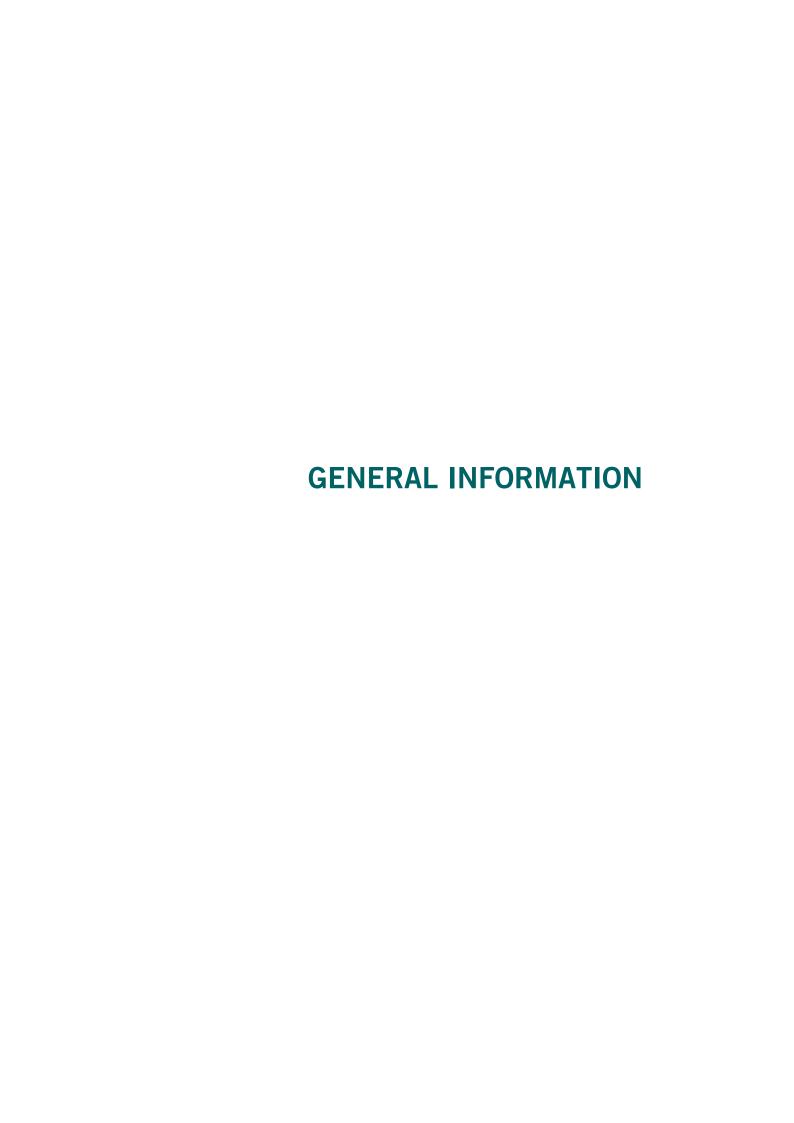


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1. THE INSTITUTE'S MAIN OBJECTIVES

The *Instituto Valenciano de Investigaciones Económicas* (**Ivie**) —Valencian Institute of Economic Research—was created in 1990 by the Generalitat Valenciana —The Valencian Regional Government— as a public institution, in order to promote and develop economic research and to project it at a national and international level.

The **Ivie** was founded in 1990 by the *Generalitat Valenciana* (Valencian Regional Government) and now enjoys company status with the participation of capital from *Bankia, Ford-Spain, BBVA Foundation, Caja Mediterráneo Foundation, Cañada Blanch Foundation, and Cajas de Ahorros Foundation* (Funcas).

The **Ivie** has two main aims. The first is the consolidation of teams of specialists who are able to ensure continued production in lines of economic research of general interest. The second is to contribute to the establishment of links between research work and the decisions of economic agents. Many of these decisions require careful analysis of the available alternatives, based on the results of research, the quality of the statistical information and the experience of specialists as evaluators of such alternatives. For this reason, the **Ivie** also offers technical advice on economic matters to any private institution or company that requests it.

To achieve its aims, the **Ivie** is organized into a general services area and various lines of theoretical and applied research. Their development rests mainly on the work of the Institute's researchers, all of whom have wide academic experience.

Furthermore, in order to carry out its projects, the **Ivie** develops links with researchers from Valencian Universities by signing collaboration agreements with them, supporting the Economic Research Teams of the University Departments in the achievement of their activities and promoting the social use of the research effort.

The **Ivie** started its activities in November 1990. Since then it has received sponsorship from the collaboration agreement signed with the Conselleria d'Economia i Hisenda (Regional Government Department of Economy and Finance), thanks to which it carries out activities for the promotion of economic research, both theoretical and applied. The remainder of the **Ivie**'s activities are financed through the relevant partnership agreements or contracts with various public and private institutions in Spain, Europe and America.

2. PEOPLE

2.1. BOARD OF DIRECTORS

President:

Vicent Soler i Marco Regional Minister of Finance and Economic Model

Secretary:

José Abargues Morán Human Resources Director of Ford Spain

Members:

Inmogestión y Patrimonios, S.A.: José Manuel García Trany Corporate Business Director for Eastern Spain/Balearic Islands, Bankia

Sector de Participaciones Integrales, S.L.: Isabel Rubio León

Communication and External Relations Manager for the Valencian, Murcia and Balearic Regions at Bankia

Fundación Cañada Blanch: Antonio Lleó García Trustee of the Cañada Blanch Foundation

Carlos Ocaña y Pérez de Tudela General Manager of the Cajas de Ahorros Foundation

Fundación BBVA: Rafael Pardo Avellaneda Director of the BBVA Foundation

Luis Manuel Boyer Cantó

President of Caja Mediterráneo Foundation

Eva Martínez Ruiz Sub Secretary at the Department of Finance and the Economic Model

2.2. ADVISORY COUNCIL

Francesco Giavazzi

Innocenzo Gasparini Institute for Economic Research, Milan

Emilio Ontiveros

Autonomous University of Madrid and AFI (Analistas Financieros Internacionales)

Vicente Salas

University of Zaragoza

Joaquim Silvestre

University of California-Davis

José Viñals

International Monetary Fund

2.3. MANAGEMENT

Research director:

Francisco Pérez (Universitat de València)

Research Deputy Director:

Joaquín Maudos (Universitat de València)

Director of International Projects:

Matilde Mas (Universitat de València)

Managing director:

Pilar Chorén

2.4. RESEARCH PROFESSORS

Francisco Alcalá (University of Murcia)

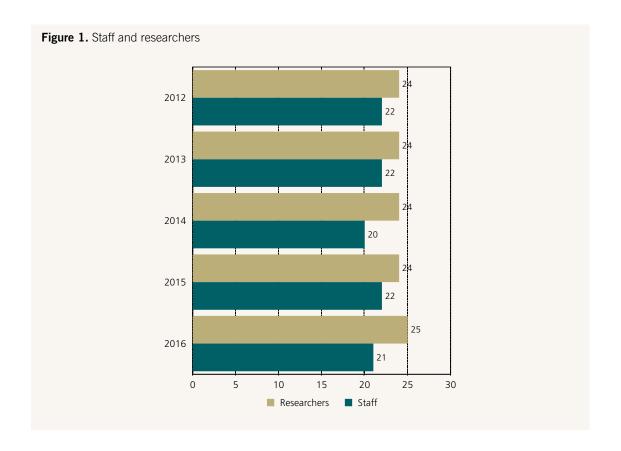
Dr Alcalá is a graduate in Economics with special honors (1980), holds a Master in Economics from CIDE (Center for Research and Teaching in Economics, Mexico, 1983) and has a PhD from the Universitat de València (1985). At present he is Professor in the Economic Analysis Department at the University of Murcia and Research Fellow at the Centre for Economic Policy Research (London). He has been Director of the said department (2001-2006), Visiting Lecturer at the CIDE (Mexico) and at the Universitat Pompeu Fabra (Barcelona). He has also been Visiting Scholar at the Universities of California (Berkeley), Harvard University, New York and Columbia. His specialist fields are the economic growth, international trade and industrial organization, of which he has published numerous books, book chapters and articles in high-level national and international specialist journals, such as *The Quarterly Journal of Economics, Journal of International Economics, Journal of Economics and Management Strategy, International Journal of Industrial Organization, Information Economics and Policy, Economics Letters, SERIEs-Journal of the Spanish Economia. He has directed many National R&D Plan projects and several competitive projects funded by the Seneca Foundation, and he has been advisor on economic matters to social and governmental institutions. (Personal webpage: sites.google.com/site/alcalapaco).*

Joaquín Aldás (Universitat de València)

Dr Aldás graduated (1993) and obtained his PhD (1998) in Economics and Business Studies from the Universitat de València, where he is Professor in Marketing and Market Research. He has been Visiting Research Fellow at the University of Glasgow. His research interests are consumer behavior, advertising media planning and quantitative methods in marketing research. He is co-author of 20 books and book chapters and has published more than 50 articles in specialized journals such as Equal Opportunities International, European Journal of Innovation Management, European Journal of Marketing, Industrial Management & Data Systems, International Journal of Bank Marketing, International Journal of Electronic Business, International Journal of Internet Marketing and Advertising, Journal of Air Transport Management, Journal of Interactive Marketing, Journal of Product and Brand Management, Journal of Services Marketing, Neural Computing and Applications, Online Information Review, Qualitative Marketing Research, Services Industries Journal, Sex Roles and Tourism Management, and in the most important refereed Spanish journals. He has participated in more than 30 studies for private and public institutions, public competitive projects and National R&D Plan projects, and has been main researcher of the European Project Consumer Behavior Erasmus Network (2009-2011). He has attended numerous conferences organized by the Academy of Marketing, the European Marketing Academy and the Academy of Marketing Science. (Personal webpage: www.uv.es/aldas)

Santiago Carbó (Bangor University, UK)

Dr Carbó graduated in Economics from the Universitat de València (1989) and took his PhD in Economics (1993) and Master in Banking and Finance at the University of Wales (1990). He is currently Professor of



Economics and Finance at the Bangor University (UK), Head of Financial Studies of the Cajas de Ahorros Foundation (Funcas) and Professor at CUNEF (University School for Financial Studies, Madrid). He has been Professor of Economic Analysis at the University of Granada. He is independent advisor for Cecabank and President of IBEFA (the International Banking, Economics and Finance Association). He is member of the Group of Economic Advisors of ESMA (European Securities and Market Authority). He has been, and still is, consultant to public institutions such as the European Central Bank (ECB) and the Federal Reserve Bank of Chicago, as well as to financial institutions and international consulting firms. He is author of more than two-hundred articles and publications on the financial system, among others, in journals such as *The Review of Economics and Statistics, European Economic Review, Review of Finance, Journal of Money, Credit and Banking, European Economic Review, Journal of International Money and Finance* and Journal of Banking and Finance. He also frequently collaborates with the written press, at present being regular columnist in *El País* and stating his views in other Spanish national dailies (El Mundo, ABC, Cinco Dias, amongst others), radio and television (TVE, Cadena SER, Radio Nacional de España, etc.), as well as in foreign newspapers (Financial Times, BBC, Business Week, International Herald Tribune, amongst others). (Personal webpage: www.santiagocarbo.com)

José García Montalvo (Pompeu Fabra University)

Dr García Montalvo is Professor of Applied Economics at the Pompeu Fabra University (UPF). Currently, he is Director of the Department of Economics and Business of the UPF. He graduated in Economics from the Universitat de València in 1987 with special honors. He received the First National Graduation Prize (1988, Ministry of Education and Science), followed by a PhD in Economics from Harvard University (1993). In 2008 and 2013 he was awarded the ICREA Acadèmia distinction prize for his research work. In 2010 he received the Knowledge Transfer Award of the Board of Trustees of the UPF and in 2013 the Rector of the UPF awarded him the Medal of the Pompeu Fabra University. He has been Vice-rector of Science Policy of the UPF. He is consultant to the OECD, the World Bank and the Inter-American Development Bank. His research is concentrated on themes connected with econometrics, economic development, the labor market for youth and the economy of the housing market. He was Guest Lecturer at the Department of Economics at Harvard (1996) and worked for a year as a researcher in the Technology and Economic Policy Program of the Kennedy School

of Government (1995). He has published 13 books and more than 100 articles in *American Economic Review, Review of Economics and Statistics, Economic Journal, Journal of Business and Economic Statistics, Journal of Development Economics, Journal of Economic Growth and Applied Psychology, among others.* (Personal webpage: www.econ.upf.edu/~montalvo).

Francisco J. Goerlich (Universitat de València)

Dr Goerlich graduated and obtained a PhD in Economics from the Universitat de València. He also holds a M.Sc. in Economics from the London School of Economics & Political Science (University of London). At present, he is a Professor at the Department of Economic Analysis at the Universitat de València. His research fields are macroeconomics, income distribution, demographics, regional economics and applied econometrics. He is co-author of several books, among which worth mentioning are those for the BBVA Foundation, *Una grid* de densidad de población para España, Zonas de morfología urbana: Coberturas del suelo y demografía, Cambios en la estructura y localización de la población, Distribución de la renta, crisis económica y políticas redistributivas and Delimitación de áreas rurales y urbanas a nivel local: Demografía, coberturas del suelo y accesibilidad. He has published his work in specialized journals such as Applied Economics, Econometric Theory, Economics Letters, International Journal of Geographical Information Science, Social Indicators Research, Empirical Economics, Regional Studies and Review of Income and Wealth, among others. He has participated in various national and international congresses, both on his own initiative and as a guest. He has taken part in the SPINTAN research project on smart public intangibles funded by the EU 7th Framework Programme. He is currently associate researcher of the Spanish R&D Plan Project ECO2015-70632-R, El desarrollo en la era de la economía digital y sus condicionantes: aspectos metodológicos y análisis empírico, and also participates in DICTA (Data for European ICT Industries Analysis), a study commissioned by the European Commission Joint Research Centre. (Personal webpage: www.uv.es/goerlich).

Carmen Herrero (University of Alicante)

Awarded with an honorary degree from the University of Granada, Dr Herrero graduated from the Complutense University of Madrid and obtained her PhD in Mathematics from the Universitat de València. She is currently Professor of Economics at the University of Alicante. Her latest research focuses on the application of axiomatic techniques to the analysis of distributive problems, particularly justice and equity issues related to health. She is President of ASSET (Association of Southern-European Economic Theorists), and member of the Council of the Game Theory Society and of ArbolMat ('The Math Tree'), a joint initiative of the Spanish Royal Mathematical Society and Universia. She has been Visiting Lecturer at the Universities of Vienna, LUISS Guido Carli (Rome), California (Davis) and Rochester and at the Institute for Economic Analysis (IAE, Barcelona), and has taught courses at the Barcelona Graduate School of Economics, the University of Paris X (Nanterre) and at the Institute of Advanced Studies in Vienna. She has been a member of the Editorial Board of the Social Choice and Welfare review and the Managers Board of the Spanish Science and Technology Foundation. She has also been a consultant to the Scientific Policy Secretary General of the Spanish Ministry of Education and Science, Spanish coordinator of the TMR Network Cooperation and Information (FMRX-CT96-0055), as well as the Spanish representative for the EC Marie Curie Project PMD-CT-2000-00010 Topics on Quantitative Economics. Among her more than 70 articles, her recent ones have appeared in Economics of Education Review, Health Economics, Journal of Health Economics, Journal of Human Development and Capabilities, PLOS ONE and Social Choice and Welfare. (Personal webpage: fae.ua.es/FAEEnglish/carmen-herrero-blanco)

Matilde Mas (Universitat de València)

Dr Mas graduated and took a PhD in Economics at the Universitat de València where she is Professor of Economic Analysis and Director of International Projects of the **Ivie**. Her specialized fields are growth economics, regional economics, analysis of public capital, new information technologies and intangible assets She is currently director of the Project DICTA (*Data for European ICT Industries Analysis*) commissioned by the Joint Research Centre (Directorate B, European Commission), and advisor to the LA KLEMS Project for Latin America. She is also associate researcher of the National R&D Plan Project *El desarrollo en la era de la economía digital y sus condicionantes: aspectos metodológicos y análisis empírico* (ECO2015-70632-R). Until January 2017, she has been coordinator of the Project SPINTAN (Smart Public Intangibles) funded by the 7th Framework Programme of the European Union (2013-2016). She has also participated in other EU projects: EU KLEMS, INDICSER, ICT NET and PREDICT. She is co-author of 77 books and book chapters, co-editor of *Industrial Productivity in Europe. Growth and Crisis* [Edward Elgar, 2011] and has published more than 80 articles in specialist journals such as *Journal of Productivity Analysis*, *Journal of Regional Science, Regional Studies* and *Review of Income and Wealth*, among others. She is member of the Editorial Board of *the journal Hacienda*

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Dr Maudos graduated (1989) and obtained his PhD (with special honors) in Economics from the Universitat de València (1995), where he is currently Professor in Economic Analysis. He is also Research Deputy Director of the **Ivie** and collaborator at the CUNEF. His specialist fields are banking and regional economics. He was Visiting Researcher in 1995-96 at the Florida State University Finance Department, at the College of Business at Bangor University (UK) in 2008-2009, and at the School of Business of the University of Glasgow, in addition to being consultant to the European Commission, the European Investment Bank and the United Nations. He has jointly published 17 books and a hundred articles in specialized journals, both national and international (Annals of Regional Science, Economics Letters, Entrepreneurship and Regional Development, International Journal of Transport Economics, Journal of Banking and Finance, Journal of Business Economics and Management, Journal of Comparative Economics, Journal of International Money and Finance, Regional Studies, Review of Income and Wealth, and Transportation Research, among others), and has also taken part in various joint works. He is member of the Editorial Board of the journal Inversión & Finanzas. He is director of competitive projects (Spanish Ministry of Education and Science, BBVA Foundation, etc.), as well as of projects with firms and government agencies. (Personal webpage: www.uv.es/maudosj)

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Dr Pastor graduated in Economics in 1990 and received his PhD with special honors from the Universitat de València in 1996, where he is an Associate Professor at the Universitat de València, accredited as Full Professor of Economic Analysis. Former Vice-Dean for Internships, Business and Economy Relations and Vice Dean for Communication and Business Relations (2011-2015), he is currently Dean of the Faculty of Economics at this university. He is also consultant for the Children and Youth Observatory (Valencia Town Council) and member of the cross-departmental committee of Valencia's Youth Programme (2014-2018). He specializes in economics of education, regional economics and banking. He has been a Visiting Researcher at the Florida State University and at the College of Business, Law, Education and Social Sciences of the University of Bangor (Wales, UK), and an external consultant for the World Bank. He is co-author of more than fifty books and has published over fifty articles in Spanish and international academic journals (Journal of International Financial Markets, Institutions and Money, Regional Studies, Scientometrics, Transportation, etc.). He has been the main researcher of various competitive projects, as well as of projects with firms and government agencies, and has participated in the SPINTAN Project on intangible assets in the public sector (EU 7th Framework Programme). He is currently the main researcher of the National R&D Plan Project El desarrollo en la era de la economía digital y sus condicionantes: aspectos metodológicos y análisis empírico (ECO2015-70632-R). Also, he is director of an educational innovation project of the Universitat de València. (Personal webpage: www.uv.es/jmpastor)

José María Peiró (Universitat de València)

Dr José María Peiró graduated (1975) and took his PhD (1977) in Philosophy and the Arts at the Universitat de València. He also graduated in Psychology at the Complutense University of Madrid (1976). In 2010 he was awarded with an honorary degree from the Universidade Metodista de São Paulo. He is Professor of Organizational and Social Psychology at the Universitat de València, Past-President of the International Association of Applied Psychology and Director of the Research Institute of Psychology of Human Resources of Organizational Development and Quality of Working Life. Awarded by Psicofundación with the José Luis Pinillos Prize to Excellency and Innovation in Psychology. He has been winner of the Aristotle Prize 2015 given by EFPA, honored with the EAWOP Lifetime Contribution Award for his scientific and professional career (2013), granted the Advanced International Research Service and Fukuhara Award of the ICP (2013) and received the Gold Medal from the General Council for Industrial Relations and Work Sciences (2010). He is director of the PhD Program of Human Resources and is coordinator of the European Master Erasmus Mundus of Work, Organizational and Personnel Psychology. He was Director of the Observatory for Employment Access and Vocational Guidance of the Universitat de València (2003-2009). Author of more than 50 books and book chapters and 130 articles published in Computers in Human Behavior, European Journal of Work and Organizational Psychology, International Journal of Hospitality Management, Journal of Applied Psychology, Journal of Occupational Health Psychology, Social Science & Medicine and Work & Stress. His research fields are transition of youth to the labor market, the prevention of psychosocial risks, human and social capital, quality of service, climate and culture in organizations, work teams, psychosocial aspects of ICT, management and development of the human resources. (Personal webpage: www.uv.es/jmpeiro)

Francisco Pérez (Universitat de València)

Dr Pérez graduated (1973, with special honors and National Graduation Award) and obtained his PhD in Economics at the Universitat de València (1977). He is Professor of Economic Analysis at the Universitat de València (1986) and Research Director of the Ivie (since 1990). His specialized fields are economic growth and competitiveness, regional economics, economics of education, and public economics. He has published 64 books in collaboration with others, and over 180 book chapters and articles in international and Spanish specialized journals, such as Empirical Economics, Economic Geography, Higher Education, Journal of International Money and Finance, Journal of Policy Modeling, Journal of Regional Science, Papers in Regional Science, Regional Studies, Review of Income and Wealth, Studies in Nonlinear Dynamics and Econometrics and World Development. His research has been quoted more than 4,800 times and he has an h-index of 34. He has completed six periods of research productivity, participates in European projects and has directed more than a hundred research projects. He is associate researcher of the National R&D Plan Project El desarrollo en la era de la economía digital y sus condicionantes: aspectos metodológicos y análisis empírico (ECO2015-70632-R) and main researcher on a project for excellence in research groups (Prometeo) funded by the Valencian Government. He has directed nine PhD theses. He has given conferences for numerous institutions and visited over 50 universities and research centers in Spain, Europe and North and South America. He is a member of several scientific societies and foundations. Eisenhower Fellow USA since 1998. In November 2010 he was awarded the 8th Societat Catalana d'Economia Prize and in 2016 he received the Francesc de Vinatea distinction, the highest recognition from the Valencian Parliament. (Personal webpage: www.uv.es/perezgar)

Javier Quesada (Universitat de València)

Dr Quesada graduated in Economics from the Universitat de València and took his PhD in Economics at the University of Cincinnati (Ohio). He is currently a Professor of Economic Analysis at the Universitat de València. He was Director General of the Economy (1995-98) and Director of the Science and Technology Office of the Valencian regional government (1999-2003). His fields of research are financial and monetary economics, and the economics of new technologies and growth. He has jointly published 13 books — Infraestructuras, inversión privada e intangibles (CAM, 2009), BBVA Foundation-Ivie Reports on Growth and Competitiviness (2011, 2012, 2013 and 2014), Activos intangibles: Una inversión necesaria para el crecimiento económico en España (Ariel and Fundación Telefónica 2014), amongst others— and articles in E. Gardener et al. (eds.) Banking in the New Europe (Palgrave Macmillan 2003), in J.R. Cuadrado (ed.) Regional policy, economic growth and convergence: Lessons from the Spanish case (Springer 2009) and in F. Fiordelisi et al. (eds.) New Issues in Financial and Credit Markets (Palgrave Macmillan, 2010), as well as in specialized journals such as Applied Economics, European Journal of Finance, European Journal of Operational Research, Journal of International Financial Markets and Institutions and Money. He was a Visiting Scholar at Harvard University (1985-86). He is associate researcher of the National R&D Plan Project El desarrollo en la era de la economía digital y sus condicionantes: aspectos metodológicos y análisis empírico (ECO2015-70632-R). He is member of the European Academy of Science and Arts, and assistant to the Executive President of the Rey Jaime I prizes. (Personal webpage: www.uv.es/quesada)

José Ramos (Universitat de València)

Dr Ramos graduated (1988) and obtained a PhD in Psychology (1993) from the Universitat de València where he is currently Professor in Organizational Psychology and Work. From 2006 to 2012, he was Dean of the Faculty of Psychology. His specialist fields are the organizational climate and the psychological contract, analysis of managerial work, service quality, occupational stress, and employment, unemployment and psychological well-being. He has directed National R&D Plan projects and has also taken part in projects for the European Union. He is coordinator of the National Referee Committee that awards the European Qualification for Psychologists (Europsy) of the European Federation of Psychologists Associations. Since May 2015, he is member of the Executive Committee of the European Association of Work and Organizational Psychologists (EAWOP). He has attended numerous national and international congresses, and has published over fifty works in national and international journals such as Applied Psychology: An International Review, European Journal of Work and Organizational Psychology, International Journal of Stress Management, Psychological Reports, Psicothema, Total Quality Management & Business Excellence, Stress & Health and Work & Stress. He has directed 9 PhD theses and he is co-author of 17 books and book chapters, among which worth mentioning are

Productividad y gestión de recursos humanos en las Administraciones Públicas (Funcas, 2010) and Psicología de las Organizaciones (Editorial Síntesis, 2015).

Ernest Reig (Universitat de València)

Dr Reig graduated and obtained his PhD in Economics from the Universitat de València, where he is Professor of Applied Economics. He is specialized in regional and agricultural economics and in the analysis of efficiency and productivity. At present, he is studying the calculation of sustainability indexes and the agricultural ecoefficiency. He has published several books and reports, among them La multifuncionalidad de la agricultura en España (Ministry of Agriculture-EUDEMA 2007), La sostenibilidad del crecimiento económico en España (Funcas 2011) and La sostenibilidad de la agricultura en España (Cajamar, 2013) and Delimitación de áreas rurales y urbanas a nivel local: Demografía, coberturas del suelo y accesibilidad (BBVA Foundation, 2016). He is author of over 40 articles in various specialized journals such as Agricultural Economics, Applied Economics, Economic Modelling, Environmental and Resources Economics, Investigaciones Económicas, Journal of Productivity Analysis, Land Use Policy, Resource and Energy Economics, Revista de Economía Aplicada and Social Indicators Research. He is member of the Editorial Board of the journal Investigaciones Regionales. He was Research Scholar at the London School of Economics (1983-84), Director of the Instituto Valenciano de Economía (1986-1991) and Director General of the Economy of the Valencian regional government (1991-95). He has been main researcher of several projects of the National R&D Plan, the most recent one titled *Indica*dores sintéticos de sostenibilidad para la mejora de la gobernanza del sector agrario (AGL2010-17560-C02-02). In 1997, he was awarded the 6th Premi Catalunya d'Economia (Prize in Economics of Catalonia) by the Societat Catalana d'Economia. (Personal webpage: www.uv.es/ereig)

Lorenzo Serrano (Universitat de València)

Dr Serrano is an Associate Professor at the Universitat de València accredited as Full Professor where he graduated in Economics in 1991 (with special honors) and received his PhD in 1998 (with special honors). He also obtained a degree in Monetary Economics at the Centre of Financial and Monetary Studies in Madrid (1993). His work covers topics such as growth, human capital and regional economics. He has had scholarships at the Bank of Spain (1991-1993) and the Council of Education of the Valencian Regional Government (2001). He has also been Research Fellow at the SOM Research School of the University of Groningen (2000-2001). He has participated in the SPINTAN Project on intangible assets in the public sector, funded by the EU 7th Framework Programme and coordinated by the Ivie. He has jointly published more than thirty books and more than 40 articles in Spanish (Investigaciones Económicas, Moneda y Crédito, Revista Española de Economía, Revista de Economía Aplicada, among others) as well as in international reviews (Applied Economics, Economics Letters, Journal of Productivity Analysis, Journal of Transport, Economics and Policy, Regional Studies, Review of Income and Wealth, Review of International Economics, Transportation, Transport Policy, among others). He is main researcher of the National R&D Plan Project El desarrollo en la era de la economía digital y sus condicionantes: aspectos metodológicos y análisis empírico (ECO2015-70632-R). (Personal webpage: www.uv.es/lserrano)

Ezequiel Uriel (Universitat de València)

Dr Uriel, Professor Emeritus at the Universitat de València, took degrees in Law (1960) and Economics (1963) and did his PhD (1972) at the Complutense University of Madrid. His specialized fields are the labor market, statistical information systems and forecasting techniques. He has published fifty books individually and in collaboration with others, on the social accounting matrix and national accounting, statistical and econometric methods, regional analysis, statistical information systems and the labor market —El stock y los servicios de capital en España y su distribución territorial (1964-2002). Nueva metodología (Fundación BBVA, 2005) y Balanzas fiscales de las comunidades autónomas con la Administración Pública Central, 1991-2005 (Fundación BBVA, 2007) y Cuentas de la Educación en España 2000-2013: Recursos, gastos y resultados (Fundación BBVA, 2016), amongst others—. Also he is author of twenty-six book chapters and over seventy articles in specialized journals such as Estadística Española, Entrepreneurship and Regional Development, Investigaciones Económicas, Cuadernos del ICE, Anales de Economía, Moneda y Crédito, Revista de Economía Aplicada, Applied Economic Letters, Review of Income and Wealth, International Review of Law and Economics and Papeles de Economía Española. He has participated in over 40 studies for public and private institutions, and directed 11 doctoral theses. He was a Visiting Fellow at Warwick University in 1988-1989, Guest Lecturer at the Harvard School of Business in 1979 and Visiting Professor at the University of Berkeley (2000-2001). (Personal webpage: www.uv.es/=uriel).

Fernando Vega-Redondo (Bocconi University, Italy)

Dr Vega-Redondo has a degree in Economics from the Complutense University of Madrid and a PhD in Economics from the University of Minnesota. He is currently Professor at the Department of Decision Sciences of Bocconi University in Milan, Italy. His research interests are focused on the field of networks, game theory, learning, and their applications to evolutionary processes such as growth and institutional change. His more than 90 published articles can be found in journals such as Econometrica, Review of Economics Studies, Science, Journal of Economic Theory, Games and Economic Behavior, International Economic Review, International Journal of Economic Theory, International Journal of Game Theory, Journal of Economic Dynamics and Control, Journal of Evolutionary Economics, Journal of Theoretical Biology, Physical Review Letters, Proceedings of the National Academy of Sciences USA, Social Choice and Welfare and Theory and Decision. He is the author of several books such as Complex Social Networks published as an Econometric Society Monograph, Economics and Theory of Games published by Cambridge University Press, and Evolution Games and Economic Behavior published by Oxford University Press. He has directed over twenty doctoral theses and has taught at the Universities of Alicante, Pompeu Fabra, Essex, and the European University Institute in Florence. He has also been a Visiting Professor at the Indian Statistical Institute, the Institute for Advanced Studies in Vienna, the Hebrew University of Jerusalem and the Universities of Harvard, California-San Diego, Boston and Cornell. In 2011 he received the FUE Research Diversity Prize awarded by the Urrutia Elejalde Foundation. (Personal webpage: www.igier.unibocconi.it/vegaredondo)

Antonio Villar (Pablo de Olavide University, Seville)

Dr Villar has a degree in Economics from the Universitat de València and holds PhDs from the University of Alicante and the University of Oxford. Regarded as a researcher worthy of his reputation, he is at present Professor at Pablo Olavide University in Seville. He was awarded the XVI Andalusian Prize for Research in Social Sciences and Humanities. His specialized fields cover subjects of general equilibrium and welfare economics. He is the author of 18 books and over 70 articles, published in journals such as Economic Theory, Journal of Public Economics and Review of Income and Wealth, among others. He has been Visiting Scholar at the Centre for Operation Research and Econometrics (Belgium), at the Universities of Stanford, Oxford and York, the Institute for Advanced Studies (Vienna) and the European University Institute (Florence). He was head of the Economics and Law Division of the National Evaluation and Prospective Agency (1989-91), and in charge of the Evaluation Unit of the Science and Technology Office of the Valencian government (2002-2003), of the 2010 Consolider-Ingenio Program for the Spanish Ministry of Education and Science and Vice-Rector of Research and Technological Transference and First Vice-Rector of the Pablo Olavide University (2007-2010). He has participated in the revision of the criteria for preparing human development indices of the United Nations, and has directed several projects for the Andalusian Regional Government and in research projects of the National R&D Plan. Currently, he participates in the Advisory Commission for Special Research Infrastructures of the Ministry of Science and Innovation, and has been named Thomas J. Alexander Fellow (OECD 2015) and Fernand Braudel Fellow (European University Institute 2015). (Personal webpage: sites.google.com/site/avillarupo)

2.5. ASSOCIATE RESEARCHERS

Iván Arribas (Universitat de València)

Dr Arribas graduated in Mathematics with special honors (1991) and obtained his PhD in Economy from the Universitat de València (2002), where he is currently an Associate Professor. His specialist fields are techniques of quantitative analysis, time series analysis, game theory and international integration. He is co-author of the book *La medición de la integración comercial en una economía globalizada* published by the BBVA Foundation in 2010, and has published numerous articles in specialized journals, such as *World Development, Economic Geography, Empirical Economics, Management Decision, Journal of Policy Modeling, Mathematical Social Sciences y Studies in Nonlinear Dynamics & Econometrics,* amongst others. He has participated in several studies for public and private entities (Iberdrola, Trinidad Alfonso Foundation) and competitive projects of the National R&D Plan and Eurostat. Currently, he is the main researcher of the Project *Modelling risk in the IFM-CAP model* funded by the Joint Research Centre of the European Commission, and of the Project *Entorno de usuario digital, generador de estrategias* financed by Universitat de València/VLCCampus/INNCIDE. Also, he is Member of the Research Group ERI-CES (Estructura de Recerca Interdisciplinar-Comportament Econòmic i

Social). He has given courses at the Central Bank of the Dominican Republic and the University Mar del Plata (Argentina), and has taken part in numerous international scientific meetings. (Personal webpage: www.uv.es/iarribas).

Alejandro Escribá (Universitat de València)

Dr Escribá obtained his PhD in Economics and Business Studies from the Universitat de València. Currently, he is an Associate Professor of Business Administration at the said university and director of the Universitat de València Chair of Family Business. He has been Guest Lecturer at Bocconi University (Italy), HEC Montreal and Concordia University (Canada). His research interests focus on the study of business strategy and competitiveness, as well as on the role of management teams and of corporate governance in this area. His work also addresses the strategic analysis of university systems and of academic performance. He has published more than thirty articles on these issues in several Spanish and international journals, amongst them Business Research Quarterly, Journal of Management Studies, Group and Organization Management, British Journal of Management, International Small Business Journal and International Marketing Review.

Juan Fernández de Guevara (Universitat de València)

Dr Fernández de Guevara graduated and obtained his PhD (with special honors) in Economics from the Universitat de València, where he is currently Assistant Professor of Economic Analysis. His specialized fields are banking, social capital, productivity analysis and the role of the ICT and the intangible assets in economic growth. He has been researcher in the projects funded by the EU 7th Framework Programme, INDICSER and SPINTAN, and advisor to the European Investment Bank and the UN. Currently, he is participating in the National R&D Plan Project *Factores de competitividad: hacia una nueva sociedad del conocimiento*, and in DICTA (Data for European ICT Industries Analysis), research funded by the European Commission (Joint Research Centre, Directorate B). He has authored more than 30 books and book chapters and has co-edited books for Palgrave MacMillan and the BBVA Foundation. Also, he has published more than 30 articles in specialized journals such as *Journal of Banking and Finance, The Manchester School, The European Journal of Finance, Journal of International Money and Finance, Revista de Economía Aplicada, Regional Studies, Applied Economics Letters, Journal of Higher Education and Financial Stability, among others, and has taken part in numerous national and international congresses. In 2015, he received the prize for the best co-authored paper from Funcas in its Research Promotion Programme. (Personal webpage: www.uv.es/radoselo).*

Belén Gill de Albornoz (Universitat Jaume I)

Dr Gill de Albornoz graduated in Economics and Business Studies from the University of Zaragoza (1995) and obtained a PhD from the Universitat Jaume I (2002), where she is Associate Professor of Financial Economy and Accountancy. She has taken part in projects for the National R&D Plan, the AECA (Spanish Association for Accounting and Business Administration) and the European Commission. Her specialist areas are financial economy and public finances, the quality of accounting data and corporate government. She stayed several years at the University of Lancaster (UK) and has participated in various national and international congresses. She has contributed to the collective works La feminización de las profesiones sanitarias (Fundación BBVA, 2010) and Las empresas del sector de la construcción e inmobiliario en España (Funcas, 2010), and has published numerous articles in national and international journals, such as Abacus, Corporate Governance, Energy Economics, Investigaciones Económicas, Papeles de Economía Española, Revista Española de Financiación y Contabilidad, The European Accounting Review and Universia Business Review. She has received several research awards: from the Spanish Stock Market Commission (2015), the AECA (2004, 2005, 2014), the Centro de Estudios Financieros (2003, 2004, 2007) and the Accounting and Auditing Institute & the Spanish Association of University Teachers of Accounting (2003). Furthermore, in 2012 she received a Prize from the Fundación de Estudios Financieros for her research work Income smoothing and idiosyncratic volatilitv.

Manuel Illueca (Universitat Jaume I)

Dr Illueca graduated in Economics and Business Studies from the Universitat de València (1993) and obtained a PhD in Business Administration and Management from the Universitat Jaume I in Castellón (2001), where he is Associate Professor in Financial Economics and Accounting (on leave). Currently he is Director of the Valencian Institute of Finance. In 2007 he was a Visiting Scholar in the Finance Department of the University of Indiana (US). His research fields are financial statement analysis, the economics of banking, and financial derivatives. He contributed to the collective work *Banca relacional y capital social en España: Competencia y confianza* (BBVA Foundation, 2006), and his articles have been published in national journals (*Investigaciones*

Económicas, Revista de Contabilidad, Revista Española de Financiación y Contabilidad, Spanish Economic Review, among others) and international ones (Applied Economics, Energy Economics, International Small Business Journal, Journal of Futures Markets, Journal of Productivity Analysis, Review of Finance, among others). He has been member of the editorial boards of PYME-Revista Internacional de la Pequeña y Mediana Empresa and Revista Valenciana de Economía y Hacienda, editor of the Revista de Contabilidad-Spanish Accounting Review, and referee for leading Spanish and international journals. He has taught several courses and seminars, and participated in numerous national and international conferences and scientific meetings.

Jesús Rodríguez López (Pablo de Olavide University, Seville)

Dr Rodríguez graduated in Economics from the University of Seville (1992), holds a Master in Economics from the Pompeu Fabra University of Barcelona (1997) and obtained his PhD in Economics from the Pablo de Olavide University of Seville (2003). He is currently Professor at this university and since March 2011 he is collaborator of the UNICAJA Financial Education Platform (eduFInet). He has been Visiting Researcher at the University of Minnesota (2009, 2010 and 2011) and at the European University Institute of Florence (2004). He has also been Assistant Professor in specialized courses for Professor Dr. Albert Marcet on Bayesian Econometrics (2002) and Time Series Analysis: SVAR (1998), organized by the International Menéndez y Pelayo University. His research fields are economic growth, progress in investment-specific technology, analysis of exchange rate regimes and international economy. He has published several book chapters and articles in indexed journals: *Macroeconomic Dynamics, Open Economies Review, Information Economics and Policy, Journal of Macroeconomics, Eastern European Economics, Papers in Regional Science, Review of International Economics, Telecommunications Policy and The Berkeley Electronic Press Journal of Macroeconomics*. He has been a researcher of various competitive projects with government agencies, and main researcher for the Project *The role of information and communication technologies in the economic growth of the Andalusian region* funded by the European Commission. (Personal webpage: www.upo.es/econ/rodriguez)

Emili Tortosa-Ausina (Universitat Jaume I)

Dr Tortosa graduated in Economics and Business Studies from the Universitat de València and obtained his PhD with special honors from the Universitat Jaume I in Castellón, where he is currently a Professor in Applied Economics. He has also lectured in the Economic Analysis Department at the University of Alicante and has held scholarships at various institutions. He has been a guest researcher at the Business Economics Department at the Autonomous University of Barcelona, the School of Economics at the University of New South Wales (Sydney, Australia), the Economics Department at Oregon State University (USA), the School of Management at the University of Leicester (UK), and the Faculty of Business and Economics at the Diego Portales University (Chile). His specialist research areas are economic measurement, in particular, the analysis of efficiency and productivity. He has published various books in collaboration with others, and his articles have appeared in specialized journals such as *Annals of Regional Science*, *Applied Economics*, *Economic Geography*, *Economics Letters*, *Economics of Education Review*, *Empirical Economics*, *Environment and Planning A*, *European Economic Review*, *Journal of Business Economics and Management*, *Journal of Policy Modeling*, *Journal of Productivity Analysis*, *Journal of Regional Science*, *Papers in Regional Science*, *Review of Industrial Organization* and *World Development*, among others. He has participated in and organized numerous national and international congresses and scientific meetings. (Personal webpage: www3.uji.es/~Tortosa)

2.6. TECHNICAL STAFF

Carlos Albert Economist

Rodrigo Aragón Computer engineer

Eva Benages Economist

Vicent Cucarella Economist (until June 20th, 2016)

Héctor García Computer engineer

Laura Hernández Economist

Silvia Mollá Economist (since July 11th, 2016)

Juan PérezEconomistJuan Carlos RobledoEconomistJimena SalamancaEconomistMarta SolazEconomist

Ángel SolerEconomistIrene ZaeraEconomist

2.7. GENERAL SERVICES

Rosa Buitrago Secretary

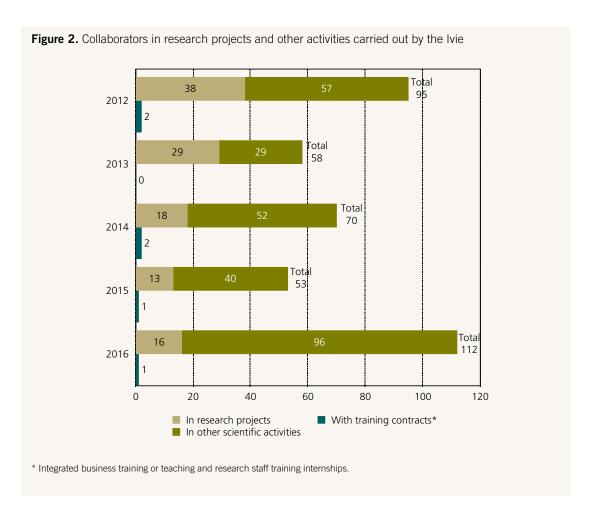
Yolanda Jover Press (since June 9th, 2016)

Leonor Marqués Administration
Belén Miravalles Documentation
Natalia Mora Administration
Alicia Raya Publications
Susana Sabater Publications
Julia Teschendorff Publications

2.8. COLLABORATORS IN RESEARCH PROJECTS AND OTHER ACTIVITIES

Among all the collaborators who participated in research projects and other scientific activities carried out by the lvie, the following 16 researchers from 8 institutions took part in different economic studies conducted by the **Ivie** in 2016:

M. Dolores Añón (Universitat de València)Silvia Barona (Universitat de València)Rafael Beneyto (Financial analyst)



José Ismael Fernández (Universitat de València)

María Iborra (Universitat de València)

Andreu Iranzo (Fundación Asamblea de Ciudadanos y Ciudadanas del Mediterráneo and the Council of European Affairs)

Fernando Jiménez Sánchez (University of Murcia and Carlos III-Juan March Institute)

Juan Mañez (Universitat de València)

José Antonio Pérez (Universitat Politècnica de València)

Ana Rincón (NIESR)

Rebecca Riley (NIESR)

María Rochina (Universitat de València)

Vicente Safón (Universitat de València)

Juan A. Sanchis Llopis (Universitat de València)

Amparo Sanchis Llopis (Universitat de València)

Francesco Venturini (University of Perugia)

2.9. COLLABORATORS WITH TRAINING CONTRACTS

Through an agreement signed with the Universitat de València, Consuelo Mínguez did work training at the **Ivie** while taking a Master's Degree in Economics at the said University.

3. COLLABORATION AGREEMENTS

The Institute's initiatives are possible thanks to the financial support of the institutions which sponsor the Ivie's lines of research and share the Institute's aims. Likewise, all research undertaken by the Ivie is based mainly on the initiatives and projects of the university professors who are associated with the Institute as researchers and, in general, on the research potential of the Valencian Universities. To favor this relationship, cooperation agreements have been signed with:

Agencia Valenciana de Fomento y Garantía Agraria

Alianza A-4U (Alliance of 4 Universities: Autonomous University of Barcelona, Autonomous University of Madrid, Carlos III University of Madrid and Pompeu Fabra University)

AVE (Valencian Association of Entrepreneurs)

Valencia City Council

Bankia

BBVA Foundation

Cajas de Ahorros Foundation (Funcas)

Cañada Blanch Foundation

European Union

Ford Spain

Fundación Cotec para la Innovación

Fundación Deportiva Municipal de Valencia (FDM)

Fundación Ford para el Desarrollo y la Innovación

Harvard University

INAECU (Research Institute for Higher Education and Science)

InnDEA Valencia Foundation (City Council of Valencia)

IVACE (Valencian Institute for Business Competitiveness)

Joint Research Centre Directorate B (European Commission)

London School of Economics

Mercadona

Miguel Hernández University

Polytechnic University of Valencia

Presidency of the Valencian Government

Ramón Areces Foundation

Regional Ministry of Finance and Economic Model (Valencian Government)

Spanish Food and Drink Industry Federation (FIAB)

Sociedad Deportiva Correcaminos de Valencia

Trinidad Alfonso Foundation

Universitat de València

University-Enterprise Foundation (ADEIT), Universitat de València

University Jaume I

University of Alicante

University of Murcia

University of Valladolid

WIFO (Austrian Institute of Economic Research)

4. ACKNOWLEDGMENTS

The effort made by the **Ivie** in all the directions mentioned has been acknowledged both in academic circles and on a social level. During the two decades of its existence the Institute and its researchers have received the following awards:

- On December 16, 2016, Professor José María Peiró was awarded the Jose Luis Pinillos Prize for Excellence and Innovation in Psychology, in the category of 'Psychologist of the Year', by Psicofundación (the Spanish Foundation for the Scientific and Professional Promotion of Psychology). The Ivie researcher received the award at the closing ceremony of the conference III Jornadas de Excelencia e Innovación en Psicología, in which the academic, scientific and professional career of the psychologist was recognized.
- On December 15, at the Simposio de la Asociación Española de Economía (Spanish Economic Association) in Bilbao, Jose García Montalvo was granted the SERIEs Award 2016 for the article «The real estate and credit bubble: evidence from Spain».
- Also in 2016, José María Peiró was made a member of the Spanish Academy of Psychology on November 30. The Academy, created by the Ministry of Education, Culture and Sport, recognized the research work of the **Ivie** researcher and Professor of the Universitat de València.
- On November 25, 2016, Francisco Pérez was made an honorary member of the Colegio Mayor San Juan de Ribera. The event was held during the Closing Ceremony of the Institute's Centenary, which took place in the auditorium of the Universitat de València.
- The prize-giving ceremony of the Valencian Parliament *Alta Distinción Parlamentaria de Corts Francesc de Vinatea* was held at the Borgia Palace in Valencia on April 25, 2016. The award was presented to the committee of experts made up of Francisco Pérez (**Ivie** research director), Vicent Cucarella (**Ivie** research technician), together with Rafael Beneyto, José Antonio Pérez, José Ismael Fernández and Vicent Peiró, who have analyzed the financial problems of the Valencian Government.
- In 2015, the journal *Economía 3* presented the **Ivie** with the Economía 3 Research Career Award for the work carried out over its 25-year trajectory. The prize was delivered to the **Ivie** at The Westin Hotel in Valencia, on January 27th, 2016.
- Also in 2015, the Fundación de Estudios Bursátiles y Financieros (dedicated to stock market and financial studies) awarded the prize for Financial Dissemination to the **Ivie** for its «outstanding work in this area since its inception 25 years ago». The award was presented to the **Ivie** at the headquarters of the Presidency of the Valencian Government, in Valencia, on March 29th, 2016.
- On 18 December 2015, Ivie researchers Juan Fernández de Guevara and José Manuel Pastor received the 2014 Research Promotion Award by Funcas for their working paper «The adjustment of bank ratings in the financial crisis: International evidence» written in collaboration with Carlos Salvador (Universitat de València).
- On 12 November 2015, José M. Peiró received the award 'Profesionalidad y Compromiso' (for professionalism and commitment) by the Fundación Diagrama in Villena (Alicante).
- On 7 July 2015, during the XIV European Congress of Psychology in Milan, the European Federation of psychologists' associations (EFPA) awarded José María Peiró the 2015 Aristotle Prize. The award is granted

- to European psychologists who are internationally recognized for their contributions to psychology in research or in the professional area.
- On 2 September 2014, José García Montalvo was awarded the ICREA Academia prize aimed at promoting research excellence among the professors and researchers of public Catalan universities.
- In 2014, the Spanish Economic Association Award (1st edition) for the best article published in the SERIEs-Journal of the Spanish Economic Association throughout the period of 2010-2013 was given to «Firm's Main Market, Human Capital, and Wages», a research article by Ivie researcher and professor at the University of Murcia, Francisco Alcalá in collaboration with Pedro J. Hernández.
- Also in 2014, the Institute of Financial Studies granted the Ivie the 7th IEF Award for Financial Excellence 2014 in the dissemination category for "its brilliant career and contribution to the knowledge society in general and, in particular, to the economy." The award was presented to Ivie research director and professor at the Universitat de València, Francisco Pérez, in an event which was held in Barcelona on 3 November 2014.
- On May 23, 2014, **Ivie** researcher and professor at the University of Alicante Carmen Herrero was awarded with an honorary degree from the University of Granada.
- During the LXXI Annual ICP Conference in Honolulu (Hawaii) on August 3, 2013, the International Council
 of Psychologists (ICP) granted the Advanced International Research and Service Fukuhara Award to the Ivie
 research professor and professor at the Universitat de València, José María Peiró.
- Also during 2013, the European Association of Work and Organizational Psychology (EAWOP) honored Jose María Peiró with the EAWOP Lifetime Contribution Award for his scientific and professional career during the 16th Congress of the European Association of Work and Organizational Psychology held in Münster (Germany) on 22 May.
- Furthermore, in 2013 the Governing Body of the Pompeu Fabra University awarded Professor José García Montalvo, Vice-chancellor of Science Policy (2011-2013), UPF Medal of Honor.
- In 2012, Ivie associate researcher Belén Gill de Albornoz received a prize from the Fundación de Estudios Financieros for her research work Income smoothing and idiosyncratic volatility.
- On November 24, 2010, the President of the Institut d'Estudis Catalans, Salvador Giner, awarded the Ivie Research Director, Francisco Pérez, the VIII Societat Catalana d'Economia 2010 Prize for the study carried out at the Ivie El Desarrollo del Arco Mediterráneo Español. Trayectoria y perspectivas, published in 2010.
- The Andalusian Regional Government awarded the Ivie researcher and professor at the Pablo de Olavide University, Antonio Villar, the XVI Premio Andalucía de Investigación Ibn al Jatib (Prize in Research of Andalusia) in the areas of humanities, law and social sciences on March 22, 2010. This prize aims to acknowledge and encourage outstanding researchers in science, as well as organizations, institutions or firms which have distinguished themselves by their commitment to promoting scientific research. The award recognized the theoretical relevance of Antonio Villar's research, in addition to his institutional involvement in the development of economics in Andalusia.
- In July 2010, Ivie research professor José María Peiró was awarded an Honorary Degree by the Metodista de São Paulo University.
- In 2010, the Social Advisory Board of the Pompeu Fabra University granted José García-Montalvo the Knowledge Transfer Award.
- In November 2009, professors Matilde Mas and Francisco Pérez were appointed Honorary Members of the Argentinian Association of Public Economics.
- On February 18, 2009 the Ivie researcher and professor at the Pompeu Fabra University, José García-Montalvo, received the ICREA Acadèmia Prize for his research work.

- On May 21, 2008 José María Peiró, **Ivie** researcher and professor at the Universitat de València, was given the Research and Development Award by the Universitat de València Social Council. This recognition values Peiró's long line of research in human resources management and work climate.
- The **Ivie** was awarded the Research and Development Prize *Premio Universidad-Sociedad a la Investigación y el Desarrollo 2005* by the Universitat de València Social Council on June 20, 2005. This prize distinguishes those institutions and members of the university community whose work and efforts have helped to strengthen ties between the Universitat de València and its cultural, social and economic environment.
- The journal *Economía 3* presented the **Ivie** with the *Premio Centro Investigador* (Research Centre Award) on December 11, 2003.
- In 1997 **Ivie** research professor Ernest Reig received the *Premio d'Economia de Catalunya* (Prize in Economics of Catalonia) from the Societat Catalana d'Economia for the study *Capitalización y Crecimiento de la Economía Catalana 1955-1995*.

5. INSTITUTIONAL INFORMATION

The **Ivie** has had the institutional structure of a public limited company since it was set up. Although it was considered a public firm during the first few years, the **Ivie** has been a mercantile company subject to private law following the incorporation of its shareholders in 1995.

Throughout the years the **Ivie** has always complied with current legislation so as to ensure the good of the public and private resources entrusted by different institutions for the development of its activities. In addition, the **Ivie** provides the required accounting information, which is in the Mercantile Register.

The **Ivie** is annually controlled by independent auditors with the aim of receiving opinions regarding the quality of the financial data which the Administration Board develops.

In 2011, the **Ivie** created the **Ivie** Foundation of the Valencian Community, in order to intensify the development of economic research and education activities of general interest and to strengthen the collaboration with other institutions in this area.

Since 2013, the **Ivie** is a research center associated to the Universitat de València, registered with the Spanish Registry of Universities, Centres and Qualifications (RUCT).



INFORME DE AUDITORÍA INDEPENDIENTE DE CUENTAS ANUALES **ABREVIADAS**

A los accionistas del Instituto Valenciano de Investigaciones Económicas, S.A. (IVIE), por encargo del Consejo de Administración.

Hemos auditado las cuentas anuales abreviadas adjuntas del Instituto Valenciano de Investigaciones Económicas, S.A., que comprenden el balance abreviado a 31 de diciembre de 2016, la cuenta de pérdidas y ganancias abreviada, el estado abreviado de cambios en el patrimonio neto y la memoria abreviada correspondientes al ejercicio terminado en dicha fecha.

Responsabilidad del Consejo de Administración en relación con las cuentas anuales abreviadas

El Consejo de Administración es responsable de formular las cuentas anuales abreviadas adjuntas, de forma que expresen la imagen fiel del patrimonio, de la situación financiera y de los resultados del Instituto Valenciano de Investigaciones Económicas, S.A., de conformidad con el marco normativo de información financiera aplicable a la entidad en España, que se identifica en la Nota 2 de la memoria abreviada adjunta, y del control interno que considere necesario para permitir la preparación de cuentas anuales abreviadas libres de incorrección material, debida a fraude o error.

Responsabilidad del auditor

Nuestra responsabilidad es expresar una opinión sobre las cuentas anuales abreviadas adjuntas basada en nuestra auditoría. Hemos llevado a cabo nuestra auditoría de conformidad con la normativa reguladora de la auditoría de cuentas vigente en España. Dicha normativa exige que cumplamos los requerimientos de ética, así como que planifiquemos y ejecutemos la auditoría con el fin de obtener una seguridad razonable de que las cuentas anuales abreviadas están libres de incorrecciones materiales.

Una auditoría requiere la aplicación de procedimientos para obtener evidencia de auditoría sobre los importes y la información revelada en las cuentas anuales abreviadas. Los procedimientos seleccionados dependen del juicio del auditor, incluida la valoración de los riesgos de incorrección material en las cuentas anuales abreviadas, debida a fraude o error. Al efectuar dichas valoraciones del riesgo, el auditor tiene en cuenta el control interno relevante para la formulación por parte de la entidad de las cuentas anuales abreviadas, con el fin de diseñar los procedimientos de auditoría que sean adecuados en función de las circunstancias, y no con la finalidad de expresar una opinión sobre la eficacia del control interno de la entidad. Una auditoría también incluye la evaluación de la adecuación de las políticas contables aplicadas y de la razonabilidad de las estimaciones contables realizadas por la dirección, así como la evaluación de la presentación de las cuentas anuales abreviadas tomadas en su conjunto.

Consideramos que la evidencia de auditoría que hemos obtenido proporciona una base suficiente y adecuada para nuestra opinión de auditoría.

AUDITORÍA Y ASSURANCE





Opinión

En nuestra opinión, las cuentas anuales abreviadas adjuntas expresan, en todos los aspectos significativos, la imagen fiel del patrimonio y de la situación financiera del **Instituto Valenciano de Investigaciones Económicas, S.A.** a 31 de diciembre de 2016, así como de sus resultados correspondientes al ejercicio anual terminado en dicha fecha, de conformidad con el marco normativo de información financiera que resulta de aplicación y, en particular, con los principios y criterios contables contenidos en el mismo.

AUREN AUDITORES SP, S.L.P.

Francisco Mondragón Peña 23 de marzo de 2017



Plaza del Ayuntamiento, 26, 2.ª 46002 Valencia Tlf. +34 96 366 40 50 www.auren.com

AUDITORÍA Y ASSURANCE



6. PUBLICATIONS

One of the Institute's aims is to foster the dissemination of quality economic research. Since it was founded, the **Ivie** has been publishing two series of working papers which are first submitted to an evaluation process, where highly qualified anonymous referees evaluate the papers before they are accepted for publication. In 2016, 9 working papers were published.

The **Ivie** wishes to publicly express its thanks for their collaboration to all the referees who are listed in this Annual Report. Their effort is decisive for the achievement of the Institute's objectives.

The publication of working papers is only the first stage in the diffusion of research activity, the final aim being publication in scientific journals. For this reason, information about the articles published by the associates is also given. In 2016 the **Ivie**'s researchers produced 20 books, published or forthcoming. They also published 104 scientific articles, 60 of which were for international volumes and refereed journals, as well as 32 other specialized publications.

6.1. IVIE WORKING PAPERS

6.1.1. AD SERIES

The AD series, coordinated by Carmen Herrero, is a continuation of the work initiated by the Department of Economic Analysis of the University of Alicante in its collection *A DISCUSIÓN*. This series provides and distributes papers marked by their theoretical content.

2016 Issues:

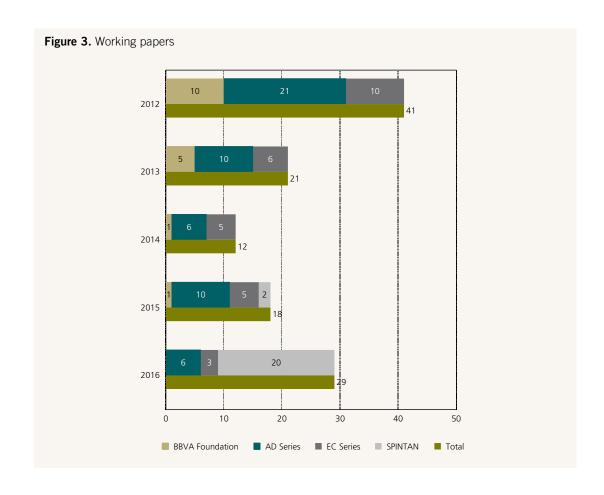
WP-AD 2016-01	$\mbox{\ensuremath{\mbox{\tiny c}}}$ The disposition effect: who and when?», Cueva, C., Iturbe-Ormaetxe, I., Ponti, G. and Tomás, J.
WP-AD 2016-02	«Non-Contributory Pensions Number-Gender Effects on Poverty and Household Decisions», Borrella, M.A., Bosch, M. and Sartarelli, M.
WP-AD 2016-03	«Collusion, Customization and Transparency», Martínez, F.
WP-AD 2016-04	«Handedness, Ability, Earnings and Risk. Evidence from the Lab», Sartarelli, M.
WP-AD 2016-05	«An Endogeneous scoring rule», Herrero, C.
WP-AD 2016-06	$\mbox{\ensuremath{\mbox{\tiny c}}}\xspace$ Crowding out effect and sorting in competitive labor markets with motivated workers», Cunyat, A.

6.1.2. EC SERIES

Coordinated by Matilde Mas, the EC Series mainly includes applications of different analytical tools to the study of specific economic problems.

2016 Issues:

WP-EC 2016-01 «Cadenas globales de valor y generación de valor añadido: El caso de la economía española», Solaz, M.



WP-EC 2016-02 «Opinion shopping: Partner versus firm-level evidence», García, B., Gill de Albornoz, B.

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Rosa Aisa (Universidad de Zaragoza)

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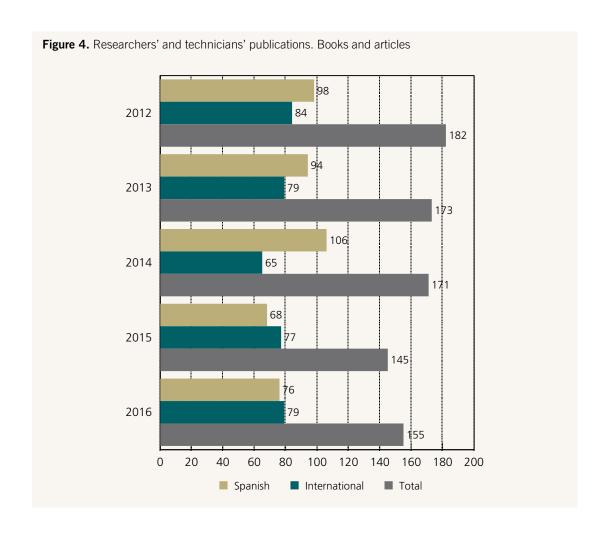
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"The microeconomics of corruption. A review of thirty years of research", Economics Working Paper No. 1525, Dpt. Economics and Business, Pompeu Fabra University, May.

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"Risk-taking behavior, earnings quality, and performance in Spanish banking: A profit frontier approach", Working Paper No. 2016/19, Dpt. Economics, Jaume I University, September.

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"Teachers' Intention to Use Educational Video Games: A Technology Acceptance Model Approach", in Connolly, T. and L. Boyle (eds.): *Proceedings of The 10th European Conference on Games Based Learning*. Sonning Common (England): Academic Conferences and Publishing International Limited, pp. 434-441.

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Pastor, J.M., J.M. Pavia, L. Serrano and E. Tortosa-Ausina:

"Rich regions, poor regions and bank branch deregulation in Spain", Working Paper No. 2016/02, Dpt. Economics, Jaume I University.

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Pérez, A.R., J.M. Peiró, A. Caballer, N. Tordera, L. Lorente, I. Rodríguez and Y. Ayala:

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Rodríguez-López, J., G.A. Marrero, R.M. González and T. Leal:

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Villar, A.:

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7. RESEARCH AND ECONOMIC STUDIES

The Institute conducts research and economic studies not only to further its own areas of specialization, but also in response to demands by other institutions and firms with which the **Ivie** has contracts. The following projects were carried out during 2016 (the financial year during which the project was developed is in brackets next to the title):

7.1. CONTRACTS WITH OTHER INSTITUTIONS

BBVA FOUNDATION-IVIE RESEARCH PROGRAMME

The BBVA Foundation and the **Ivie** have been regularly pursuing various joint lines of research since 1995. The present project aims to continue this collaboration and to improve it in several aspects. The priority lines of research to be supported and developed are *Accumulation of capital and knowledge, Growth, development and welfare, the Construction of Europe and globalization, Public policies evaluation and Geography, demography and health.*

During 2016 the following studies were carried out under this Programme:

CAPITAL STOCK IN THE SPANISH ECONOMY (2014-2015)

The objective of this project for the BBVA Foundation is to consolidate statistics on the physical capital stock in Spain, adapted to the new 2009 OECD methodology and the new European System of Accounts (ESA 2010). In 2016, the new series of wealth capital and productive capital (or volume indices of capital services) were updated based on the aforementioned methodology. The national series, corresponding to the period 1964-2014, presents a disaggregation of 19 types of assets for each of the 31 industries considered (CNAE 2009). The disaggregation allows two assets of particular importance to be analyzed: infrastructures and assets associated with new technologies (hardware, software and telecommunications), as well as the distinction between tangible and intangible assets. Within the latter, expenditure in R&D has been included for the first time following the guidelines of ESA-2010.

The same methodology was used for estimating the territorial series for the magnitudes mentioned above, covering the period 1964-2013. In this case, information is available for 19 types of assets and by industries: 25 for the autonomous communities and 15 for the provinces.

The scope of the estimates provided allows the characteristics of capitalization to be studied from multiple points of view, making the database a basic tool with which to study the sources of growth in Spain.

A report entitled *Acumulación y productividad del capital en España y sus comunidades autónomas en el siglo XXI*, produced in 2016, presents the main results of the latest estimates of investment and capital endowments for the Spanish economy. The report offers an analysis of the evolution of investment and capital stock in Spain and its regions in the 21st century, emphasizing the contrast between the years of expansion that preceded the economic downturn and the years following the onset of the crisis, which were characterized by different accumulation patterns. The authors consider the problems Spain faces when it comes to taking advantage of installed capital to achieve productivity gains, and the causes of these difficulties. Particular attention is also given to investment in R&D, the new asset incorporated in the 2016 edition of the database.

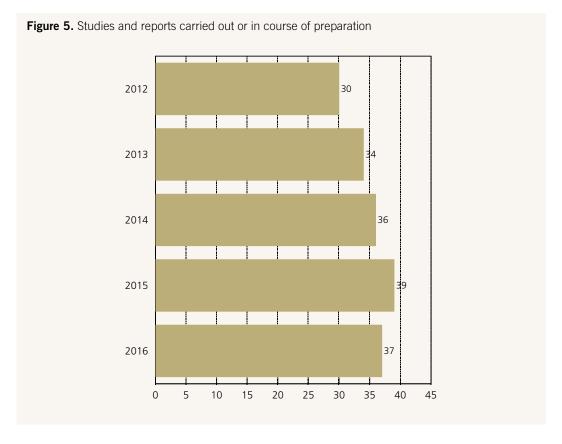
Research team:

Lorenzo Serrano (dir.) (Ivie, Universitat de València) Matilde Mas (dir.) (Ivie, Universitat de València) Francisco Pérez (dir.) (Ivie, Universitat de València) Ezequiel Uriel (dir.) (Ivie, Universitat de València) Rodrigo Aragón (Ivie) Eva Benages (Ivie) Héctor García (Ivie) Juan Carlos Robledo (Ivie) Consuelo Mínguez (Universitat de València)

U-RANKING PROJECT: PERFORMANCE INDICATORS OF SPANISH UNIVERSITIES (2016)

The purpose of this project financed by the BBVA Foundation is to build a system of performance indicators of Spanish universities of wide coverage, rigorous in its approach and properly framed in the international initiatives in this area: the Programme on Institutional Management in Higher Education (IMHE) led by the OECD, the International Ranking Expert Group (IREG) founded by the UNESCO European Centre for Higher Education (UNESCO-CEPES) and the EUA Rankings Review Report.

The research is approached from the careful analysis of the information provided by the simple and synthetic indices used, assessing the criteria for aggregation of simple indicators, the sensitivity of the synthetic indices and the rankings resulting from changes in the aggregation procedures. The project focuses on four types of university rankings based on different approaches and levels of aggregation. The first is U-Ranking, which analyzes the performance of the university system and sums up in a single index its achievements in teaching, research, and innovation and technological development. The second general ranking, U-Ranking Volume, takes into account the combined effect of outcomes and size, ordering universities according to their overall contribution to the mission entrusted to the university system. In addition to these general rankings, two more specific ones are considered. U-Ranking Dimensions focuses on ranking universities in each specific dimension



of their mission—teaching, research, and innovation and technological development—while U-Ranking Degrees ranks the bachelor's degrees offered by universities, providing information that is highly relevant for students in the process of deciding what university to study at.

In March 2016, the results of the fourth edition of this project were presented and the updated data was made available on the U-Ranking website. The ranking covered a total of 61 universities (48 public and 13 private). This edition has been the first to look at how the performance of the public university system has evolved, based on results obtained in the four editions of U-Ranking. A section of the 2016 report also categorizes universities into homogeneous groups according to the characteristics of teaching staff and students, their size, organizational complexity, financial resources, and the environment they operate in. In other words, it identifies strategic groups of universities. The authors then consider whether the universities categorized in any of these groups consistently occupy higher or lower positions on U-Ranking.

U-Ranking results are published on the website www.u-ranking.es, which is organized into two main sections. The section *U-Ranking of Spanish Universities* presents the results for general rankings. The site also offers partial indexes for the 2014-2016 editions and a summary of the methodological approach used. The second main section, *Select a University*, offers an interactive tool that allows students and other interested parties to construct their own customized ranking of bachelor's degree courses based on their preferred area(s) of study, geographical preferences and academic orientation. The tool covers 95% of the university system and provides information on cut-off marks and prices for more than 2,700 official bachelor's degrees and 960 schools and faculties. A new section added in 2016 provides a scorecard for each university and indicates its position on U-Ranking, U-Ranking Volume and U-Ranking Dimensions, along with basic information about the university and its scores (on a scale of 0-100) on each of the 25 indicators, which overlap the mean value of the institutions analyzed.

Research team:

Francisco Pérez (**Ivie**, Universitat de València) Joaquín Aldás (**Ivie**, Universitat de València) Rodrigo Aragón (**Ivie**) Héctor García (**Ivie**) Irene Zaera (**Ivie**) Julia Teschendorff (**Ivie**)

ESENCIALES SERIES (2016)

In 2015, the **Ivie** and the BBVA Foundation launched *Esenciales* [Essentials], a new series of periodicals designed to disseminate the main results of the Research Program carried out by the two institutions over the last twenty years. Brief, accessible and with the latest data available, the different issues in this series will examine questions dealt with in recent research, always in connection with the present.

The publication was brought out monthly in 2016. The 11 issues published analyzed various topics related to the Spanish economy, such as training for entrepreneurs; confidence in public institutions during the economic recovery; public spending on training for the unemployed; foreign direct investment in Spain; the cost of bank financing for companies; the loss of youth population; the demographics of rural municipalities; spending on basic public services during the economic downturn; the business fabric; employability, school drop-out rates, competences and educational mismatches among young people; and indebtedness and vulnerability of companies.

Research team:

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Joaquín Maudos (**Ivie**, Universitat de València)
Lorenzo Serrano (**Ivie**, Universitat de València)
Juan Fernández de Guevara (**Ivie**, Universitat de València)
Francisco Goerlich (**Ivie**, Universitat de València)
Ernest Reig (**Ivie**, Universitat de València)

Pilar Chorén (Ivie) Carlos Albert (Ivie, Universitat de València) Rodrigo Aragón (Ivie) Vicent Cucarella (Ivie) Héctor García (Ivie) Yolanda Jover (Ivie) Juan Pérez (Ivie) Jimena Salamanca (Ivie) Ángel Soler (Ivie, Universitat de València) Alicia Raya (Ivie)

THE COMPETITIVENESS OF SPANISH REGIONS IN THE KNOWLEDGE ECONOMY (2015-2016)

In developed economies, growth patterns are characterized by relying on human and technological capital to sustain competitiveness, based on adopting innovations and creating added value. The virtual stagnation of productivity in Spain during the expansion stage before the crisis, coupled with the subsequent housing bubble has meant that progress towards a new growth model based on the knowledge economy is essential. However, not all regions are equally prepared to take such a step. The objective of this research project carried out for the BBVA Foundation has been to analyze intensity differences in the use of knowledge by Spanish regional economies and explore the extent of the differences between them. The project led to the publication of a monograph that analyzes the following points:

- The economic behavior of Spain's autonomous communities in the period between the adoption of the euro and the onset of the international financial crisis in 2008, and the differential impact the crisis has had at the regional level.
- The role of knowledge in Spanish regions; assessment of its productive use and its role as a factor that accounts for differences in the ability of Spain's autonomous communities to generate income and improve productivity.
- The role of human capital as the core of the knowledge economy, including analysis of educational levels in the Spanish population, early school leaving, the level of effective competences provided by education and training, the use of human capital by companies, the type of positions offered by firms, training of entrepreneurs, problems associated with overqualification, and unemployment.
- The role of sectors that make intensive use of information and communication technology (ICT) as a component of the regional structure of production, and the role of ICT as a driver of economic growth. The authors also analyzed regional differences in the production of ICT manufactures and services, differences in their approach to ICT investment and endowments, and the use of these new technologies by households and companies.
- Environmental factors that condition the growth of autonomous communities; namely, the behavior of the public sector and the degree of sufficiency and efficacy with which its main functions are carried out in the regions; the level of development and quality of regional innovation systems; and the existence of agglomeration economies linked to large urban centers that contribute to the accumulation and dissemination of knowledge based on the geographical proximity of companies and workers.
- Factors related to the microeconomic environment. To analyze this point, the research team examined the characteristics of the business fabric of each region, in particular the size of companies, their degree of internationalization, and the qualifications of entrepreneurs and managers. In addition, synthetic indicators were developed to classify autonomous communities according to their level of competitiveness.

Research team:

Ernest Reig (Ivie, Universitat de València) Francisco Pérez (Ivie, Universitat de València) Javier Quesada (Ivie, Universitat de València) Lorenzo Serrano (Ivie. Universitat de València) Carlos Albert (Ivie, Universitat de València) Rodrigo Aragón (Ivie)

Eva Benages (**Ivie**, Universitat de València) Vicent Cucarella (**Ivie**) Juan Pérez (**Ivie**) Jimena Salamanca (**Ivie**)

DETERMINANTS OF SPANISH UNIVERSITY RESULTS (2015-2016)

The purpose of this study developed for the BBVA Foundation is to identify and characterize homogeneous groups of universities from a strategic point of view (resources, organizational characteristics and socioeconomic context), analyzing to what extent the performances of universities are conditioned by belonging to a particular group.

The ultimate objective is to identify the universities in each group which, given equivalent situations in their group, have better results in terms of teaching, research and transfer so as to detect good management practices and serve as a benchmark for other universities in their group.

The development of the research includes the following stages:

- 1) Identifying key areas for the classification of universities in strategic groups (homogeneity of members in terms of allocation of resources, external conditions and organizational and strategic behavior).
- 2) Determining the strategic groups of Spanish universities in order to assess whether their different realities allow us to better adjust the diagnoses carried out.
- 3) Characterizing strategic groups based on the areas studied and on the quantitative and qualitative variables associated with these areas.
- 4) Analyzing university results in light of the differences between groups and within each group.
- 5) Studying barriers to mobility, i.e., the difficulty a university has to move from one group to another, with the implications that this entails.

Research team:

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PATTERNS OF UNIVERSITY EXCELLENCE: EXPERIENCES, DETERMINANTS AND PROPOSALS FOR IMPROVEMENT (2015-2017)

The aim of this research project for the BBVA Foundation is to identify experiences of university excellence in Spain, in the various areas of activity in higher education institutions (teaching, research and transfer). The study examines their particular characteristics and identifies the contributing factors which could be adopted, imitated or adapted by other institutions with similar characteristics (benchmarking).

The development of the analysis and the improvement proposals made are based on the definition of the strategic groups identified in the previous project carried out for the BBVA Foundation *Determinants of Spanish University Results*. After identifying the strategic groups and explaining the heterogeneity of the intergroup and intragroup results, a sample of cases of excellence will be identified, including a representation of each group and examples of outstanding practice in each of the university missions. The routines and organizational systems that account for the excellence of the results will be identified, as well as the use of resources, capabilities and strategies. The aim is to outline behavior patterns which could serve as a basis for improvement proposals potentially transferable to other universities.

The study's methodology is based on direct observation and examination of the cases analyzed using documentary analysis, in-depth interviews, group dynamics, questionnaires, etc. The research will include the following stages:

- 1) Identifying cases of university excellence in each strategic group (universities with outstanding results in the areas of teaching, research and the transfer).
- 2) Analyzing the reasons for good intragroup results and evaluating the degree of idiosyncrasy or transferability of these factors to the universities of the same group, as well as to other groups.
- 3) Designing a benchmark program according to the reference strategic group and the specific contextual factors of each university.

In 2016, activities related to the first point were carried out and partial work was done on the second point. Nine universities that outperform others in their strategic group have been identified, including institutions that serve as benchmarks for excellence in both teaching and research. Work has been done to document the characteristics of these universities and their actions. This involved studying public documents and conducting interviews with people regarded as rich sources of information in each case. The information gathered has been encoded and analyzed as a first step towards identifying patterns of effective actions that can be transferred to other universities.

Research team:

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THE FUNCTIONING OF THE JUSTICE SYSTEM IN SPAIN: STRUCTURES, RESOURCES AND RESULTS (2015-2016)

The Spanish judicial system has been criticized throughout the decades since the adoption of the 1978 Constitution, but during the crisis public trust has diminished greatly in the institutions responsible for this important role, as well as in their results. According to the Eurobarometer, in this area we can observe the greatest differences between Spain and other developed countries in terms of confidence in public institutions. These negative impressions contrast with the abundant legislative and administrative reforms of recent decades, including the ones addressed in the beginning years of the 21st century.

Furthermore, the impact of national judicial systems on the economy has been stressed by the IMF, the European Central Bank, the OECD, the World Economic Forum and the World Bank, as well as specialized literature: an effective judicial system encourages investment and facilitates the growth of companies, promoting productivity and competitiveness; the growth of the most innovative activities is based on investment in intangible assets (e. g. intellectual property rights), which is favored by the proper functioning of the judicial system, as is the case of intellectual property rights; an effective judicial system encourages competition by ensuring the proper execution of contracts, deterring opportunistic behaviors, and reducing transaction costs, particularly in the financial area.

This research project carried out for the BBVA Foundation has focused on analyzing the functioning of the Spanish judicial system. In 2016, a monograph with the following content was produced:

- A description of the Spanish judicial system and the most important components of judicial structures, including the jurisdictions considered (civil, criminal, social and administrative) and the organizational units, processes and human resources involved in its functioning.
- An assessment of conciliation, mediation and arbitration as alternative dispute resolution methods, with particular emphasis on their relevance in advanced societies, and an analysis of the use of such approaches in Spain, where the judicial system is overburdened.
- An examination of the human and financial resources devoted to justice and legal activities in Spain. This section offers international benchmarks and various analyses, from the perspective of personnel and central and regional governments, and in terms of the human and financial resources that the private sector (companies and families) devotes to legal activities.

- An analysis of the efficacy of the system in general and differences between the various jurisdictions: the serious problem of delays in court proceedings and the enforcement of judgments, and possible external and internal causes of such delays; and the efficiency of the system as reflected in the relationship between resources used and results achieved.
- An assessment of the quality of justice, encompassing an analysis of ease of access from a geographical, financial and informational perspective; quality guarantees offered by procedures for selecting court personnel and the use of ICT; and the quality of judicial rulings in terms of workloads, the finality of judgments, and the appeal rate.
- A study of satisfaction with the justice system on the part of different groups and from different perspectives, including an international comparison.
- An assessment of the independence and impartiality of the justice system and their determinants in practice, from an objective viewpoint and in subjective terms (i.e., user perceptions and opinions).
- Finally, recommendations and proposals for action are made to improve outcomes for this key institution.

Research team:

Francisco Pérez (**Ivie**, Universitat de València) Silvia Barona (Universitat de València)

Andreu Iranzo (Fund. Asamblea de Ciudadanos y Ciudadanas del Mediterráneo and Council of European Affairs)

THE ECONOMIC COSTS OF THE INSTITUTIONAL QUALITY DEFICIT AND CORRUPTION IN SPAIN (2016-2017)

A country's economic development depends crucially on the quality of its government institutions, and the costs of corruption go well beyond the value of misappropriated public funds. Poor governance and corruption undermine key elements in the functioning of an economy and result in lower productivity, higher unemployment, and wages that are lower than would otherwise be possible with the technology and human capital available.

This report produced for the BBVA Foundation has two main objectives: first, to compare institutional quality and perceived levels of corruption in Spain with those in other countries around the world, particularly the main European economies; and second, to make a rough estimate of the cost of the country's institutional quality deficit in terms of economic development. The analysis also includes a review of some of the main challenges related to the institutional framework and governance in Spain and sets out lines of action that could lead to improvements in these areas. Based on scientific literature that focuses on the key determinants of productivity and economic growth, the report makes intensive use of the institutional quality indicators developed within the framework of the *Worldwide Governance Indicators* project. It also includes a summary of the data and information generated in this area for over 200 countries, by 31 public, private and nongovernmental organizations.

Research team:

Francisco Alcalá (Ivie, Universidad de Murcia)

Fernando Jiménez (Universidad de Murcia e Inst. Carlos III-Juan March de Estudios e Investigaciones)

CREDIT, FINANCING OF INVESTMENT, AND PRODUCTIVITY (2016-2017)

The recent international financial crisis has generated renewed interest in how conditions of access to finance affect investment, employment and productivity. This study carried out for the BBVA Foundation looks at how lending behavior in various phases of the business cycle affects the level and composition of investment and the medium-term productivity of companies, economic sectors and economies. These issues are highly relevant in Spain, a country with a particularly poor track record on productivity, which conditions its growth potential. Spain is a good laboratory for investigating these issues because of the many SMEs in the country that are highly dependent on bank financing, and due to the magnitude of the banking crisis, which led to severe tightening of access-to-finance conditions. Specific issues that will be explored in this research include the following:

- The effect that an intense build-up of investments financed by a credit boom has had on productivity, the criteria on which the banking decisions that fueled the boom were based, and the anticipated duration of its effects.
- The significance of the level of dependence of companies and sectors on banks for financing as a factor that explains how their productivity has evolved.
- The determinants of productivity at the sectoral and aggregate level, taking into account the role of financial variables.
- A micro-analysis of two variables—investment and productivity—at the sectoral and aggregate level.

Research team:

Juan Fernández de Guevara (Ivie, Universitat de València) Joaquín Maudos (Ivie, Universitat de València) Rodrigo Aragón (Ivie) Jimena Salamanca (Ivie)

DEVELOPMENT AND WELL-BEING: A COMPARATIVE ANALYSIS OF CURRENT MEASURES (2016-2017)

The misuse of GDP as a measure of development or well-being has led many researchers and institutions to propose alternatives that reflect the goal of improving the living conditions of citizens and peoples, and some of these new approaches have gradually been gaining ground in the international arena. The Human Development Report (HDR), launched by the United Nations in 1990, was an important step in this direction because it linked human development to variables related to health and education. Also, since the publication in 2009 of a report by Stiglitz, Sen and Fitoussi that proposed 30 measures for improving measurement of development, well-being and progress, significant advances have been made in developing well-being metrics that go beyond economic variables.

When it comes to assessing different policies, the idea of well-being, or quality of life, is one that has economic, ethical and political dimensions. Measuring the progress of a society means assessing the well-being of individuals, taking into account the options open to them, their achievements, and their level of satisfaction. Purely economic variables are not the only determinants of well-being. The concerns of individuals are not limited to their wealth or ability to consume material goods: they also care about their health, the quality of their work, their social relations, the environment and their children's future. Other aspects of human well-being include social integration, political participation and legal certainty.

The purpose of this research, conducted for the BBVA Foundation, is to offer an insight into the current situation as regards well-being in Spain, the situation in the country's autonomous communities, and how this has evolved in recent years. To this end, the researchers involved have adopted the methodology of the OECD Better Life Initiative. Subject to statistical limitations related to the availability of regional data, they analyze the aspects and variables identified in the initiative for Spain and its autonomous communities in the period 2006-2014.

The authors of the study begin by comparing Spain, the OECD as a whole, and several European countries (Germany, the United Kingdom, the Netherlands, Italy and Portugal) in the period 2009-2014. This comparison serves as a means of analyzing the Spanish situation and its evolution in this limited context, which is compared with that of the OECD as a whole and the selected countries in particular. The study offers a schematic overview of Spain's evolution in this context, based on a limited number of variables.

The authors go on to offer an in-depth analysis of the evolution of Spain and its autonomous communities with respect to the variables selected by the OECD, grouping them into dimensions that differ slightly from those proposed by the OECD, and using additional variables in some cases to offer a clearer picture of how well-being has evolved. The variables are grouped into five major blocks: population and work, inequality and poverty, health, education, and social relations. Finally, the situation in each region is summed up in relation to a group of selected variables, and the level of life satisfaction is analyzed in each case.

Research team:

Carmen Herrero (Ivie, Universidad de Alicante)

PATHWAYS TO LABOR MARKET INTEGRATION AND DETERMINANTS OF EMPLOYABILITY: UNIVERSITY TRAINING VS. ENVIRONMENT (2016-2017)

The main purpose of university rankings is to order the universities in a geographical area (national or international) based on their teaching, research and transfer outcomes. Depending on the methodological approach, some rankings focus exclusively on research results, offering a rather partial view of university missions. Others, such as U-Ranking, take into account the three dimensions indicated, offering a much fuller picture of the university system (within Spain in the case of U-Ranking). However, there is broad agreement that one aspect of university performance—the employability of graduates—is barely addressed. Generally, this is because until now there has been practically no reliable and comparable information available concerning employment rates and the fit between the competences of graduates of specific universities and the positions they occupy. In Spain, this situation changed very recently. Data on the employability of university graduates, broken down by degree and university, is now available thanks to information made public by the Ministry of Economy and Competitiveness and the National Statistics Institute in 2015. This data makes it possible to tackle a range of significant issues in this area.

This research project for the BBVA Foundation seeks to characterize pathways to labor market integration for graduates and identify determinants of employability in relation to specific degrees, branches of study and universities. The analysis of integration pathways will take into account the level and quality of employment in each case, the correspondence between training and the profile of positions held, stages of labor market integration, and changes in the job-qualification fit over these stages. In short, taking as its point of departure a known and significant fact in our economic context—higher unemployment rates among university graduatesthe ultimate aim of this monograph is to examine the role of various types of determinants of employability, taking into account, as far as possible, environmental factors and factors related to the good practices of university institutions.

Research team:

Joaquín Aldás (Ivie, Universitat de València) José María Peiró (Ivie, Universitat de València) Lorenzo Serrano (Ivie, Universitat de València) Ángel Soler (Ivie, Universitat de València) Irene Zaera (Ivie)

GLOBALIZATION, LOCATION OF PRODUCTION, AND GROWTH (2016-2017)

Economic globalization in recent decades has had a major impact on the location of production processes, generating greater fragmentation and internationalization of production chains, many instances of offshoring of activities from advanced to developing countries, and a certain tendency towards reduction of income inequality between countries. These changes are explained by several factors, including lower transport costs, the information and communication technology revolution, advances in models of business management and organization, and the possibility of fragmenting production processes into a series of tasks that have different factor content and are carried out at different locations, which is facilitated by better functioning of markets. International relocation of production raises many questions related to the characteristics of this process and its consequences for the growth and well-being of countries.

The aim of this research project is to study the dynamics of international relocation of production and its impact on the economic growth of countries (Spain in particular) in the context of globalization and growth in international trade over the last half century and of the evolution of inequality in income distribution across countries. The following issues will be studied:

- The dynamics of international relocation of production, particularly how the intensity of this process has evolved in recent decades. Highly disaggregated data will be used to identify the sectors, industries and products that have been central to this process in different periods.
- The impact of relocation on the growth of countries, determined by performing an econometric analysis within the analytical framework of growth and convergence equations. An analysis by world regions and countries of the winners and losers in the international relocation process in different periods will also be performed, and the industries whose relocation accounts for the most significant impacts will be identified.
- The position of the Spanish economy in the process of international relocation of production and the consequences of this for the country's development. The study will focus on how Spain has participated in this process (in which sectors and industries, and with what degree of intensity) over its various stages, and how this has affected its economic growth dynamics.

Research team:

Francisco Alcalá (Ivie, Universidad de Murcia) Marta Solaz (Ivie)

RESEARCH PROGRAMMES WITH OTHER INSTITUTIONS

TRAINING, EMPLOYMENT AND COMPETITIVENESS (2015-2016)

Within the framework of the Bankia-Ivie Research Program on Human Capital, Education and Employment, the Ivie will be supporting Bankia during the period 2015-2016 by taking part in two initiatives: a) designing the lines of work for the Centre of Knowledge and Innovation and b) drawing up a report on the focus given to the design and assessment of dual vocational training (VT) policies in the most advanced European countries.

In 2016, a diagnostic assessment of dual VT was produced within the framework of this program. The report examined two aspects that are crucial to analyze the situation in Spain from a comparative perspective: 1) how assessment of dual VT policies is handled in the European context, and 2) the mechanisms and units that have been created in benchmark countries in the field of VT and dual VT to perform analysis and assessment activities. In short, the project has offered the Bankia Foundation for Dual Training an analysis of the situation as regards assessment of dual VT in Europe and Spain with the aim of facilitating—thanks to this comparative perspective—the Center's design of actions in this area that will guide, define and give content to lines of research and action related to the assessment of dual vocational training in Spain.

The report looks at how countries regarded as exemplary for their good practices approach and assess their dual VT policies, providing a detailed analysis of the situation in Germany, Switzerland and the Netherlands, as well as an overview of the situation at the European level and an analysis of certain aspects of interest in the case of Denmark, Austria and England. This international frame of reference allows the authors to consider the situation in Spain with respect to assessment of dual VT (taking into account the diversity of cases at the autonomous community level) and compare this to what occurs in other areas of education in the country, such as university education, where assessment is now more developed.

In addition to considering the various groups with an interest in assessment and the instruments and tools used, the authors focus on the kind of organizational units that perform activities related to analysis and assessment of policies and outcomes. The underlying aim is to provide a frame of reference to guide the Center for Knowledge and Innovation. The report also examines differences that are significant in relation to issues of this kind, such as the characteristic business fabric of each economy.

Another goal of the report is to highlight the lack of information on this issue in Spain and propose alternatives which allow for the design and maintenance of databases that focus on this issue (comparable to those in other countries).

In addition to the report, the research team has produced a catalogue of actions in the field of dual VT assessment that summarizes key points concerning deficiencies in the assessment of dual VT in Spain and sets out recommended lines of action in different areas and over different time horizons.

Research team:

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FIAB-CAJAMAR-IVIE RESEARCH PROGRAMME (2013-2016)

In 2013, a Three Year Agreement with the Spanish Food and Drink Federation (FIAB) and Cajamar was established in order to carry out various studies on the food sector based on the analysis of the existing statistical information. The main aim is to improve the decision-making and visibility of the sector commensurate with its importance in the whole of the Spanish economy. The content of **Ivie**'s collaboration with these two institutions is structured in three parts: its participation in FIAB's annual report, the preparation of thematic reports and the provision of technical assistance.

In 2016, the collaboration of **Ivie** focused on the elaboration of the annual report which contains a Spanish food industry analysis that takes into account several aspects: evolution of the business census, production, labor market, investment and capitalization, productivity, external sector (trade and investment), prices, consumption, R&D and international comparison of the agro-food sector.

During this past year, the **Ivie** also gave support to the Federation in the organization of an open debate and elaborating a brochure for the presentation of the study.

Additionally, the **Ivie** provided technical support to the FIAB regarding any financial and statistical doubts or questions.

Research team:

Joaquín Maudos (**Ivie**, Universitat de València) Rodrigo Aragón (**Ivie**) Juan Carlos Robledo (**Ivie**) Jimena Salamanca (**Ivie**) Ángel Soler (**Ivie**, Universitat de València)

SPINTAN (2013-2016)

The SPINTAN (Smart Public INTANgibles) Project, promoted and funded by the European Union within the Seventh Framework Programme, was launched December 2013 and ended November 2016. The main objective of the project was to analyze the impact of public sector intangibles on innovation, well-being and *smart* growth. The project, coordinated by the **Ivie**, is carried out by academic researchers from a range of 12 European institutes and universities: NIESR (UK), LUISS (Italy), ISTAT (Italy), Imperial College (UK), The Conference Board, OECD, ZEW (Germany), DIW (Germany), wiiw (Austria), FORES (Sweden) and KOPINT (Hungary). The Department of Industry of the Australian Government and two Japanese institutions, The Research Institute of Economy, Trade and Industry (RIETI) and Gakushuin University are also partners of the project.

In 2016, the committed activities still pending were completed. Specifically, the final version of the database on intangible assets in the public sector was produced and a manual describing the main statistical and methodological aspects of the database was published. The availability of this information (which covers EU member states and a broad set of large countries in the rest of the world) will facilitate analysis of the medium-and long-term impact that austerity policies associated with fiscal consolidation have on economic growth.

Nineteen working papers and 16 policy briefs were published in 2016. All the information produced over the three-year life span of the project has been available to the public since it was completed in November 2016.

Research team:

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DATA FOR EUROPEAN ICT INDUSTRIES ANALYSIS (DICTA) (2015-2017)

The Digital Single Market is the second priority area defined by the current Presidency of the European Commission for the period 2014-2019. The advancement of the information society is therefore one of the focal points of economic policy measures at the European level. The Directorate General for Communications Networks, Content & Technology (DG CONNECT) and the Joint Research Centre Directorate B (both European Commission bodies) jointly carry out the PREDICT project, which aims to analyze the situation of the information and communication technology (ICT) sector and ICT R&D investment in Europe. Since 2013, the Ivie has collaborated on the PREDICT project by developing a database that can be used to track various aspects of the ICT sector, including its ability to generate added value and employment, its labor productivity, and the intensity of investment in R&D in the sector. This database is used by the European Commission in various indicators and reports, including the Digital Scoreboard, the Digital Economy and Society Index, and the European Digital Progress Report.

In 2016, the Ivie's contribution to PREDICT was broadened to include the media and electronic content sector and the online retail sales sector in addition to the ICT sector. The range of information provided has also been expanded to include predictions for the most recent years, international trade indicators for the ICT sector, and measures aimed at integrating the sector with the rest of the economy.

More specifically, this project focuses on the following points:

- The size of ICT and media and electronic content (MC) industries in the EU and in a sample of relevant countries of the world.
- The performance of the ICT and MC industries during the period of crisis and the differences in productivity between them.
- The capacity of these sectors to create jobs.
- The behavior of public funding in R&D on ICT assets during the crisis and its consequences in different countries and their industries.
- The importance of e-commerce firms to retailers and what is expected of this sector.
- A detailed analysis of data on international trade of ICT products.

— The interlinkages between the ICT sector and the remaining economic sectors of each European country...

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Consuelo Mínguez (Universitat de València)

Belén Miravalles (Ivie)

STUDY ON TFP GROWTH: DRIVERS, COMPONENTS, AND FRONTIER FIRMS (2016)

Within the framework of European Semester activities, the European Commission monitors sectoral competitiveness policies. The **Ivie** is part of an international consortium coordinated by WIFO (Austrian Institute of Economic Research), which prepares reports on various aspects of the European economy at the request of the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW). In 2016, the **Ivie** worked with the National Institute of Economic and Social Research (NIESR, London), the University of Valencia, and the University of Perugia to produce a report that analyzes productivity differences among European companies. The study, which uses a sample of more than a million companies, focuses on analyzing differences in the efficiency with which productive resources are allocated in Europe, in such a way as to determine whether the most productive companies in each sector of activity are the ones that gain market share, as would be expected. The report characterizes frontier firms (the most productive ones) in each sector of activity and considers the factors that determine a company's proximity to the productivity frontier. Finally, the question of whether productivity levels are converging towards observed best practices is examined.

Research team:

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Laura Hernández (Ivie)

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THE ECONOMIC VALUE OF KNOWLEDGE-BASED ACTIVITIES IN SPAIN AND ITS REGIONS (2016)

In the context of Spain's recovery from a severe economic and financial crisis, knowledge-based activities have had a substantial impact on productivity, economic development and income generation in the country's

regions, and this continues to be the case. This is a cross-cutting issue that affects the production system, the education system and the labor market, and one that may have a huge influence on shaping Spain in the 21st century. In this research, the aim of the Ramón Areces Foundation and the Ivie was to help lay the foundations for the promotion of policies that facilitate the development of knowledge and its more effective use to benefit society as a whole.

The research was structured in two parts. First, a methodology for building a database that quantifies the value of knowledge-based economic activities in Spain and its autonomous communities was developed. This database was then used to assess how the intensity of knowledge use has evolved in Spain and examine regional differences in this area. The researchers analyzed the importance of production specialization and the intra-sectoral effect when it comes to explaining these differences, and their effects on productivity and gross domestic product (GDP) per capita.

The database offers a high degree of sectoral disaggregation (27 sectors at the national level and 21 at the regional level) and also provides disaggregated information for the factors of production (capital and labor) that contribute to knowledge.

Research team:

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ENDOWMENTS OF INTANGIBLE ASSETS IN SPANISH REGIONS, 1995-2014 (2016)

This research, carried out for the Cotec Foundation for Innovation, aims to estimate investment in intangible assets "beyond GDP" (i.e., those which have not yet been included in GDP by systems of national accounts) for Spain's autonomous communities. As a result of this research, Spain has become the first country in the European Union for which this regional-level information is available. The estimates also offer a high degree of sectoral disaggregation in order to supplement other information already available on sources of growth in Spanish regions during the period 1995-2014. To provide as complete a picture as possible, both the database and the accompanying report present information for intangible assets already included in the definition of gross domestic product (GDP) by the National Accounts of Spain. This information is based on estimates made by BBVA Foundation-Ivie annually.

Intangible assets (also called knowledge-based assets by the Organization for Economic Cooperation and Development, OECD) can be classified in the two blocks referred to in the previous paragraph. The assets that have already been recognized as such by national accountants (and therefore included in GDP) are software and databases, mineral exploration and evaluation, and artistic and cultural originals. More recently, R&D has also been included, having gone from being considered intermediate consumption to being treated as part of investment. Intangible assets "beyond GDP" include those that contribute to increasing value added by enhancing brand image (such as design, advertising and market research), expenditure to increase human capital by training employees to take up jobs or perform job functions, and expenditure to improve the internal organization of companies.

The report that accompanies the database presents the main features of approaches to investment in intangible assets in Spain and its autonomous communities in the period 1995-2014. The definition of intangible assets, the methodology and the statistical sources used are compatible with those used at the international level, and series are compatible with those provided by BBVA Foundation-Ivie for investment in tangible assets and the intangible assets already included in the National Accounts of Spain that provide GDP information.

Research team:

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Laura Hernández (**Ivie**)
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ANALYSIS OF THE TRANSFORMATIONS OF THE VALENCIAN ECONOMY

CAÑADA BLANCH FORUM (2016)

For several decades now, the Cañada-Blanch Foundation, the **Ivie**, the London School of Economics (LSE), the Valencian Association of Entrepreneurs (AVE) and Bankia have promoted rigorous economic analyses on significant economic and social problems. These institutions consider that Europe, Spain and Valencia are currently at a socioeconomic crossroads full of uncertainties, and that reflection and action proposals are needed. For this reason, they decided to create the Cañada Blanch Forum, a project that prepares analysis and forecast documents, and organizes seminars in which the results are presented, discussed and disseminated. It began in 2014 with the aim of continuity and is open to the participation of other social, economic and research institutions, and each year it will focus on the issues considered crucial for the future of the Valencian Community, on the basis of a rigorous approach to problems and with emphasis on medium and long-term prospects and proposals for action.

On this basis the 2016 Cañada Blanch Forum *Risks of innovation: How to manage innovation to better compete* was celebrated. The 2016 Forum analyzed the explicit and implicit risk involved in adopting a culture of innovation in institutions, companies and administrations, all of which must manage a risk that combines three components (in different proportions):

- 1) a modernizing component derived from the acceptance by the market of improvements related to a new product, value-generation process or business model;
- 2) a business component related to the fit of the culture of innovation with the organizational structure, ownership configuration and human resources;
- 3) the financial dimension of innovation risk, which results from likely time differences in flows of receipts and payments.

This edition of the Forum was held at the facilities of Marina de Empresas on November 30 and December 1 and attracted nearly two hundred participants (including speakers and attendees).

An overview of this work and of the activities that took place within the framework of the Forum is available at the website http://www.ivie.es/foro-canada-blanch/foro2016/, which presents responses to issues raised at the Forum and brings together papers, messages and the conclusions drawn, as well as pictures and videos.

Research team:

Javier Quesada (**Ivie**, Universitat de València) Pilar Chorén (**Ivie**) Carlos Albert (**Ivie**, Universitat de València) Juan Pérez (**Ivie**)

TECHNICAL ASSISTANCE IN THE IMPLEMENTATION OF THE RURAL DEVELOPMENT PROGRAM FOR THE VALENCIAN COMMUNITY 2014-2020 (2016)

The purpose of the Rural Development Program (RDP) for the Valencian Community 2014-2020 (PDR CV 2014-2020) is to implement a strategy which fulfils rural development priorities by means of a series of measures defined by EU regulations on rural development aid through the European Agricultural Fund for Rural Development (EAFRD).

The purpose of this assistance, commissioned by the Valencian Agency for Agricultural Support and Guarantee (AVFGA), is to provide a detailed description of the methodology used to calculate economic values for Measure 10, Agri-environment and Climate, of the Rural Development Program for the Valencian Community 2014-2020. Specific statistical data was used to calculate reference amounts, and the research team considered published literature and relevant research in this area. The work done led to the production of a technical report.

Research team:

Carlos Albert (Ivie, Universitat de València)

PROPOSALS FOR THE DEVELOPMENT OF AN INNOVATIVE INDUSTRY IN THE VALENCIAN CENTRAL **COUNTIES (2016)**

The Ivie, in collaboration with the Valencian Institute of Business Competitiveness (IVACE), carried out this study on the socioeconomic situation and industry in the central counties of the Valencian Community with the aim of identifying proposals for action to develop and promote an innovative industry in these counties and guide industrial innovation policy in the territory.

The analysis focuses on the counties of Costera, Vall d'Albaida, Safor, Marina Alta, Marina Baixa, Comtat and Alcoià. A wide variety of economic and social actors from the central counties collaborated in the study.

The report begins by analyzing the evolution of the general socioeconomic situation in the Valencian Community in recent years, the region's production specialization, and the characteristics of companies, before focusing on the socioeconomic situation in the central counties. For this territory, the report provides a more detailed analysis of population dynamics, how the labor market works and how human capital is used, the business fabric and specialization, innovation and technopoles, logistical infrastructure and industrial land, and land uses. Finally, the authors offer a SWOT (strengths, weaknesses, opportunities and threats) analysis of the counties, set out a series of conclusions, and identify strategic priorities.

The assessment and proposed strategic priorities were discussed in a series of working groups composed of social actors from the counties and in interviews with experts, which were carried out to complement the first part of the study with input from various experts and economic actors from the central counties. The aim of this discussion stage was to increase the strategic value of the study by incorporating suggestions into the assessment and specific proposals for action based on a perspective that is more grounded in the territory.

As a result of the analysis carried out and the contributions made by various social and economic actors who participated in the project, priority lines of action have been defined for industrial policy to boost innovation in the central counties.

Based on the working groups, interviews with experts, and graphic material included in the report, the Ivie created a video that offers an overview of the project and the conclusions drawn.

Research team:

Javier Quesada (Ivie, Universitat de València) Pilar Chorén (Ivie) Carlos Albert (Ivie, Universitat de València) Irene Zaera (Ivie)

AUTONOMOUS COMMUNITY FUNDING: A NEW MODEL (2016)

This research, carried out by the **Ivie** for the Regional Ministry of Finance and Economic Model, addresses the Valencian Regional Government's need for a detailed analysis of the current situation of the Valencian Community within the autonomous community funding system. The research team produced two documents. The first, which is intended to serve as a basis for developing the new funding model proposed by the Valencian Regional Government in negotiations with the Spanish government, analyzes the following points: the functioning of the current autonomous community funding model; the main results of the current funding model for each autonomous community and in the various phases of its implementation for the period 2009-2014; the situation of the Valencian Community in the current autonomous community funding model, and the results obtained by the region; and the consequences that the current design of the autonomous community funding system has had for the Valencian Community, based on an estimation of 1) the underfunding and its effects on debt, and 2) the effects on final results of possible modifications to the design of the current model.

The second document offers a comparative analysis of the strategic positioning of Spain's other autonomous communities with respect to the funding model. The aim in this case is to set out the main criticisms and weaknesses of the current model and present technical proposals made by experts in this area. The report examines the assessments and opinions of Spain's other autonomous communities regarding the current model and presents critical analyses produced by experts on autonomous community funding (academics and specialized professionals) since the current model was adopted.

Research team:

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Belén Miravalles (Ivie)

Silvia Mollá (Ivie)

Héctor García (Ivie)

Juan Pérez (Ivie)

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VALENCIA: BLUEPRINT FOR A MODERN EUROPEAN CITY (2016)

The severe impact that the economic crisis has had on the city of Valencia has compelled local authorities to change municipal priorities. Without giving up activities related to the socioeconomic promotion of the city as a motor for the development of the Valencian Community, Spain and the EU, city authorities have decided to look inwards and focus on Valencia's 19 districts. The aim is to undertake initiatives that make Valencia a city more oriented towards people by focusing on social protection of city residents, community interconnectedness, access to housing, urban mobility, social and cultural facilities, and local solidarity initiatives.

The authors of this study for the Valencia City Council assess the impact of the economic crisis on the model for the city of Valencia and its districts and perform a SWOT (strengths, weaknesses, opportunities and threats) analysis that serves to establish a framework and structure for municipal lines of action being pursued. The report concludes by proposing key objectives and areas of action for the city.

Research team:

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IMPACT ANALYSIS

THE SOCIO-ECONOMIC CONTRIBUTION OF THE UNIVERSITY OF VALLADOLID (2016)

The aim of this study, conducted by the **Ivie** for the University of Valladolid, is to determine the magnitude of the University's contributions to the territory where it carries out its activity, estimate its impacts, and orient changes that should be pursued to improve its results. The authors study the activity carried out by the institution, analyze its socioeconomic environment, and provide a quantitative estimate of its impacts—from the perspective of demand (short-term) and supply (long-term)—on production and income, employment, growth and tax revenues.

Research team:

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ECONOMIC IMPACT OF THE 36th VALENCIA MARATHON TRINIDAD ALFONSO (2016)

The objective of this study, commissioned by the Sports Club Correcaminos of Valencia —in coordination with Trinidad Alfonso Foundation and Valencia's Sports Foundation, was to (i) quantify the economic impact of the celebration of the 36th EPD Valencia Marathon Trinidad Alfonso, which took place in 2016, in terms of production, income (value added) and employment of the Valencian economy; and (ii) to analyze the runners' satisfaction with this sport event. In relation to the first aim, the expenditure required to host the event as well as the tourist expenditure made by the participants during their stay in Valencia have been estimated. Once the full direct costs associated to the marathon are computed, the overall impact is estimated using the inputoutput methodology. With respect to the second objective of the study, fieldwork was carried out, including a satisfaction survey of runners who took part in the race.

Research team:

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ECONOMIC IMPACT OF THE TRINIDAD ALFONSO FOUNDATION'S PROGRAM TO SUPPORT SPORTS COMPETITIONS IN THE VALENCIAN COMMUNITY (2016-2017)

The Trinidad Alfonso Foundation has presented the rules governing its Competition Support Program, which is aimed at promoting and supporting the organization of official sports competitions in the Valencian Community. To be eligible for support, sports events must be official competitions (national or international), and funding recipients must be Spanish federations or universities that organize official sports competitions hosted in the region. In addition to raising the national and international profile of the Valencian Community, the aim is to encourage wealth creation in the regional economy, given that it is the spending by participants from outside the region that is most significant when it comes to generating economic impacts.

In this context, the aim of the study is to estimate the economic impact in terms of income (GDP) and employment associated with the Competition Support Program, taking into consideration all the competitions that will be funded during the period covered by the program. The estimated impacts are generated both by tourist spending (by participants from outside the Valencian Community) and expenditure on the organization of events. The report will provide an aggregate estimate of the economic impact of the program as a whole, and specific estimates for the competitions with the most significant impact. As in other economic impact studies, an input-output model will be used, and the corresponding table will be constructed for the Valencian Community.

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Joaquín Maudos (Ivie, Universitat de València) Carlos Albert (Ivie, Universitat de València) Belén Miravalles (Ivie)

THE ECONOMIC IMPACT OF MERCADONA (2015-2017)

The objective of this study conducted for Mercadona is to estimate the economic impact the company has had on the Spanish economy in terms of employment and income (value added) in 2015. To this end, three types of impacts are estimated: a) direct, deriving from the final sale of products in their stores; b) indirect, deriving from Mercadona's activity throughout the different sectors of the economy as a result of purchases from their suppliers and hiring various types of services; and c) induced, deriving from the consumption of income generated through direct and indirect impacts. The study began in 2015, and in early 2016 the first results concerning the impact of Mercadona's activity in 2015 were presented. In 2016, the research team studied the impact of the supermarket chain in that fiscal year. The reports for the two years describe impacts at the aggregate level and by branch of activity.

Research team:

Joaquín Maudos (**Ivie**, Universitat de València) Eva Benages (Ivie, Universitat de València)

ANALYSIS OF THE EFFECTS ON FREIGHT TRAFFIC OF ADAPTING THE TRAIN YARD OF THE ALMUSSAFES INDUSTRIAL PARK TO EUROPEAN GAUGE TRACK (2016)

The integration of the Valencian Community into the trans-European rail network through the Mediterranean Corridor strengthens the competitiveness of companies due to the improvement in the efficiency and effectiveness of rail as a means of transport. In this context, consideration is being given to the possibility of adapting the train yard of the Almussafes Industrial Park by installing new European gauge track to make the facility interoperable and allow for full connectivity with the rest of the Mediterranean Corridor rail network.

The aim of this analysis, carried out for the Ford Foundation for Development and Innovation, was to estimate the volume of freight traffic the terminal would have in the future, after adapting to European gauge track, and determine how the distribution of traffic among user companies would change, focusing particularly on the relative weight of Ford in traffic through the terminal (in terms of both freight shipped and freight received). The estimate was arrived at by doing fieldwork that involved surveying the views of companies that used the terminal in 2015 and those of the operator of the facility.

Research team:

Joaquín Maudos (**Ivie**, Universitat de València) Jimena Salamanca (Ivie)

USE OF THE VALENCIA 5K CIRCUIT (2016)

In a previous study on the use and assessment of Circuit 5K, a specific lane for runners in the Turia Gardens in the city of Valencia, two counts were carried out: one prior to the half marathon that took place in Valencia and the other coinciding with the popular race itself. Consequently, the figures obtained from the use of the 5 kilometers circuit did not correspond to what we could call a typical or standard week, which would allow us to know exactly the level of use of the circuit and how this figure changes according to different sporting events. The objective of this study by the Ivie for the Trinidad Alfonso Foundation is to estimate the number of uses of Circuit 5K in a typical week so as to obtain a reference value of use. The use is estimated according to time of day and day of the week. For this purpose, it was necessary to redesign the methodology followed in previous counts.

Research team:

Iván Arribas (Ivie, Universitat de València)

THE PUBLIC BROADCASTING SERVICE OF THE VALENCIAN COMMUNITY: ECONOMIC ASPECTS (2016)

The audiovisual sector plays a very important role in the development of any society because of its ability to offer services and contribute to the development of citizens (culturally, socially and politically), and through its contribution to economic activity and employment.

Public service broadcasting is an important part of the audiovisual sector. It is essential for various reasons: as an element that unifies and lends cohesion to the territory; as a conveyor of culture and language in its sphere of influence; as a channel for transmitting information and knowledge; as an entertainment space; and as an element that contributes to economic development and the creation of wealth and employment, both through its direct impact in the audiovisual industry and its indirect and knock-on effects on other sectors of the economy.

In this context, the aim of this study, carried out for the President's Office of the Valencian Regional Government, was to determine the economic value of the audiovisual sector in the Valencian Community and show the importance that Radiotelevisió Valenciana (RTVV, the Valencian public broadcaster) had on its recent evolution—in terms of both its direct economic contribution to the sector and its pull effect on the audiovisual sector and the rest of the Valencian economy—and the impact that its closure in 2013 has had on the Valencian audiovisual sector.

The analysis was structured in three phases:

- In the first phase, the researchers examined and quantified the audiovisual sector of the Valencian Community in terms of turnover (sales), employment and companies, and determined its weight in the national total.
- In the second phase, a simulation of the economic pull effect of the Valencian public broadcaster was developed using the input-output method and table constructed for the Valencian economy.
- Finally, the researchers analyzed the aspects that need to be taken into account when making decisions on public actions related to audiovisual activities, with specific reference to the case of RTVV.

Research team:

Joaquín Maudos (Ivie, Universitat de València)

ABACO (2016)

ABACO (Knowledge-Based Activities) is a project that was launched in 2011 under the umbrella of the Campus of International Excellence (VLC/Campus), in collaboration with the COTEC Foundation, which aims to become a national benchmark for the measurement and analysis of knowledge-based activities and to promote the recognition of its importance for Spain's economic growth. In 2016, the Universitat de València and the Polytechnic University of Valencia have taken the commitment to support this initiative which they consider of utmost interest. The project has been commissioned by VLC/Campus and is organized around three elements: (i) the creation, through the ABACO website, of an open and accessible information system on all the relevant dimensions of knowledge-based activities, from a global and national perspective; (ii) the production, storage and dissemination of documents, reports, briefing notes, maps, and other audiovisual materials that analyze the trajectory of these activities in Spain, from multiple perspectives; (iii) and the encouragement of initiatives that aim to share opinions and views on the situation of the knowledge-based activities and, through them, promote knowledge-based competitiveness, growth and well-being.

In 2016, the tasks carried out by the Ivie have been:

- The update of the Observatory, a powerful data bank which offers users free access to over 200 indicators and is structured in five areas: new technologies, human capital, innovation, environment and socioeconomic impact of knowledge-based activities.
- The maintenance and update of the ABACO digital library, that stores and provides systematized access to a wide range of reports, working papers and publications on knowledge economics, ICT, R&D, human capital and entrepreneurship, among others, both at national and international levels.
- The management and maintenance of the contents of ABACO's website, www.observatorioabaco.es, which includes the main results of the project.
- The dissemination of the results and contents of the ABACO Project.

Research team:

Francisco Pérez (dir.) (Ivie, Universitat de València) Javier Quesada (Ivie, Universitat de València) Carlos Albert (Ivie, Universitat de València) Eva Benages (Ivie, Universitat de València) Yolanda Jover (Ivie) Jimena Salamanca (Ivie) Belén Miravalles (Ivie)

UPDATING AND MAINTENANCE OF THE VALENCIAN PUBLIC UNIVERSITY INFORMATION SYSTEM (2016)

This project is a continuation of one the Ivie carried out for the Valencian Community's five public universities with the objective of designing and implementing an information system for those institutions (SIUVP in its Spanish acronym). The system is based around a public website that offers information on the activity of these universities and their results as reflected in a wide range of objective indicators.

The website (http://www.siuvp.es), which was officially launched in February 2016, offers visitors detailed information on the five universities, covering aspects related to the courses offered and to the demand for courses, the academic performance of students, internationalization, research activity, knowledge transfer to the wider society, economic resources, and the economic results of their activity. The site also provides a detailed explanation of the methodology used, defines the more than 60 indicators utilized, and specifies the variables considered.

In 2016, data for the academic year 2014-2015 was used to update 41 of the indicators used on the SIUVP platform.

Research team:

Francisco Pérez (Ivie, Universitat de València) Rodrigo Aragón (Ivie) Héctor García (Ivie) Irene Zaera (Ivie)

ANALYSIS OF FAMILY BUSINESSES (2016)

The main difficulty when it comes to obtaining accurate data on family businesses is that companies are not identified as such in commercial regulations. In the absence of such information, any rigorous study of family businesses requires that researchers work with business databases and establish a methodology that can be used to identify companies of this type as accurately as possible.

This project carried out for the University of Valencia has two aims: first, to establish a systematic approach to calculating the weight of family businesses in the main economic variables for the Valencian Community and make comparisons at the national level; and second, to identify the distinguishing features of family businesses and deepen our knowledge of business and family management.

The source of the data used in the study is the Iberian Balance Sheet Analysis System (SABI), which provides data for individual companies in Spain. A filtering and separation mechanism can be applied to this data to distinguish family businesses from non-family businesses. SABI is a database of more than 850,000 Spanish companies that can be searched using different criteria to perform detailed statistical and comparative analyses of companies and groups of companies.

Research team:

Alejandro Escribá (Ivie, Universitat de València) Carlos Albert (Ivie, Universitat de València)

STRATEGY FOR ATTRACTING BACHELOR'S AND MASTER'S DEGREE STUDENTS TO THE POLYTECHNIC UNIVERSITY OF VALENCIA (2016)

The Polytechnic University of Valencia (UPV) requested that the **Ivie** designs a study encompassing information collection and analysis with a view to improving its strategy for attracting students to its various campuses. The study is divided into two parts that deal with two types of students: bachelor's degree students who enter the UPV from post-compulsory secondary education, and master's students, particularly those from Latin America.

The analysis is structured around three main objectives:

- 1) To assess the current strategy for attracting students and identify more efficient alternatives by studying the processes students follow to gather information and make decisions about the studies they wish to undertake; and to identify obstacles and motivating factors related to these processes.
- 2) To identify the UPV's image and positioning in relation to its competitors from the perspective of potential consumers/customers; and to analyze the effect of obstacles to mobility and determine what action can be taken in this regard.
- 3) To quantify the potential for attracting students to the UPV in the future, with specific reference to their geographic origin.

Research team:

Joaquín Aldás (Ivie, Universitat de València) Irene Zaera (Ivie)

ESTIMATION OF POTENTIAL DEMAND FOR A UPV BACHELOR'S DEGREE IN DATA SCIENCE (2016)

The objective of this report for the UPV was to estimate the demand for places which a new degree in Data Science might have during the next academic year. Demand was determined by 1) conducting two surveys of first-year students enrolled in programs similar to the proposed bachelor's course (at the UPV and at other Valencian universities); and 2) conducting a series of in-depth interviews with experts directly involved in the work environments in which graduates of the proposed program would seek employment to seek their views on the adequacy of the new degree and its curriculum, and on business needs and requirements in this area. Since this is a new program in Spain, the report also includes a qualitative analysis of the appeal and perception of the name of the degree for students and professionals. The procedure followed is based on a methodological approach for the assessment and introduction of new bachelor's degrees at the UPV that was developed by the **Ivie** and presented to the University in 2010.

Research team:

Joaquín Aldás (**Ivie**, Universitat de València) Carlos Albert (**Ivie**, Universitat de València) Irene Zaera (**Ivie**)

7.2. IVIE PROFESSORS AND ASSOCIATE RESEARCHERS' COMPETITIVE RESEARCH PROJECTS

7.2.1. INTERNATIONAL PROJECTS

The **Ivie** leads the European Project SPINTAN, which was launched in December 2013 and ended in December 2016. The research project was promoted and funded by the European Union within its 7th Framework Programme and its main objective was to analyze the impact of public sector intangibles on innovation, well-being and *smart* growth. In the project researchers from a total of 15 institutes and universities are involved: NIESR (United Kingdom), LUISS (Italy), ISTAT (Italy), Imperial College (UK), The Conference Board, ZEW (Germany), OECD, wiiw (Austria), DIW (Germany), FORES (Sweden), KOPINT (Hungary), the Department of Industry and Science of the Australian Government, The Research Institute of Economy, Trade and Industry (RIETI, Japan) and Gakushuin University (Japan).

The **Ivie** takes part in the EC Project *Prospective Insights on R&D in ICT (PREDICT)*, funded by the Directorate-General for Communications Networks, Content and Technology (DG CONNECT) and the Joint Research Centre (JRC) Directorate B of the European Commission, carrying out the research *Data for European ICT industries analysis* (DICTA) for JRC.

Ivie researchers Francisco Pérez and Matilde Mas take part in the WORLD KLEMS Project on productivity, a continuation of the EU KLEMS Project in which the **Ivie** also participated. From this project involving 41 institutions from all over the world, research from the KLEMS framework has extended to the major developing economies and those in transition such as Argentina, Brazil, Chile, China, India, Indonesia, Mexico, Russia, Turkey and Taiwan.

Various research technicians and research professors from the **Ivie** also collaborate on the LA KLEMS Project, assisting the researchers in data analysis and inventory tasks. This project is also an extension of the research conducted in EU KLEMS, but with reference to Latin America.

The **Ivie** is part of the European Competitiveness Network, an international consortium coordinated by WIFO (Austrian Institute of Economic Research), which is commissioned by The Directorate-General for Internal Market, Industry, Entrepreneurship (DG GROW) to draw up reports on diverse aspects of the European economy. In 2016, the **Ivie** collaborated with the National Institute of Economic and Social Research (NIESR, London), the Universitat de València and the University of Perugia to produce a report which examined the productivity differences of European companies.

Professors Carmen Herrero and Antonio Villar participated in the United Nations Environment Programme (UNEP) in a research for the development of green economy indicators.

José García Montalvo is researcher of the Projects ERC Grant PERSISTDEBT (2015-2019), Debt and persistence of financial shocks, and ERC Grant HISTROOTS (2015-2019), Historical roots of conflict and development: from prehistory to the colonization, funded by the European Research Council.

Professor José María Peiró is the director of the Universitat de València research team which collaborates with the European Institute of Innovation and Technology (Climate-KIC) and the Provadis School of International Management and Technology in the project "Certified Professional. European Certification Framework for Postgraduate Professional Education (2014-2019)".

José María Peiró also coordinates the Universitat de València research team for the Innovative Involvement project (Methodological approach. People's behaviour2 pull technology), belonging to the Research Flagship Project on Building Technology Accelerator (BTA) (2014-2018) and funded by the European Institute of Innovation and Technology (Climate-KIC). Miriam Navarro is the main researcher.

In addition, José María Peiró is head of the Spanish team in the research project EVENT, European and Vietnamese collaboration on graduate employment (2016-2019), under the European initiative Erasmus + Capacity Building for Higher Education, No. 573903-EPP-1-2016-1- SE-EPPKA2-CBHE-SP, funded by the Education, Audiovisual and Culture Executive Agency of the European Commission and led by the University of Uppsala in collaboration with Hue University (Vietnam).

7.2.2. SPANISH NATIONAL R&D PLAN

The Ivie researchers are closely involved in the activities of the National Research, Technological Development and Innovation Program, in which they participate not only by carrying out projects, but also by taking part in their evaluation process. During 2016, the researchers and associate researchers participated in the following projects:

PSI2012-36557: Job characteristics and human resource practices as antecedents of sustainable well-being at work at different career stages (2012–2016). José María Peiró (Director).

ECO2013-46550-R: Comunicación digital, ciberseguridad y confianza en mercados digitales en red. Políticas de regulación (2013-2016). Amparo Urbano and Penélope Hernández (Directors), Iván Arribas.

ECO2013-43959-R: Factores de competitividad: hacia una nueva sociedad del conocimiento (2014-2017) Joaquín Maudos (Director) and Juan Fernández de Guevara.

ECO2013-48884-C3-3: Inquiries in human capital and inequality, technology and the environment (2014-2016). Gustavo Marrero (Director), Jesús Rodríguez López.

EC02013-48328-C3-2-P: Información contable y gobierno corporativo: Efectos sobre la financiación empresarial, las políticas de inversión y el valor de la empresa (2014-2016). Beatriz García Osma (Director), Belén Gill de Albornoz.

PSI 2013-48509-P: Cooperación e innovación social para la inclusión y la calidad de vida de personas con discapacidad intelectual: virtualidad y creatividad (2014-2016). Ana Zornoza and Vicente Martínez Tur (Directors), José Ramos.

ECO2014-53419-R: Comercio, diferenciación del producto, crecimiento y bienestar (2015-2017). Francisco Alcalá (Director).

ECO2015-67656-P: Digitalización y servicios financieros: efectos en el sector bancario, medios de pago e inclusión financiera (2015-2017) Santiago Carbó (Director).

ECO2015-70632-R: El desarrollo de la era de la economía digital y sus condicionantes: Aspectos metodológicos y análisis empíricos (2016-2018). José Manuel Pastor and Lorenzo Serrano (Directors), Francisco Goerlich, Matilde Mas, Francisco Pérez y Javier Quesada.

ECO2015-65820: LATEX 2020: Microeconomia made in Alicante (2016-2018). Carmen Herrero (Director).

PSI2015-64862-R: New challenges in the study of occupational well-being in the context of the crisis aftermath. An international study of the employment quality (2016-2018). José María Peiró (Director).

7.2.3. OTHER PROJECTS FINANCED BY PUBLIC INSTITUTIONS

Iván Arribas participates in the Project Prometeo II/2014/054 Grupo de Investigación en Economía del Comportamiento Estratégico (2014-2017) conducted by Amparo Urbano, Professor of the Universitat de València. The Prometeo projects for excellent teams from research communities and universities are funded by the Valencian Government.

José García-Montalvo is the main researcher on the Project 2014 SGR 546, Applied macroeconomics and quantitative methods (2010-2014), carried out by the consolidated research group of the same name for the Regional Government of Catalonia.

Carmen Herrero is the main researcher of the Project Prometeo/2013/037 Salud y problemas socioeconómicos: Un enfoque cuantitativo y multidisciplinar (periodo 2013-2017) funded by the Valencian Government.

Also, Francisco Pérez is the main researcher on the Prometeo II/2014/046 Project Integración económica y financiera: efectos sobre el crecimiento economic (2014-2018), funded by the Valencian Regional Government. Researchers Joaquín Maudos and Emili Tortosa also take part at the project.

Finally, José María Peiró is director of the Project Prometeo 2016/138, Dynamics of subjective wellbeing and its dimensions: A study form the adaptation theory (2016-2019) funded by the Valencian Government.

7.2.4. OTHER PROJECTS FINANCED BY PRIVATE INSTITUTIONS

José Ramos is the main researcher for the Project Colaboración en el Análisis y Evaluación del II Plan de Igualdad entre Hombres y Mujeres 2015-2018 (2016-2018) funded by Banco de Crédito Social Cooperativo/Cajamar.

8. DATABASES AND INDICATOR SYSTEMS

Several of the **Ivie**'s projects have produced databases and indicator systems of great interest to economic and research studies, easing the process of decision making with the help of adequate and up-to-date information. The 25 databases and systems of indicators created by the **Ivie**, which are described below, can be accessed electronically through our website.

8.1. DATABASES

8.1.1. CAPITAL STOCK IN THE SPANISH ECONOMY AND ITS TERRITORIAL DISTRIBUTION

Since 1995 the BBVA Foundation and the **Ivie** have been developing an extensive research program on Spanish economic growth. The basis of this program includes the databases on capital stock in Spain, which are regularly updated:

- Capital stock in Spain and its distribution by territories
- Historical series on public capital in Spain and its distribution by territories (1900-2012)
- Spanish capital stock in housing and other structures and its territorial distribution

The first database provides the national series on the distribution of investment, capital stock and capital services, spanning the period 1964-2014, in addition to data disaggregated by sectors and functions for the Spanish autonomous communities and provinces until 2013. The database represents a rich source of information which covers a broad period of time and offers territorial, sectoral and functional details and by type of asset. Data for Spain has been incorporated into the STAN (STructural ANalysis) database, the OECD Productivity Database, the EU KLEMS Database and since October 2011 to the new OECD database on productivity by industry (PDBi).

The annual updating of the database makes it a valuable tool for gaining insight into particular characteristics of the recent cycle of accumulation and growth, and the significance of the capital endowments with which to face the current economic situation. The data bank contains up to 15,000 data by territory and numerous dynamic graphs and maps that offer an overview of the main features of investment and capital, as well as their territorial distribution. It also contains a set of territorial fact sheets that focus on each Spanish region and province.

The second, *Historical series on public capital in Spain and its distribution by territories (1900-2012)*, offers detailed information on public capital stock from 1900 to 2012, classified according to function and according to autonomous community and province. The last data series together with a report on the main results were released in 2015.

Finally, the database *Capital stock in housing and other structures and its territorial distribution* makes available to the public the capital stock in housing series from 1990 until 2010, with land value included. Information is provided on the changes of total stock in housing and prices. The data is disaggregated by autonomous community, province and population stratus, distinguishing between municipalities according to the number of inhabitants and whether they are on the coast or inland. Estimates regarding the value of stock of other constructions other than residential housing are also presented with their changes over time, as well as the prices of other constructions by branch of activity and autonomous community. The latest data was published in July 2012.

The annual updating of the capital stock databases makes them invaluable tools with which to examine the characteristics of accumulation and growth cycles, the territorial distribution of capital and its evolution, and to

assess the role of capital endowments in the recovery from the crisis. In addition, the data is useful for evaluating public policies and analyzing the impact of capital accumulation on regional and provincial growth and convergence. All the information provided can be accessed online at the BBVA Foundation website (www.fbbva.es).

8.1.2. SOCIAL CAPITAL

Social capital is a concept that for over a decade has attracted the attention of all social sciences and international institutions because of its outstanding potential in the processes of development. The term social capital highlights the role of cooperation and trust in achieving collective or economic results. The **Ivie** carries out a joint project with the BBVA Foundation for the study of social capital. During 2013, the social capital database, built within the framework of this project, was updated. The international database, which includes the OECD countries, covers from 1970 until 2011, and the series for Spain (with territorial breakdown by regions and provinces) until the year 2013.

The new database was published by the BBVA Foundation November 11th, 2015. Information and/or data series to date can be requested to publicaciones@ivie.es.

8.1.3. REGIONAL DIFFERENCES IN THE SPANISH PUBLIC SECTOR

The database *Regional differences in the Spanish public sector* is part of a research project carried out by the BBVA Foundation and the **Ivie** which has a double objective. First, to generate new fresh information on the public-sector performance in Spain and its regions. Second, to analyze the data obtained in order to gain a more detailed picture of the extent of its performance, the reasons underlying regional differences and their effect on inter-territorial solidarity and economic efficiency.

The database, available at the BBVA Foundation website (www.fbbva.es), contains regionalized data for the period 2000-2008 and covers information on the size the public sector in each region and its territorial distribution by levels of government, by functions and by revenue and expenditure items.

8.1.4. BASIC PUBLIC SERVICES EXPENDITURE IN SPAIN AND ITS REGIONS

As complementary information to the database described in the previous paragraph, a new database on basic public services in Spain was released in 2015. The aim was to provide useful data for politicians, public administration managers, and researchers and analysts of regional and fiscal problems to carry out a diagnosis of the situation and to design public policies.

Education, health and social protection, known as *basic public services* (BPS) are doubly important in the public sector: due to the significant resources allocated to them and the activities carried out. In fact, they represent more than half of public spending and are needed to reach the equity goals pursued by public interventions, especially the principle of equal opportunities.

The database available on the BBVA Foundation website, www.fbbva.es, offers data on BPS expenditure in each region and their aggregate for the period 2002-2013 according to the different levels of public administrations (central administration, autonomous communities, local corporations and social security administrations). The data is also classified according to public sector activities related to the provision and management of services: health (primary, specialist and hospital care, public health, clinical research); education (pre-school, primary, secondary, post-secondary and higher, scholarships, education services); and social services (retirements, disease and disability, advanced age, family protection, unemployment, housing, social exclusion).

8.1.5. PUBLIC HEALTH EXPENDITURE IN SPAIN

The Public Health Expenditure in Spain database contains statistical information on public health spending in Spain by regions for the 1991-2010 period.

It is a homogeneous territorial database that supplements those so far offered by the Public Healthcare Expenditure Statistics (EGSP), which are produced by the current Spanish Ministry of Health, Social Services and Equality in collaboration with the autonomous communities. In addition to starting in 1991, this database offers more detailed regional information than the EGSP, reaches 94% of total public health spending and provides information by public stakeholders. Also, a homogeneous series for the whole period has been constructed.

The databank, which is available at the BBVA Foundation website, www.fbbva.es, contains information on public health expenditure by region covering the period 1991-2010 in Spain, with specific data for the autonomous communities. Supplementary tables are also provided on GDP deflators and prices, population projections by region and age, health expenditure profiles and health expenditure evolution.

8.1.6. HOMOGENOUS POPULATION SERIES

It is for more than one decade now that the BBVA Foundation and the **Ivie**, under their cooperation framework agreement, have put the focus on demographic analysis, from a more aggregate level to municipal or lower scale. The information offered by the population censuses available and comparable since the end of the 19th century has made it possible to build the *Homogenous population series*.

The process of homogenization of the *de jure* resident population, taking into account the changes in the municipalities' borders for more than one century, has been very strenuous. The disappearance of municipalities, their creation, division, merging or changes of name have been tracked for each one of the more than 8,000 municipalities during the eleven censuses taken.

This Spanish population database is based on the municipal structure of the 2011 Census. Reference data is the *de jure* population and is dated for each one of the twelve censuses prepared by INE since the beginning of the 20th century, allowing a detailed analysis of the changes in location of population patterns during the period 1900-2011.

The database is accessible on the BBVA Foundation website, www.fbbva.es, and contains information for the 8,116 Spanish municipalities existing in 2011. The series are classified in accordance with the code associated with each municipal area and grouped by the 52 Spanish provinces, also offering the area in square miles of each municipality.

8.1.7. EDUCATION ACCOUNTS

The new Education Accounts in Spain 2000-2013 database was developed by the **Ivie** for the BBVA Foundation and was set up in March 2016. This database allows us to address fundamental issues related to the education system in Spain and its regions, such as its size and structure, how much is spent on education, who the producers of educational services are, as well as the beneficiaries.

Information is provided for Spain and its regions by educational levels and is divided into four large areas: 1) Public non-university and university Education Accounts, 2) Regulated private non-university and university Education Accounts, 3) Family expenditure on education (total expenses per household and per capita), and 4) Series of non-university and university students for both private and public education

These series are available on the BBVA Foundation website, www.fbbva.es, through fifteen files in Excel spreadsheet format.

8.1.8. HUMAN CAPITAL IN SPAIN AND ITS REGIONAL DISTRIBUTION

The results obtained from the Human Capital Project undertaken by the **Ivie** in collaboration with the Bancaja Foundation improve the statistical information already available on human capital and have enabled the **Ivie** to create a database that contains abundant information on the evolution of the Spanish population's educational levels

The period covered in the database is from 1964 until 2013. The series are structured by educational levels, population groups, regions, provinces and sectors and can be accessed through the **lvie**'s website: www.ivie.es.

8.1.9. THE TRANSITION OF YOUNG PEOPLE TO THE LABOUR MARKET

The Observatory of the Transition of Young People to the labor market is a data bank developed through the Human Capital Project, which is updated every three years and is sponsored by the Bancaja Foundation. The data from the Observatory's six surveys, 1996, 1999, 2002, 2005, 2008 and 2011 have been homogenized and categorized, the following factors being taken into account:

- Basic data on survey participants: age, level of education, gender, work experience, employment situation, nationality; reasons for looking for a job, employment search methods; information on academic history.
- Data on family background (education level of parents, socio-professional position of parents, household income).
- Psycho-social data which include attitudes, behavior and experiences of young people in the labor market: initiative, passivity, self-effectiveness, different elements of employment stress, centrality, satisfaction with life, one's economic situation and employment, extrinsic, intrinsic and social aspects of employment, and "justice at work".
- Data on the educational background, work and life experience of those polled, time spent studying, at what age they begin looking for work, leave home, form their first relationship and have their first child.
- Employment: duration, type of contract, commitment, salary, type of employer and sector, reasons for leaving the job and contractual flexibility.
- Aspects related to the health and the general well-being of the young people.

All the information is available on the Ivie website: http://www.ivie.es.

8.1.10. HUMAN DEVELOPMENT IN SPAIN

The Human Development Index is an indicator that measures a country's degree of economic development and combines health, education and income measures. It was first published in 1990, as part of the United Nations Development Program, and quickly became more popular than the simple comparison by per capita income, it being a more informative indicator.

Within the Human Capital research framework developed by Bancaja and **Ivie** since 2000, a data series on human development for Spain and its autonomous communities has been built according to the new methodology proposed by the UN. Furthermore, an alternative methodology is proposed to correct the major deficiencies of the UN index. The data currently covers the period 1980-2010.

The database contains the Human Development Index and the New Human Development Index, which both have health, education and income components.

Data concerning all these indexes are available on Ivie's website: www.ivie.es.

8.1.11. LIFE TABLES FOR SPAIN AND ITS REGIONS

Life tables are fundamental in providing a numerical representation of the status changes occurring within a population over time. **Ivie** researcher Francisco J. Goerlich and Rafael Pinilla have calculated the classic biometric functions of the Life Tables for Spain and its regions, covering the period 1975-2013. The data bank also contains four demographic indicators for each year and geographic area: average age of population, average-age life expectancy, life potential and life potential per capita.

The database contains period life tables with annual periods for Spain, its autonomous communities, and provinces. It consists of 22 PC-Axis files which contain biometric functions and demographic indicators cited for the same geographic areas and periods.

For the population data tables, intercensal estimates are used. In 2015, data for the 2002-2012 period was updated taking into account the intercensal estimates published by the 2011 Census for this period.

Three aspects distinguish **Ivie**'s Life Table database from INE's: data is homogenous since 1975; it is disaggregated by large groups of cause of death; and includes an additional demographic indicator: life potential.

The data is available to researchers and the interested public via the **Ivie** website (www.ivie.es), with the possibility of obtaining the information in map format.

8.1.12. ICT R&D MACRODATA

The **Ivie** has developed for the European Commission Joint Research Centre, JRC Directorate B, a comprehensive data bank on R&D activities in the information and communications technologies (ICT) sectors for the EU, other European countries (Norway and Switzerland), and also for Australia, Brazil, Canada, China, India, Japan, Russia, South Korea, Taiwan and the United States. The information comes from official sources and is disaggregated by sub-sectors (manufacturing and services).

The data compiled by the **Ivie** for the ICT sectors and a wide range of other sectors of activity covers the period 2006-2013 and is structured in the following categories: value added, employment, labor productivity, business expenditure on R&D, R&D personnel, R&D researchers and public funding for R&D. Since 2015, this data bank has been updated through the financing of the DICTA Project commissioned by JRC, Directorate B, and the Directorate General for Communications Networks, Content & Technology (DG CONNECT), both European Commission-dependent organisms.

The mentioned database is available to the public through the Ivie website: www.ivie.es.

The latest data series cover the period 1995-2014 and include new sectors such as *Media and electronic* content and *E-commerce*.

8.1.13. EU KLEMS

The **Ivie** has participated in the EU KLEMS Project, funded by the 6th Framework Programme of the European Commission, which aim was to analyze the productivity in the European Union (UE-25), the United States, South Korea, Australia, Japan and Canada. Eighteen research institutions and universities from all over Europe worked on this project.

Within this project, a database was elaborated with information on productivity, value added, intermediate consumption, labor, capital and growth accounting for these 30 countries. After its last update in May 2011, information is provided for the period 1970-2007 for seventy-two sectors of activity (NACE Rev. 1.1). The series allows the different economies to be compared in terms of industry, distinguishing between market versus nonmarket, goods versus services and ICT production.

In 2012 a new data bank for 10 European countries (Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, Spain, Sweden and the UK) and 2 non-European countries (US and Japan) was constructed according to the NACE Rev. 2 classification.

Data on the EU KLEMS Project is available on the Consortium's website (www.euklems.net), which can be accessed through the **Ivie** website.

8.1.14. SPINTAN

The SPINTAN Project (Smart Public Intangibles), directed by the **Ivie** for the European Commission, aims to define the theoretical and empirical characteristics of public intangible policies. The Project is carried out by academic researchers from diverse European institutes and universities.

The database on public intangible assets collects data from 22 European Union countries, along with the United States, China and Brazil, covering the period of 1995 to 2015. It provides information on investment and capital stock in intangible assets such as trademarks, design, original recreational, literary and artistic works, the organizational structure of companies as well as their in-house training, and expenditure on R&D and software, which are now included in the National Accounts of each country.

The new database available on the SPINTAN website, www.spintan.net, includes data on intangible assets in the following sectors of activity: R&D services; public administration, defense and compulsory social security; education; health and social services; and artistic, recreational and entertainment activities.

This information allows us to analyze the impact of public sector intangibles on innovation, well-being and *smart* growth (including education, R&D and the construction of a digital society).

8.1.15. INTANGIBLE ASSETS

Given the growing importance of activities based on knowledge in the economic development of advanced countries, investment in intangibles assets (information and communication technologies, R&D, innovation, design, creativity, image and brand, etc.) is necessary to modernize and strengthen the Spanish productive structure.

This research project carried out for the Telefónica Foundation follows the international methodology widely accepted by the majority of countries (Corrado, Hulten and Sichel [2005]: *Measuring capital and technology: an expanded framework*), and is clearly in line with the INTAN-Invest initiative [www.intan-invest.net] which calculates intangible investment for a group of European countries.

The database created offers an annual series of the value of investment in intangible assets and its capitalization for the period 1995 to 2011 for the whole of the Spanish economy with a considerable industry disaggregation (24 industries, CNAE 2009). The intangible assets considered in the database are the following: digital information, ownership of information (R&D, mineral exploration, original works of the entertainment, literary or artistic domain, new products and systems in financial services, and design), in addition to economic competencies (advertising, market research, firm-specific human capital, and organizational capital).

The complete database (investment and endowments) is available on the **lvie** website, www.ivie.es, in Excel format, and also each variable of investment and endowments in intangible assets in PcAxis format.

8.1.16. ECONOMIC VALUE OF KNOWLEDGE-BASED ACTIVITIES

This database was developed for the Ramón Areces Foundation with the purpose of quantifying the economic value of activities based on knowledge in Spain and its autonomous communities. In order to achieve this, the productive factors which use knowledge (skilled work, ICT assets, intangibles, machinery and equipment, and transport material) were first identified and then the share of income that compensates the services they provide was quantified. Using this methodology (detailed in the study *The economic value of knowledge-based activities in Spain and its regions* which accompanies this database), information is provided on total GVA in Spain as well as regional GVA, and is also disaggregated in two parts: knowledge-based GVA and GVA which does not contain knowledge or is based on the use of productive factors with low knowledge content (unskilled labor and less productive capital, such as real estate). In addition, data is offered on the share of GVA that is intended to compensate for each productive factor.

The database, which covers the period 2000-2014 (2013 for regional data), has a high level of sectoral disaggregation: 27 sectors at national level and 21 at regional level.

The database will be available to the scientific community, analysts and the interested public in 2017 on the **Ivie** website.

8.1.17. OBSERVATORY OF FINANCIAL INTEGRATION IN EUROPE

The Observatory of Financial Integration in Europe was carried out by the **Ivie** and sponsored by the *Fundación* de Estudios Financial Studies Foundation). This data bank examines the recent evolution of financial integration. In particular, the Action Plan for Financial Services, implemented in 1999, is evaluated as well as its effects on competition, efficiency and economic growth.

The research consists of nearly 80 indicators and is divided in 7 thematic areas: 1) indicators of financial development; 2) indicators of financial structure; 3) indicators of financial integration; 4) indicators of competition; 5) indicators of efficiency and productivity; 6) indicators of payments and settlements; and 7) impact of financial development and financial integration on economic growth. The period covered is 1999-2010.

Both the fourth edition, updated in 2011, as well the previous year's publication focused on analyzing the impact of the crisis on financial integration, especially the effects on the Spanish financial system, and on quantifying the impact of integration on economic growth.

The Observatory of Financial Integration in Europe is available on the Financial Studies Foundation website (www.fef.es).

8.1.18. INTEGRA

The Integra data bank is framed within **Ivie**'s research program with the BBVA Foundation and under the *International economic integration* research area, and consists of a wide range of indicators to measure the evolution of economies' integration on a world-wide scale.

The INTEGRA database has three different indicators (degree of openness, connection and integration) which have been developed with a broad level of geographical and temporal disaggregation. A total of eighty-five countries are covered (representing 97% of world GDP in 2007), spanning the period 1985-2007. It also provide indicators of total trade in goods, indicators corrected by the distance between countries and indicators disaggregated by industries according to the ISIC-3 classification (Revision 2), with a distinction between the two directions of trade flows: exports and imports.

8.1.19. INEQUALITY IN SPAIN, ITS REGIONS AND ITS PROVINCES

Sponsored by the Caixa Galicia Foundation, the aim of this study is to analyze the evolution of household consumption and income distribution in Spain from both a territorial and temporal perspective.

The database covers the period 1973/74-2005, with annual intervals from 1998 to 2005. Among the data provided is in-depth information on autonomous communities regarding their total expenditure per person and per household, according to the social class or studies of the main breadwinner. The expenditure is detailed in a total of twelve groups (education, housing, heath, and leisure, among others).

Basic data were used from the Household Budget Surveys for the periods 1973/74, 1980/81 and 1990/91, and the Continuous Household Budget Surveys, published by the INE, for the period 1998 to 2005, with autonomous community disaggregation.

The data are available on the **Ivie**'s website, www.ivie.es, and are also incorporated in the World Bank and United Nations University (WIDER) databases.

8.1.20. MIGRATION IN THE VALENCIA REGION

The Examination of Migration in the Valencia Region, is undertaken by the **Ivie** for the Bancaja Foundation and was previously included in the Observatory on Immigration in the Valencian Region of the CeiMigra Foundation, sponsored by Bancaja. Its objective is two-fold: first, to provide a comprehensive view of the immigration phenomenon with its many social and economic profiles, through the compilation and systematization of

available information, while also detecting gaps in this information. Second, to provide access to adequate statistical material for subsequent detailed analysis of the various aspects of immigration.

The last edition, dated December 2011, includes comparative data on the situation of emigration and immigration in OECD countries, and also information on the remittances sent and received from the immigrants of nationalities most represented in Spain, the employment situation of immigrants in their country of origin or the reason for their moving to Spain.

The data of Migration in the Valencia Region are available on Ivie's website: www.ivie.es.

8.2. INDICATOR SYSTEMS

The **Ivie** has developed multiple projects, enabling it to specialize in the analysis of data generated by universities and in the field of the knowledge economy (ICT, human capital, innovation systems). These projects have led to three Indicator Systems which have been developed in web format and are hallmarks of the Institute's activity: U-Ranking, ABACO and SIUVP.

8.2.1. U-RANKING

U-Ranking is a set of Synthetic Indicators of the Spanish University System (ISSUE), available at www.u-ranking.es, which offers the user two products. First it provides a set of synthetic indicators on public and private universities in Spain, allowing them to be ranked according to their performance (U-Ranking) and their volume of results (U-Ranking Volume). U-Ranking takes into account the three missions of university activity (teaching, research, and innovation and technological development), which are assessed through 25 indicators grouped into four different areas: resources, output, quality and internationalization. The website offers the global synthetic indicators obtained by each university, as well as the indicators in each activity and area, thus allowing each institution to be compared from different points of view.

Furthermore, the U-Ranking website provides an accurate and easy-to-use tool, allowing the user to build their own personalized ranking with their chosen degree and make a comparison of what each university has to offer, expressing their preferences about what to study and where, as well as the importance given to different university activities. Along with the personalized listing, other information of interest is provided, such as the last cut-off mark, the price of credits and details about the university surroundings. This tool is mainly aimed at students entering university, but is also useful for managers and experts in higher education, as well as career counsellors.

8.2.2. ABACO

ABACO (Observatory of Knowledge-Based Activities) rises as a joint project of the **Ivie**, the Universitat de València and the Polytechnic University of Valencia with the aim of measuring and analyzing the knowledge-based activities.

One of the pillars of ABACO is the generation of its own information system, available on the ABACO website, which facilitates the analysis and diagnosis of the current situation and recent evolution of knowledge-based activities in Spain, as well as comparison with other countries.

ABACO offers users a powerful database at national and international levels with over 200 indicators structured into five areas: New technologies, Human capital, Innovation system, Business environment and Socioeconomic impact.

ABACO also offers extensive detailed information on knowledge intensive GDP. The database contains information about the weight that knowledge-based factors have in the gross value added (GVA) of each of the eighteen countries studied (Australia, Austria, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, Portugal, Slovenia, Spain, South Korea, Sweden, United Kingdom, and USA). The

results are also presented by sector of activity (according to the NACE Rev.1 classification) and are available for the period 1980-2007. In the case of Spain, data are provided until 2010.

This information is available on the project's website: www.observatorioabaco.es.

8.2.3. SIUVP

The SIUVP Project (Valencian Public University System of Information) started in 2012 from the collaboration of the five Valencian public universities. The aim was to offer a complete set of indicators on their activity and results through which public universities are answerable to society, showing the effectiveness and efficiency of their performance.

The information in this platform allows the user to know the situation and development of the five universities in areas related to the supply and demand of degrees, the academic performance of their students, internationalization, research activity, knowledge transfer to society and economic results of their activity.

On the website, www.siuvp.es, a comprehensive information system consisting of more than 60 indicators structured in seven different areas can be accessed. In addition, the website provides complementary data on the training offer of the Valencian universities, as well as other related documents of interest and a glossary with the definition of each indicator.

The new website, www.siuvp.es, was launched on February 5, 2016, offering a comprehensive information system with more than 60 indicators divided into seven different areas. In addition, the website provides complementary data on the training offer of the Valencian universities, as well as other related documents of interest and a glossary with the definition of each indicator. In addition, 41 of the indicators were updated in 2016 with information on the 2014/2015 academic year.

All the information is displayed through graphs and tables which can be downloaded.

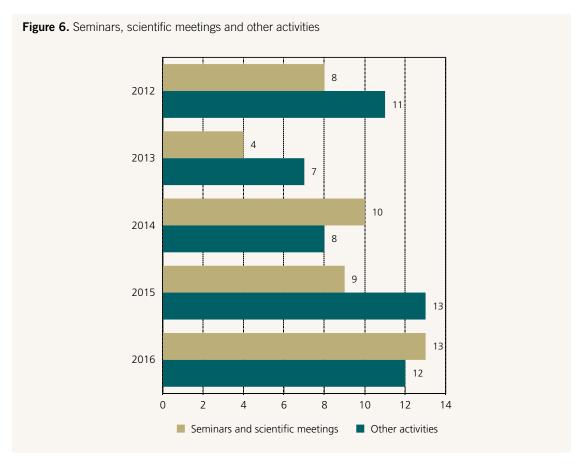
9. SCIENTIFIC MEETINGS

The Institute has taken an active part in this field through the participation of its associates in national and international meetings, and also by organizing and supporting seminars, workshops and courses in different places. Through these activities, the **Ivie** hopes to make its head office, and the university departments and institutions with which it collaborates, a regular meeting point for researchers, other specialists and social institutions.

9.1. ORGANIZED BY THE IVIE

• The **FOURTH WORLD KLEMS CONFERENCE** was held at the head office of the BBVA Foundation in Madrid on May 23 and 24. More than 80 researchers from five continents were brought together to analyze the patterns of economic growth in different world regions and to provide solutions on how to improve the productivity and well-being of countries. The objective of the conference was to analyze recent progress in the development and application of KLEMS data. These data are widely used in economic research on growth and structural change, and in international comparisons based on purchasing power parities

The meeting was organized by the **Ivie** together with members of the WORLD KLEMS project, which began in August 2010 at Harvard University (Cambridge, USA). Members of the conference's organizing committee were **Dale W. Jorgenson** (Harvard University), **Kyoji Fukao** (Hitotsubashi University), **Marcel P. Timmer** (University)



of Groningen) and Matilde Mas (Universitat de València and Ivie). The conference was divided into several sessions on topics such as ICT, human capital, intangible capital, global value chains, growth and productivity measurement, as well as on the results of regional KLEMS consortiums in Europe, Asia, Latin America and the United States. The sessions were chaired by Bart van Ark, Javier Quesada, K. L. Krishna, Matilde Mas, Andrew Sharpe, Brian Moyer, Susanto Basu, Ivo Havingha and Robin Sickles. The following papers were presented:

Amores Hernández, A.: "Methodology for the Estimation of Capital Productivity Indicators in the European Union" (in collaboration with J.M. Rueda-Cantuche, I. Remond-Tiedrez and L. Montinari)

Balk, B.M.: "On Measuring Regional or Global Growth and In•ation" (in collaboration with D.W. Prasada Rao and Alicia M. Rambaldi)

Chen, W.: "Cross-Country Income Differences Revisited: Accounting for the Role of Intangible Capital"

Christian, M.S.: "Net Investment and Stocks of Human Capital in the United States, 1975-2013"

Chun, H. and T. Miyagawa: "Declining Rate of Return on Capital and the Role of Intangibles in Japan and Korea" (in collaboration with H.K. Pyo, M. Takizawa and K. Tonogi)

Coremberg, A.: "This Was Not Argentina's Growth and Productivity Decade" (in collaboration with M. Wierny)

Corrado, C.: "ICT Prices and ICT Services: What Do They Tell Us about Productivity and Technology?" (in collaboration with D. Byrne)

Das, D. K. and H. Wu: "How do Asian Giants China and India Compare towards Industry-Level Productivity?" (in collaboration with K.L. Krishna and A.A. Erumban)

De Vries, G.: "Skills and Activity Upgrading in Global Value Chains: Trends and Drivers for Asia" (in collaboration with Q. Chen, R. Hasan and Z. Li)

Erumban, A.A.: "Global Growth Accounting: The Role of Shifting Investment Patterns" (in collaboration with R. Inklaar and K. de Vries)

Fernández de Guevara, J.: "Intangible Assets and Spanish Economic Growth" (in collaboration with M. Mas)

Fernández-Arias, E.: "The Productivity Gap in Latin America: Lessons from Fifty Years of Development"

Fraumeni, B. M.: "Progress in Measuring Human Capital Around the World"

Fukao, K.: "Measurement of Deflators and Real Value Added in the Service Sector" (in collaboration with T. Kameda, K. Nakamura, R. Namba, M. Sato and S. Sugihara) and "The Structural Causes of Japan's Lost Decades"

Goldar, B. N. and S. Agarwal: "Productivity Growth and Levels: A comparison of Formal and Informal Manufacturing in India" (in collaboration with D.K. Das, A.A. Erumban and P.C. Das)

Guillén, F.: "Determinants of Productivity Growth for the Mexican Economy" (in collaboration with P. García, J. Togno, O. Venzor, A. Henestrosa and C. Avila)

Ho, M.S.: "Education, Participation, and the Revival of U.S. Economic Growth" (in collaboration with D.W. Jorgenson and J.D. Samuels)

Hofman, A.: "Potential Growth in Latin America" (in collaboration with C. Aravena)

Jona-Lasinio, C.: "Sources of Country-Sector Productivity Growth: Total Factor Productivity and Intangible Capital in the EU-15 and the U.S."

Keenan, K.: "Experimental Estimates of Industry Level KLEMS Multifactor Productivity, 2015"

Kotlewski, D.: "KLEMS productivity accounts for the Polish economy" (in collaboration with M. Błazej)

Liang, C.Y.: "Total Factor Productivity Changes in the ICT Industry: An International Comparison among the U.S., Japan, Korea and Taiwan during 1981 to 2010" (in collaboration with R.H. Jheng)

Liu, G.: "A Stylized Satellite Account for Human Capital"

Mas, M.: "Looking for a Virtuous Pattern of Growth: Some Insights for the Discussion" (in collaboration with E. Benages)

O'Mahony, M.: "Measuring Educational Services and Social Infrastructure" (C. Corrado and L. Samek)

Pyo, H.K.: "Labor Productivity and a Test of Kaldor-Verdoorn's Law Using the World KLEMS Dataset"

Rambaldi, A.M.: "Vanishing Procyclicality of Productivity? Industry Evidence" (in collaboration with A. Peyrache)

Remond-Tiedrez, I.: "Development of a Quality-Adjusted Labor Productivity Index in the European Union" (in collaboration with J.M. Rueda, A. Amores, M. Mraz, P. Martins and J.M. Valderas)

Samek, L.: "The Impact of Health on Human Capital Stocks" (in collaboration with M. O'Mahony)

Samuels, J.D.: "Associates Degrees, the Quality of the U.S. Workforce, and the Sources of U.S. Economic Growth" (in collaboration with R. Gittell and E. Tebaldi)

Solaz, M.: "Value Added and Participation in Global Value Chains: The Case of Spain"

Strassner, E.H.: "Extended Supply-Use Tables in Basic Prices with Firm Heterogeneity: A Proof of Concept for the United States" (in collaboration with J.J. Fetzer, T.F. Howells, L.Z. Jones and Z. Wang)

Timmer, M.P.: "Peak Trade? An Anatomy of the recent Global Trade Slowdown" (in collaboration with B. Los, R. Stehrer and G. de Vries)

Voskoboynikov, I.: "Russia since 1995: Natural Gas, Catching Up, and Informality"

Wang, C.: "Total Factor Productivity Has Become Much Less Correlated with Output as well as Inputs since the 1980s"

Wasshausen, D.B.: "Integrating GDP by Industry with Interindustry Accounts for the United States" (in collaboration with T.F. Howells, A.S. Lyndaker and E.H. Strassner)

Zinni, B.: "Productivity Developments in Europe and the OECD"

In addition, a plenary session 'FUTURE CHALLENGES' was chaired by **Dale W. Jorgenson**, with the following speakers:

Pérez, F.: "Measuring Progress in the Spanish Economy: A World KLEMS-IVIE Approach"

Schreyer, P.: "An OECD Agenda on Issues in Productivity Measurement"

Timmer, M. P.: "Global Value Chain Research Going Forward"

Van Ark, B.: "The Future Development of EU KLEMS"

An open session entitled 'EUROPE'S PERFORMANCE AND TRENDS OF THE WORLD ECONOMY' also took place during the conference and was presented by **Francisco Pérez** with the participation of the following speakers:

Jorgenson, D.W.: "The World Economy: Performance and Outlook"

González-Paramo, J.M.: "Spanish Economy: How to Improve Productivity in the Current Environment"

The conference concluded with the roundtable 'THE FUTURE OF EUROPE FROM AN INTERNATIONAL PERSPECTIVE', chaired by **Javier Quesada** and in which the following participated:

Fukao, K.: "China's Slowdown and the Expected Impact on Japan's Economy: An Analysis Based on the World Input-Output Database (WIOD)"

Mas, M.: "The EU Productivity Gap"

Melguizo, A.: "Latin American Economic Outlook: Overcoming the Middle Income Trap"

Timmer, M.P.: "European Competitiveness in Value Chains"

Van Ark, B.: "Are Emerging Economies Still Emerging?"

• The **Ivie**'s **25TH ANNIVERSARY CELEBRATION** '25 YEARS PROMOTING ECONOMIC RESEARCH' took place at the head office of the University-Enterprise Foundation ADEIT in Valencia on May 12. Numerous authorities were present, as well as representatives of Valencian universities, business organizations and civil society. The event was opened by **Pilar Chorén**, Managing Director of **Ivie**, and **Vicent Soler**, Reginal Minister of Finance and the Economic Model, and President of the **Ivie**.

This was followed by a DEBATE ON THE PERSPECTIVES AND CHALLENGES OF THE SPANISH ECONOMY chaired by **Joaquín Maudos**, **Ivie**'s Research Deputy Director, with the participation of **Fernando Fernández**, Professor of Economics at IE Business School, **Matilde Mas**, **Ivie** Director of International Projects and Emilio **Ontiveros**, President of Analistas Financieros Internacionales (AFI). The debate addressed issues such as the effectiveness of the 2012 labor reform, productivity problems in Spain, and the difficulty the banking sector has to regain profitability.

The event closed with **Francisco Pérez**, **Ivie** Research director, **Esteban Morcillo**, Rector of the Universitat de València, and **Ximo Puig**, President of the Valencian Government, highlighting the work of the **Ivie** in helping to bring to light the underfunding of the Valencian Community and the independence of the Institute as a key factor for its success.

- The complex situation of recovering bank profitability in Spain was the subject of the conference **SEVENTH CONFERENCE ON THE SPANISH BANKING SECTOR**, which took place in Valencia at the University-Enterprise Foundation ADEIT on June 8. The conference was aimed at the general public, academics and professionals in banking interested in the analysis of the sector and was coordinated by **Joaquín Maudos**, Professor of Economic Analysis at the Universitat of València, and **Ivie** Research Deputy Director. Experts from the academic world and professionals in the banking sector participated in the event which was structured around two panel discussions. In the first session, which was more academic, **Joaquín Maudos** and **Santiago Carbó** (Bangor University, **Ivie**, Funcas and CUNEF) explored the challenges facing the Spanish banking system to recover its profitability. In the second session, the CEOs of two of the country's main credit institutions, **José Sevilla** (Bankia) and **Jaime Guardiola** (Banco Sabadell), presented their views and business strategies to tackle this difficult situation. Both defended the digitization of banking as a business opportunity for the sector and both rejected increases in commissions to customers as a way to improve bank profitability. In addition, the two speakers discussed aspects such as bank mergers, the low interest rates set by the ECB and the need to restore consumer confidence in the banking sector. The event was closed by **Vicent Soler**, Regional Minister of Finance and the Economic Model of the Valencian Community.
- Also held at the University-Enterprise Foundation ADEIT in Valencia was the conference on **PROPOSALS FOR A NEW FUNDING SYSTEM FOR THE AUTONOMOUS COMMUNITIES.** The event took place on September 27 and was organized by the **Ivie** and Fedea in collaboration with the Asociación Valenciana de Empresarios and the Fundación Internacional Olof Palme. The objective was to discuss proposals for the design of a new funding system for the different regions and was aimed at professionals, entrepreneurs, political and social representatives, academics, and the media interested in this specific problem and its possible solutions. The event was organized in two sessions: in the first, the situation was assessed and technical proposals for reforming the system were presented; in the second, an open debate was held on the proposals with the points of views of the participants. The presentation of the conference was attended by Vicent Soler, Regional Minister of Finance and the Economic Model of the Valencian Government and President of the **Ivie**, **Anna Balletbó**, President of the Olof Palme International Foundation, **Ángel de la Fuente**, Director of Fedea and Researcher at IAE (CSIC), and **Agnès Noguera**, Vice-President of the Valencian Association of Entrepreneurs. The following speakers presented proposals for the reform of the funding system: **Ángel de la Fuente** (Fedea and IAE-CSIC), **Joan Rosselló** (University of the Balearic Islands and Sindicatura de Comptes CAIB), **Antoni Zabalza** (Universitat de València), and **Francisco Pérez** (Universitat de València and **Ivie**).
- Organized by the Ivie and the BBVA Foundation, the seminar on the **DETERMINANTS OF SPANISH UNIVERSITIES' PERFORMANCE: HOW TO LOOK AT THE DIFFERENCES IN THEIR RESULTS** was held in

Madrid on December 13. The objective of the seminar was twofold: firstly, to present to the University Community the study undertaken by the **Ivie** for the BBVA Foundation *La Universidad Española: Grupos Estratégicos y Desempeño*, and secondly, to discuss the main results and recommendations of this research. The event, organized by Professor of the Universitat de València and **Ivie** Research Director **Francisco Pérez**, was aimed at those in charge of universities and education administrations, as well as analysts of university performance and education policies, to help enrich strategic thinking about the university system in several ways: by contextualizing the criteria with which performance is measured and what the general rankings mean; by proposing alternative actions at different levels of responsibility to improve the performance of the Spanish University System; and by reflecting on the current university system model, considering the possibility and convenience of distinguishing between different types of institutions.

Firstly, **Rafael Pardo**, General Director of the BBVA Foundation, and **Francisco Pérez** welcomed the attendees and then the authors of the study presented the results:

Aldás, J. (Universitat de València and **Ivie**): "Grupos estratégicos de universidades en el Sistema Universitario Español, identificación y descripción"

Escribá, A. (Universitat de València and **Ivie**): "Resultados docentes, investigadores y de transferencia de los grupos estratégicos del Sistema Universitario Español"

In the second part of the seminar, a roundtable was organized on LESSONS TO BE LEARNT FROM THE STRATEGIC GROUPS TO IMPROVE THE SPANISH UNIVERSITY SYSTEM, with the following participants: José Juan Moreso (Agencia para la Calidad de las Universidades-AQU en Cataluña and Pompeu Fabra University), José María Sanz (Autonomous University of Madrid), Juan Manuel Mora (University of Navarre) and Julio Iglesias de Ussel (Complutense University of Madrid and Real Academia de Ciencias Morales y Políticas).

- The seminar WHAT ARE THE ECONOMIC REFORMS NEEDED IN SPAIN? (V): AN EFFICIENT, SUSTAINABLE AND STABLE HEALTH SYSTEM was the fifth in a series dedicated to reflecting on the urgent economic reforms in Spain. It was held in Valencia on December 15 at the headquarters of the University-Enterprise Foundation ADEIT, and was organized by the BBVA Foundation and the Ivie in collaboration with the Universitat de València. The seminar was aimed at those responsible for economic and health public policies, social agents, teachers, researchers, professionals, students and all those interested in analyzing the functioning of the public sector and health activities. The purpose of this meeting was to analyze the health system in Spain and discuss the following issues: the trajectory of public health expenditure in Spain throughout the twenty-first century and the impact of the crisis; the changes in spending in relation to the evolution of health needs; regional differences in health expenditure; the impact of the demographic structure on health needs; and the level of health services in the Autonomous Communities. Also discussed was the importance of public health funding for the redistribution of income and its capacity to reduce inequalities; the results of the Spanish health system and how the adjustments affect these results; the efficiency of the health system; health expenditure regulations; the reforms which could improve the functioning of the system; and good practice in health services and its promotion. Francisco Pérez, Professor at the Universitat de València and Ivie Research Director, coordinated the seminar in which the following speakers took part:
 - **Abellán, J.M.** (University of Murcia and Asociación de Economía de la Salud): «Sostenibilidad y reformas del Sistema Nacional de Salud»
 - **Cucarella, V.** (Sindicatura de Comptes de la Comunitat Valenciana) and **F. Pérez** (Universitat de València and **Ivie**): «Necesidades y recursos autonómicos para la prestación de servicios de salud»
 - **García Díaz, M.A.** (AIReF and Rey Juan Carlos University): «La evolución del empleo autonómico en sanidad en el periodo 2002-2014»
 - **González, B.** (University of Las Palmas de Gran Canaria and Centro de Investigación en Economía y Salud): «Propuestas de reforma del sistema sanitario en clave de eficiencia»
 - Jiménez, S. (Pompeu Fabra University and Fedea): «Lecciones del Observatorio Fedea»

López Casasnovas, G. (Pompeu Fabra University and Centro de Investigación en Economía y Salud): «La descentralización como oportunidad para un sistema sanitario sostenible y solvente»

9.2. ORGANIZED BY OTHER INSTITUTIONS IN COLLABORATION WITH THE IVIE

- The ANAECO II 2016 WORKSHOP, organized by the Department of Economic Analysis (DEA) of the Universitat de València in collaboration with the Ivie, is a meeting place for members of the DEA (students and researchers) in which the results are presented of problems related to various areas of current micro and macroeconomic research, both theoretical and applied. This second edition of ANAECO was held from 6 to 8 July in the Sala Sánchez Ayuso of the Faculty of Economics, with eight sessions programmed. 20 papers were presented and discussed, which professionals from 22 universities and research centers in different countries had worked on. Among other issues of interest, papers were presented on economic growth, international integration and competitiveness, monetary policy and fiscal adjustments. There were also papers on the subjects of the labor market, funding of welfare policies, financial and banking problems, regional inequalities, and competition and R&D policies. In all cases, the papers presented were supported by the proven research careers of their authors, many of whom are Universitat de València graduates professionally engaged in research in universities, public institutions, regulatory bodies and specialized centers in Europe and the United States. The workshop was aimed at all members of the Faculty of Economics, Master's and PhD students and all those interested in the topics covered. Ivie researchers Juan Fernandez de Guevara, Joaquín Maudos and Francisco Pérez were part of the Organizing Committee. The workshop was opened by José Manuel Pastor, Ivie Research Professor and Dean of the Faculty, and various sessions were chaired by Ezequiel Uriel and Joaquín Maudos. Francisco Alcalá and José García Montalvo both presented papers, and Francisco Pérez participated in a roundtable on inequality in Spain La desigualdad en España: evolución, causas y políticas in which José Manuel Pastor acted as moderator.
- The final conference of the SPINTAN Project MILESTONE 10: SMART PUBLIC INTANGIBLES SPINTAN-FINAL CONFERENCE was held in Rome on September 12, and was organized by LUISS Guido Carli University (Rome, Italy) in collaboration with the Ivie. During the conference, the following sessions took place:

Matilde Mas (Universitat de València and **Ivie**), coordinator of the SPINTAN Project presented "The SPINTAN project: an overview".

The main conference, introduced by **M. Egidi** (Rector of LUISS Guido Carli University) and **S. Manzocchi** (LUISS Guido Carli University), was given by **Magda Bianco** (Bank of Italy) "Public intangible investment: a central banker perspective".

Pierre Mohnen (Maastricht University) was main speaker with the paper *The role of innovation and management practices in determining firm productivity in developing economies*, presented by **V. Meliciani** (LUISS Guido Carli University).

In addition, four sessions were held, chaired by **P. van de Ven** (OECD), **M. Weale** (King's College), **T. Clayton** (Imperial College) and **R. Stehrer** (wiiw) respectively, where members of the SPINTAN project presented their research results:

Beckmann, L. (DIW), **A. Huttl** (Kopin Tàrky), **M. O'Mahony** (King's College), **E. Schultz** (DIW) and **L. Stokes** (NIESR): "Intangible Investment and Hospital Performance"

Bontempi, E. (University of Bologna), **F. Bacchini** (ISTAT), **R. Golinelli** (University of Bologna) and **C. Jona-Lasinio** (ISTAT, LLEE): "Modeling Intangible Investment in a Macro-econometric Framework"

Bryson, A., L. Stokes and **D. Wilkinson** (NIESR): "The role of intangibles in schools performance: a case study for England"

Corrado, C. (TCBE), J. Haskel (IC) and C. Jona Lasinio (ISTAT, LLEE): "Spillovers from public intangibles"

Corrado, C. (TCBE), J. Haskel (IC), K. Jäger (TCBE), C. Jona-Lasinio and M. Iommi (ISTAT, LLEE): "Does Public Intangible Investment Matter? Evidence for the EU and US Economies"

Corrado, C. (TCBE), **M. O'Mahony** and **L. Samek** (King's College, London): "Education as Social Infrastructure".

Fernández de Guevara, J. and **M. Mas** (Universitat de València and **Ivie**): "Intangibles and Infrastructures as sources of Spanish economic growth"

Hosono, K. (Universidad de Gakushuin, RIETI), **D. Miyakawa** (Universidad de Hitotsubashi), **M.Takizawa** (Universidad de Toyo) and **K. Yamanouchi** (Universidad de Keio, MERI): "Complementarity and Substitutability between Tangible and Intangible Capital: Evidence from Japanese Firm-level Data"

Licht, G. (ZEW): "Impact of Economic Crises on Public Investment in R&D in Europe"

Pastor, J.M. and L. Serrano (Universitat de València and **Ivie**): "The research output of universities and its determinants: Quality, Specialisation and Inefficiencies in the EU"

Schiersch, A. and M. Gornig (DIW): "Complementarities of different types of capital in the public sector"

Squicciarini, M. (OECD) and **L. Marcolin** (OECD): "Knowledge-based capital and global value chains: the role of organisational capital"

At the end of the conference, a debate took place entitled *Economic policy and data* which was chaired by **F. Giugliano** (La Repubblica). The participants were: **G. Alleva** (ISTAT, TBC), **C. Corrado** (The Conference Board), **M. Weale** (King's College, TBC), **V. Meliciani** (LUISS University), and **A. Baldino** (Cassa Depositi e Prestiti).

- The rapid breakthrough of new technologies in recent years has generated new forms of intermediation in the provision of services and in consumption, and of which digitalization is a common characteristic. Organized by the Faculty of Economics at the Universitat de València in collaboration with the Ivie, OECD Economist Paul Schreyer presented a paper MEASURING GDP IN A DIGITALISED ECONOMY at the above faculty on November 11. Matilde Mas, Ivie Director of International Projects and José Manuel Pastor, Dean of the Faculty of Economics in Valencia and Ivie Researcher, opened the conference. The Deputy Chief Statistician at the OECD analyzed the ability of current systems to measure GDP in an economy marked by digitalization and new technologies. Schreyer pointed out some examples such as C2C transactions, including vehicle and home rental platforms such as Airbnb or Uber. He also commented on the phenomenon of the transformation of consumers into producers, facilitated by digitalization, and highlighted the example of the Wikipedia platform. Among these new ways of providing services through digital tools, he referred to the increase in services offered by occasional freelancers and the proliferation of triangular transactions, where payments are made through advertising and big data (free Apps).
- The Ivie collaborated with the Regional Ministry for Transparency, Social Responsibility, Participation and Cooperation of the Valencian Government on the conference about funding and self-government IV JORNADAS DE DESARROLLO ESTATUTARIO Y PROMOCIÓN DEL AUTGOBIERNO 'FINANCIACIÓN Y AUTOGOBIERNO: LOS LÍMITES DE LA SOLIDARIDAD. ¿HACIA DÓNDE VA EL AUTOGOBIERNO VALENCIANO?'. The event was organized by the Valencian Local Law Chair and the Faculty of Law at the Universitat de València and was held at the Chambers of the Law Faculty on October 17-19. Ivie Professors Francisco Pérez and Ezequiel Uriel participated respectively with the following papers «Las claves de la infrafinanciación valenciana» and «¿Qué son las balanzas fiscales?».
- The Ivie also collaborated in the organization of the BRUSSELS MEETING: THE SPINTAN PROJECT. MAIN FINDINGS AND FUTURE CHALLENGES, held on 22 November. The meeting was coordinated by Matilde Mas, Ivie Director of International Projects and Professor at the Universitat de València, and Marianne Paasi

(Research on Intangibles in the FP, RTD/Unit B8, UE). The results of this research project were disseminated through various presentations in two sessions:

The first session, *SPINTAN: Methods, data and empirical findings*, was chaired by **M. O'Mahony** (King's College, London) and counted with the participation of:

Bacchini, F. (ISTAT), **R.lannaccone** (LUISS & ISTAT) and **M. lommi** (LUISS & ISTAT): "Time series and real time estimates of public intangibles: the SPINTAN database"

Corrado, C. (TCBE), **J. Haskel** (IC) and **C. Jona-Lasinio** (LUISS & ISTAT): "Public intangibles: the public sector and economic growth in the SNA"

Corrado, C. (TCBE), J. Haskel (IC), C. Jona-Lasinio (LUISS & ISTAT), M.Iommi (LUISS & ISTAT) and A. Rincón-Aznar (NIESR): "Capital reallocation and public intangibles in the EU and in the US"

The second session was entitled *Public intangibles matter: productivity analysis and policy challenges* and was chaired by **C. Jona-Lasinio** (ISTAT, LUISS):

Corrado, C. (TCBE) and M. O'Mahony (KCL): "Education as intangible social infrastructure"

Corrado, C. (TCBE), J. Haskel (IC) and C. Jona-Lasinio (ISTAT&LUISS): "Spillovers from public sector intangibles2

Mas, M. (University of Valencia and Ivie): "Counting for public intangibles – changing policy challenges?"

• The third edition of the **CAÑADA BLANCH FORUM**, sponsored by the Cañada Blanch Foundation, the **Ivie**, the London School of Economics (LSE), the Valencian Association of Entrepreneurs (AVE) and Bankia, took place from November 30 to December 1 at the head office of the Marina de Empresas business center, Marina Real Juan Carlos I, located in Valencia's port. The objective of the 2016 FORUM 'RISKS OF INNOVATION: HOW TO MANAGE INNOVATION TO BETTER COMPETE' was to discuss the explicit and implicit risk involved in adopting a culture of innovation within institutions, companies and administrations. These socio-economic actors have to deal with a risk which, to a varying degree, combines a modernizing element to be confirmed by the market, a business element and a financial element. The Forum was aimed at private and public decision-makers, managers of firms and institutions, as well as professionals and academics.

A two-day discussion program was designed with a dynamic approach, allowing the participants to tackle the problem of innovation and collect ideas to help guide their own management. At the beginning of the first day, **Cristina del Campo** (REDIT) presented the following papers:

Busch, C. (LSE): "Fit for the future: How organizations can develop and sustain innovation"

Quesada, J. (Universitat de València and Ivie): "¿Cómo gestionar los riesgos de la innovación?"

A discussion then followed on THE CHALLENGE OF INNOVATING VERSUS RENOVATING, chaired by **Bruno Broseta** (BD Consulting and Universidad Europea de Valencia), and in which **José Amat** (INESCOP and Magrit), **Carmen Gallastegui** (University of the Basque Country), and **Guido Rosales** (Top Line Marketing Consultancy and Pompeu Fabra University) all participated.

On the second day, debates were held on INNOVATION AND THE BUSINESS MODEL and THE FINANCIAL RISK OF INNOVATION, chaired by **Jesús Navarro** (Chambers of Commerce of Valencia) and **Manuel Illueca** (Valencian Institute of Finance) respectively, with the participation of **Ignacio Cea** (Bankia), **José Ignacio de Orbe** (CIPASI), **Araceli Císcar** (Grupo DACSA), **Javier Jiménez** (Lanzadera), and **Alberto Gutiérrez** (Aquaservice and Plug & Play).

At the end of the event, **Antonio Pellicer** (Instituto Valenciano de la Infertilidad) gave a conference on reproductive medicine and the IVI as a scientific and business model "*Medicina reproductiva: el IVI como modelo científico y empresarial*", which was presented by **Javier Quesada** (Universitat de València and **Ivie**).

Finally, **F. Pérez** (Universitat de València and **Ivie**) presented the conclusions of the Cañada Blanch 2016 Forum, in which the experts gathered agreed that the greatest risk of innovation was not innovating at all.

9.3. PARTICIPATION OF IVIE RESEARCHERS AND TECHNICIANS IN OTHER SCIENTIFIC MEETINGS

Francisco Alcalá was a speaker at the MOVE-BARCELONA GSE MACROECONOMICS WORKSHOP in honor of economist Timothy J. Kehoe, which was hosted in Barcelona on March 18. He gave a seminar 'INTERNATION-AL RELOCATION OF PRODUCTION AND GROWTH' on May 19 at the University of Groningen (Netherlands). On July 6, he presented a paper at the II WORKSHOP ANAECO 2016 organized by the Economic Analysis Department of the Universitat de Valencia. He was a participant in the EUROPEAN ECONOMIC ASSOCIATION AND ECONOMETRIC SOCIETY EUROPEAN MEETING 2016 held in Geneva (Switzerland) from 22 to 26 August, and also in the LACEA AND LATIN AMERICAN ECONOMETRIC SOCIETY MEETING 2016, which took place in Medellin (Colombia) from 9 to 12 de November.

Joaquín Aldás presented a paper at the 44th ACADEMY MARKETING SCIENCE (AMS) ANNUAL CONFER-ENCE, held in Buena Vista (Florida) from 18 to 21 May. On July 14, he participated in a debate 'Medición y valoración de la transferencia universitaria según los rankings de referencia internacionales' programmed within the SEMINAR 'LA UNIVERSIDAD ESPAÑOLA COMO MOTOR DE CRECIMIENTO Y EMPLEO', which was organized by CRUE and the Fundación CYD at the Complutense University of Madrid. Also in July, he was speaker at the GLOBAL MARKETING CONFERENCE, organized by Global Alliance of Marketing and Management Associations in Hong Kong (China) from 21 to 24. He presented a paper at the SEIO 2016-XXXVI CONGRESO NACIONAL DE ESTADÍSTICA E INVESTIGACIÓN OPERATIVA, which took place in Toledo on September 5, as well as at the XXVII CONGRESO DE MARKETING AEMARK which was hosted at the University of León from 7 to 9 September. On October 27 and 28, he gave a seminar at the 15th EUROPEAN CONFERENCE ON E-LEARNING, hosted in Prague. Finally, he participated in a panel of experts on measuring the internationalization of higher education, which was held in Bogotá (Colombia) on November 25 during the 8th LATIN AMERICAN AND THE CARIBBEAN HIGHER EDUCATIONS CONFERENCE-LACHEC 2016.

Iván Arribas was a participant in the 9th INTERNATIONAL SCIENTIFIC CONFERENCE 'BUSINESS AND MANAGEMENT' 2016, organized by the Vilniaus Gedimino Technical University in Vilnius (Lithuania) on May 12. On June 3, he was speaker at the IFABS 2016 Barcelona Conference 'RISK IN FINANCIAL MARKETS AND INSTITUTIONS: NEW CHALLENGES, NEW SOLUTIONS' which was organized by the International Finance and Banking Society in the city of Barcelona. In addition, he presented three papers at the 5th WORLD CONGRESS OF THE GAME THEORY SOCIETY-GAMES 2016, which took place at Maastricht University (Netherlands) on 25 July.

Santiago Carbó took part in a debate on the evolution of the economy and credit in Spain held during the EX-PERIAN DAY 2016 in the Rafael del Pino Auditorium in Madrid on March 1. On September 2, he presented a paper at the WOLPERTINGER MEETING 2016, organized by the European Association of University Teachers of Banking and Finance, in Verona (Italy).

Vicent Cucarella gave a conference on funding in Valencia 'EL FINANÇAMENT VALENCIÀ, DE LA SUBMISSIÓ AL CANVI NECESSARI' at the head office of the association Lo Rat Penat, in Valencia on January 27. On February 23, he took part in a roundtable on the improvement of funding 'PACTE PER A LA MILLORA DEL FINANÇAMENT', organized by the Faculty of Geography and History at the Universitat de València. On May 6, he presented a paper at the conference JORNADES DE SOSTENIBILITAT hosted in Castalla (Alicante), and on May 20, he participated in a colloquium on a sustainable future and the local economy 'EL SOMNI D'UN FUTUR SOSTENIBLE. EL SOMNI D'UNA ECONOMIA LOCAL', held in Benicarló (Castellón). He also participated in a debate on funding in Valencia 'EL FINANÇAMENT AUTONÒMIC VALENCIÀ: PROBLEMES I PROPOSTES', which took place in Alaquàs (Valencia) on June 1.

Alejandro Escribá presented a paper at the 7th WORKSHOP ON TOP MANAGEMENT TEAMS AND BUSINESS-EIASM, hosted in Groningen (Netherlands) on April 7 and 8. He was a speaker at the presentation of the project for guaranteeing the continuity of family business 'COMO GARANTIZAR LA CONTINUIDAD DE LA EMPRESA FAMILIAR', a meeting organized by IVEFA (Instituto Valenciano para el Estudio de la Empresa Familiar), held in Valencia on May 31. He was also a speaker at the 16th EURAM ANNUAL CONFERENCE organized by the

European Academy of Management, which was held in Paris from 1 to 4 June, and he was a participant in the XXVI ACEDE CONGRESS 2016 'ORGANIZACIONES Y PERSONAS EN EVOLUCIÓN', held in Vigo from 26 to 28 June. Also in Paris, he presented two papers at the 39th ANNUAL CONFERENCE OF THE INSTITUTE FOR SMALL BUSINESS AND ENTREPRENEURSHIP, which was hosted on 27-28 October.

Juan Fernández de Guevara was speaker at the PREDICT 2016 TECHNICAL WORKSHOP 'ICTS, R&D AND THE ECONOMY' organized by the Joint Research Centre of the European Commission, Directorate B, and hosted in Seville on February 18 and 19. From 6 to 8 July, he presented a paper at SEM'S THIRD CONFERENCE, organized by The Society for Economic Measurement and held in Thessaloniki (Greece). He was a participant in the WOLPERTINGER CONFERENCE 2016, the meeting for the European Association of University Teachers of Banking and Finance, which took place in Verona (Italy) from August 31 to September 3, and also participated in the SPINTAN FINAL CONFERENCE, which was hosted in Rome (Italy) at the LUISS Guido Carli University, on September 12-13.

José García-Montalvo chaired the WORKSHOP 'BIG DATA AND CLIMATE CHANGE' organized by the Ramón Areces Foundation in Madrid from February 29 to March 1. He co-organized the I BARCELONA DATA SCIENCE CONFERENCE, which took place in Barcelona on March 21-22, as well as the WORKSHOP 'THE POLITICAL ECONOMY OF DEVELOPMENT AND CONFLICT IV', held in Barcelona on 26 and 27 May. In Santander, on June 28, he was speaker at the seminar 'DESAFÍOS DE LA ECONOMÍA ESPAÑOLA' organized by UIMP in collaboration with Funcas. He presented a paper at the WORKSHOP ANAECO 2016, organized by the Economic Analysis Department of the Universitat de València on July 7 at the Faculty of Economics in Valencia, and also presented a paper at the 2016 NBER'S SUMMER INSTITUTE OF POLITICAL ECONOMY, held in Boston on July 19 and 20. Finally, in November, he gave a lecture at the POLITICAL ECONOMY SEMINARS organized by the Stanford Graduate School of Business (USA).

Belén Gill de Albornoz presented two papers at the 2016 INTERNATIONAL CONFERENCE ON BUSINESS AND INFORMATION-BAI2016, hosted in Nagoya (Japan) from 3 to 5 July, one of which received the award for best work in the Finance and Accounting section. She was also speaker at the 39th EUROPEAN ACCOUNTING ASSOCIATION ANNUAL CONFERENCE, which took place in Maastricht (Netherlands) from 11 to 13 May.

Francisco Goerlich gave a conference on the recent evolution of income in Spain *'Evolución reciente de la distribución de la renta en España: ¿ruptura o continuidad?'* within the cycle of Caixa Popular conferences 'FUTUR OBERT' at the cultural center La Nau in Valencia on February 23. He presented a paper 'FROM SMALL AREA TO GRID-BASED STATISTICS: THE INTEGRATION OF HISTORICAL DATA AND GEOSPATIAL INFORMATION' at the EHPS-Net Meeting Working Group 9 – GIS, held at the **Ivie**, on March 29. On June 6, he was a speaker at the ENCUENTRO DE EXCELENCIA with NOBEL PRIZE WINNERS PISSARIDES AND DEATON at the Faculty of Economics of the Universitat de València. In addition, he presented a paper at the WORKSHOP SOBRE LA DESIGUALDAD DE LA RENTA EN ESPAÑA, organized by Fedea in Madrid on July 4. Finally, he was a speaker at the 2016 XREAP SYMPOSIUM 'INEQUALITIES IN ECONOMICS' hosted in Barcelona on 25 November.

Carmen Herrero gave a seminar 'EQUALITY OF OPPORTUNITY' at the Catholic University of Chile, in Santiago de Chile on March 15. At the University of Navarre on April 18, she gave a conference 'EVALUACIÓN DE LA INVESTIGACIÓN: EL PAPEL DE ANECA' and a seminar 'RANKING OF COUNTRIES ON THE BASIS OF PUBLICATIONS'. Finally, she was speaker at the 41 SIMPOSIO DE LA ASOCIACIÓN ESPAÑOLA DE ECONOMÍA, hosted in Bilbao on December 15.

Manuel Illueca was a speaker at the IFABS 2016 BARCELONA CONFERENCE 'RISK IN FINANCIAL MARKETS AND INSTITUTIONS: NEW CHALLENGES, NEW SOLUTIONS', organized by the Autonomous University of Barcelona on June 1-3.

Matilde Mas was a participant in the PREDICT 2016 TECHNICAL WORKSHOP 'ICTS, R&D AND THE ECONO-MY' held at the Joint Research Centre of the European Commission in Seville on February 18-19. She gave a conference 'INTANGIBLES Y CRECIMIENTO ECONÓMICO' at the Fundación Cotec para la Innovación in Madrid on June 15, and on June 25 took part in the debate program RAONEM on the subject of Brexit, broadcast by Levante TV. She organized the session 'Public Intangibles. The SPINTAN Project' for the SEM's THIRD CONFERENCE, which was hosted in Thessaloniki (Greece) on July 6-8, and was a speaker at the SPINTAN FINAL CONFERENCE, which was held at the LUISS Guido Carli University in Rome (Italy) on 12 and 13 September. On October 11, she presented the main results of the European Project SPINTAN at the WORKING

PARTY ON INDUSTRY ANALYSIS-WPIA organized by the OECD in Paris. She took part in a discussion on the strengths and weaknesses of the Spanish economy 'Fortaleses i Desquilibris de l'Economia Espanyola: el Baròmetre dels Cercles' held during the III FÒRUM D'ECONOMIA I EMPRESA, which was organized by the Faculty of Economics at the Universitat de València and the Economists Association of Valencia on 8-10 November. She organized and participated in the BRUSSELS MEETING: THE SPINTAN PROJECT. MAIN FINDINGS AND FUTURE CHALLENGES hosted in Brussels on November 22. Finally, she presented a conference at the LA KLEMS SEMINAR 'CRECIMIENTO, EMPLEO, CAPITAL Y LA HETEROGENEIDAD SECTORIAL EN AMÉRICA LATINA' in Washington DC in December, organized by the Inter-American Development Bank.

Joaquín Maudos presented an analysis '¿INDUSTRIA Y/O SERVICIOS EN LA ECONOMÍA VALENCIANA?' to the Commission for Industry, Trade and the Environment at the Chambers of Commerce of Valencia on February 24. He participated in a roundtable 'Empresas y financiación de futuro' at the CONFERENCE 'FINANCIACIÓN EMPRESARIAL EN ESPAÑA: ESTRATEGIAS DE FUTURO', which took place in the Assembly Hall at the Madrid Stock Exchange on March 10. He was also a participant in the panel discussion 'Los grandes retos de la economía internacional en 2016' held during the CONFERENCIA SOBRE RIESGO PAÍS 2016 and organized by the Chamber of Commerce of Valencia on May 5. On June 25, he took part in RAONEM, a discussion program broadcast by Levante TV, and which focused on Brexit. He was member of the organizing committee of the II WORKSHOP ANAECO 2016, held at the Faculty of Economics of the Universitat de València from 6 to 8 July, as well as acting as chair in Session 4 which took place on July 6. He presented a paper at the WOLPERTINGER CONFERENCE 2016, annual meeting for the European Association of University Teachers of Banking and Finance, hosted in Verona (Italy) from August 31 to September 3. Finally, he chaired a discussion on the strengths and weaknesses of the Spanish economy 'Fortaleses i Desquilibris de l'Economia Espanyola: el Baròmetre dels Cercles' during the III FÒRUM D'ECONOMIA I EMPRESA organized by the Faculty of Economics of the Universitat de València and the Economists Association of Valencia on November 8-10.

José Manuel Pastor was a speaker at the 10th ANNUAL INTERNATIONAL TECHNOLOGY, EDUCATION AND DEVELOPMENT CONFERENCE-INTED 2016 held in Valencia from 7 to 9 March, and took part in a roundtable 'Perspectivas económicas' held during the FORUM FORINVEST at the Feria Valencia on March 10. He presented a paper at the IV CONGRESO IBEROAMERICANO DE DOCENCIA UNIVERSITARIA, which took place in Murcia from March 31 to April 2, and participated in the forum FORO DE EMPLEABILIDAD Y EMPRENDI-MIENTO 'YOUTH & JOBS' organized by the Universidad Europea de Valencia on May 4. On June 8-9, he gave a conference at the seminar JORNADAS DE CONSEJOS SOCIALES, organized by the University of Alicante and the Conferencia de Consejos Sociales de las Universidades Españolas, and hosted in Alicante. He also gave a conference at the seminar II JSVE 2016 'USO DE LAS TIC EN LA INNOVACIÓN DOCENTE UNIVERSITARIA' in Valencia on June 20. On July 5, he presented a paper at the WORKSHOP 'REFLEXIONES SOBRE LA INFLU-ENCIA DE LA UNIVERSIDAD REY JUAN CARLOS EN SU ENTORNO' organized by the Rey Juan Carlos University in Madrid. On July 6, he presented the opening session at the II WORKSHOP ANAECO 2016 organized by the Faculty of Economics at the Universitat de València, as well as participating in a debate on inequality in Spain 'La desigualdad en España: evolución, causas y políticas' on July 8. He was a speaker at the CONGRESO NACIONAL DE INNOVACIÓN EDUCATIVA Y DOCENCIA EN RED (IN-RED), which was held in Valencia on July 7-8, and on 12-13 of that same month, he was a participant in the conference V JORNADAS DE INNOVACIÓN DOCENTE EN LA EDUCACIÓN SUPERIOR in Valencia. He presented a paper at the SPINTAN FINAL CONFER-ENCE, hosted at the LUISS Guido Carli University in Rome (Italy) on September 12-13, and also presented a paper at the INTERNATIONAL UNIVERSITY CONGRESS 'COMUNICACIÓN EN LA PROFESIÓN Y EN LA UNI-VERSIDAD DE HOY'-CUICIID 2016, which took place on October 26-27 in Madrid. He was a participant in the III FÒRUM D'ECONOMIA I EMPRESA organized by the Faculty of Economics at the Universitat de València on November 8-10, and finally, he was a speaker at a meeting on the Valencian Economy CLAUS DE L'ECONOMIA DE VALÈNCIA: CAP A UNA CIUTAT MEDITERRÀNIA SOSTENIBLE, organized by the University-Enterprise Foundation ADEIT in Valencia, on November 30.

Francisco Pérez took part in a roundtable on underfunding in the autonomous communities 'SOLUCIONES A LA INFRAFINANCIACIÓN AUTONÓMICA', organized by the Club de Encuentro Manuel Broseta in Valencia on January 25. On February 12, he gave a lecture on expenditure in public services 'DIFERENCIAS REGIONALES DE GASTO EN SERVICIOS PÚBLICOS: NECESIDADES VERSUS RECURSOS AUTONÓMICOS' at the Faculty of Economics and Business Studies at the Autonomous University of Madrid, and presented a paper at the FÒRUM VALENCIÀ PEL CORREDOR MEDITERRANI, organized by the Rectorate of the Universitat de València on March 7. He was a participant in a discussion on public funding 'Financiación pública a debate', which took place during the FORUM FORINVEST at the Feria Valencia on March 10, as well as participating in the presen-

tation of the book ESPAÑA ESTANCADA. POR QUÉ SOMOS POCO EFICIENTES, which was held at the cultural center La Nau in Valencia on April 18. On 5 May, he took part in a panel discussion on the challenges facing the international economy 'Los grandes retos de la economía internacional en 2016' at the CONFERENCIA SOBRE RIESGO PAÍS 2016, which was organized by the Chamber of Commerce of Valencia, and he was also a speaker at the FOURTH WORLD KLEMS CONFERENCE in Madrid on May 23-24. On May 27, he read the Laudatio in which Professor Dale W. Jorgenson was awarded Honorary Doctor in the auditorium of the historic building La Nau of the Universitat de València. On June 8, he was a participant in the roundtable 'La educación general en España: de la ley Villar a nuestros días', which was held in Burjassot (Valencia) during the CICLO DE CONFERENCIAS CENTENARIO del Colegio Mayor San Juan de Ribera, and was also a speaker at the JORNA-DA COMUNIDAD VALENCIANA 2020 hosted in Valencia on June 16. He was part of the Organizing Committee of the WORKSHOP ANAECO 2016, coordinated by the Economic Analysis Department of the Universitat de València, in addition to participating in a discussion on inequality in Spain during the WORKSHOP 'LA DESIG-UALDAD EN ESPAÑA: EVOLUCIÓN, CAUSAS Y POLÍTICAS' on July 8. In Seville, on September 22-23, he presented a paper at the conference 'LA REFORMA DEL MODELO DE FINANCIACIÓN AUTONÓMICA' organized by UIMP. As representative of the Committee of Experts, he took part in the Event 'PER UN FINAN-ÇAMENT JUST', which was hosted at the cultural center Círculo de Bellas Artes de Madrid, on October 5. He also gave a seminar at the IV JORNADAS DE DESARROLLO ESTATUTARIO Y FOMENTO DEL AUTOGO-BIERNO, organized by the Faculty of Law at the Universitat de València on October 17-19, and was a moderator at the WORKSHOP RIFDE-GEN on fiscal sustainability 'SOSTENIBILIDAD FISCAL Y HACIENDAS SUBCEN-TRALES EN ESPAÑA: DESAFÍOS Y REFORMAS' held in Santiago de Compostela on October 19-20. He was speaker at the III FÒRUM D'ECONOMIA I EMPRESA, which was coordinated by the Faculty of Economics at the Universitat de València and took place from 8 to 10 November. On November 24, he gave a conference at the XI EDICIÓN DE LOS PREMIOS UNIVERSIDAD EMPRESA hosted in Madrid, as well as chairing a debate during the CONFERENCE 'LA NIVELACIÓN INTERTERRITORIAL Y LA ESTIMACIÓN DE LAS NECESIDADES DE GAS-TO' organized by RIFDE gen+ in Santiago de Compostela and held on November 29. Finally, at the headquarters of the Valencian regional government on December 22, he took part in the presentation of issue 61 of the journal REVISTA VALENCIANA D'ESTUDIS AUTONÒMICS, focusing on the autonomous community funding system.

José María Peiró gave the conference 'BIENESTAR Y DESEMPEÑO EFICAZ EN LAS ORGANIZACIONES' at the Ciudad Politécnica de la Innovación in Valencia on January 21. He was a participant in the FIRST SMALL GROUP MEETING of the Alliance for Organizational Psychology on 'FOSTERING ETHICAL, RIGOROUS AND RELEVANT RESEARCH: THE CONTRIBUTION OF WORK AND ORGANIZATIONAL PSYCHOLOGY' organized by the Swiss Federal Institute for Technology in Zurich (ETH), Switzerland, on February 12-13. He presented a paper at the PRODEJIP-SECOND ANNUAL CONFERENCE organized by the Association for the Promotion and the Development of Joint International Programmes in Higher Education in the city of Leiden (Netherlands) on February 25-26, and another paper at the CONFERENCIA ANUAL MOTIVEM, hosted in Valencia on March 2. In Paris, he gave two conferences at the ENOP SYMPOSIUM on 17 and 18 March, and chaired the session 'Leading by Distance: Challenger and Considerations Round Virtual Team Management' which was held during the SIOP ANNUAL CONFERENCE in Anaheim (California) on April 14-16. He was guest speaker at the CYCLE OF INTERNATIONAL CONFERENCES at the Psychology Institute of the Chinese Academy of Science (Beijing) on April 27, and presented the papers 'La internacionalización de la educación graduada en Europa' and 'La psicología del trabajo y las organizaciones en Europa' on May 18 and 19 at the University of Puerto Rico. Back in Spain, he gave a lecture and presented a paper at the CONGRESO INTERNACIONAL DE PSICOLOGÍA DEL TRABAJO Y RECURSOS HUMANOS which took place in Madrid on June 2-3. In Lecce (Italy), he was a speaker at the SEMINAR 'WORK IN PROGRESS: FOR A BETTER QUALITY OF LIFE' hosted on June 6 and organized by the University of Salento. On June 23, he gave the lecture 'STRENGTHS AND WEAKNESSES OF THE HAP-PY-PRODUCTIVE WORKERS MODEL: A REFORMULATION AND EXTENSION' at the University of Tilburg (Netherlands), and was guest speaker at two conferences during the 31st INTERNATIONAL CONGRESS OF PSYCHOLOGY (ICP 2016), held in Yokohama (Japan) from 24 to 29 July. He then went on to Latin America to take part in the X CONGRESO IBEROAMERICANO DE PSICOLOGÍA and also the III CONGRESO NACIONAL: PSICOLOGÍA IBEROAMERICANA: 'REALIDADES Y TRANSFORMACIONES' (where he also presented a paper), which was held in Antigua Guatemala, from 22 to 25 September. On October 7, he gave a lecture 'EMOTIONS AT WORK' organized by the Latvian Society for Organizational Psychology and held in Riga (Lithuania). He coordinated the roundtable 'Psicología Organizacional y del Trabajo' at the 2.º CONGRESO LATINOAMERICA-NO PARA EL AVANCE DE LA CIENCIA PSICOLÓGICA in Buenos Aires, on October 11-15. During this event, he gave a conference 'PERSPECTIVAS Y RETOS DE LA PSICOLOGÍA DEL TRABAJO Y LAS ORGANIZACIONES EN IBEROAMÉRICA'. A few days later in Valencia, he presented a paper during the CONGRESO DE INVESTIGA-

DORES EN ECONOMÍA SOCIAL Y COOPERATIVA, which took place from 19 to 21 of October, before going on to present two works at the II CONGRESO INTERNACIONAL DE LA SOCIEDAD ESPAÑOLA DE PSICOLOGÍA SOCIAL and the XIII CONGRESO NACIONAL DE PSICOLOGÍA SOCIAL hosted in Elche (Alicante) on October 20-22. On November 4, he travelled to Chile to give a conference at the III CONGRESO CHILENO DE PSICOLOGÍA DEL TRABAJO Y LAS ORGANIZACIONES, which was held in the city of La Serena. He was also a speaker at HRMINING 2016: 4th INTERNATIONAL SEMINAR ON HUMAN CAPITAL MANAGEMENT IN MINING hosted in Santiago (Chile) on November 9, and he gave a conference at the IV JORNADA PSICOLOGÍA DEL TRABAJO, ORGANIZACIONES Y RECURSOS HUMANOS in Madrid on November 25. Finally, he presented two papers at the KICK-OFF MEETING of the ERASMUS+ CAPACITY BUILDING PROJECT EVENT, which took place in Hanoi (Vietnam) on December 7-9.

Javier Quesada presented the paper 'INTANGIBLES Y CRECIMIENTO ECONÓMICO' in collaboration with Matilde Mas, to the Innovation Funding Committee at the Fundación Cotec para la Innovación in Madrid on June 15.

Ernest Reig was guest speaker at the VII CONGRESO INTERNACIONAL SOBRE EFICIENCIA Y PRODUCTIVIDAD hosted in Córdoba on May 19, in addition to being a participant in the XLII INTERNATIONAL CONFERENCE ON REGIONAL SCIENCE held in Santiago de Compostela on November 16-18.

Lorenzo Serrano gave a presentation at the SPINTAN FINAL CONFERENCE, which took place at the LUISS Guido Carli University in Rome (Italy) on September 12-13. He was also a speaker on December 20 at the conference 'CAPITAL HUMANO EN ESPAÑA' organized by the Faculty of Economics at the Universitat de València.

Marta Solaz presented a paper in the LACEA AND LATIN AMERICAN ECONOMETRIC SOCIETY MEETING 2016 hosted in Medellin (Colombia) from 9 to 12 November, and also at the MOVE-BARCELONA GSE MACRO-ECONOMICS WORKSHOP in honor of economist Timothy J. Kehoe, which took place in Barcelona on March 18.

Ángel Soler gave a lecture on June 21 at the Summer Course FORMACIÓN Y OCUPACIÓN, HORIZONTES Y PERSPECTIVAS DE FUTURO: EL EJEMPLO DE LA MARINA ALTA, which was organized by the National Distance Education University (UNED) and took place in Denia.

Emili Tortosa was speaker at the VII CONGRESO INTERNACIONAL DE EFICIENCIA Y PRODUCTIVIDAD EFIU-CO organized by the *Grupo de Eficiencia y Productividad* at the University of Córdoba and which was hosted in Córdoba on May 20. He also presented three papers at the IFABS 2016 Barcelona Conference 'RISK IN FINANCIAL MARKETS AND INSTITUTIONS: NEW CHALLENGES, NEW SOLUTIONS', organized by the International Finance and Banking Society on June 1-3 and held in Barcelona.

Ezequiel Uriel chaired the first session at the II WORKSHOP ANAECO 2016 organized by the Economic Analysis Department of the Universitat de Valencia on July 6. In addition, he presented a paper at the conference IV JORNADAS DE DESARROLLO ESTATUTARIO Y FOMENTO DEL AUTOGOBIERNO, organized by the Faculty of Law at the Universitat de València in collaboration with the Valencian Government and the **Ivie** from 17 to 19 October.

Fernando Vega was a speaker at the SECOND ANNUAL NSF CONFERENCE ON NETWORK SCIENCE IN ECONOMICS, hosted at Stanford University on April 22-24, and also a participant in the BILBAO-NORWICH-MÁLAGA (BINOMA) WORKSHOP ON ECONOMICS OF NETWORKS, organized by the University of East Anglia in Norwich (United Kingdom) on June 9-10. On November 1, he presented a paper at the BESC 2016-THE 3rd INTERNATIONAL CONFERENCE ON BEHAVIORAL, ECONOMIC, AND SOCIO-CULTURAL COMPUTING, organized by Duke University in Durham (USA). He took part in a roundtable 'Diversity in Economics' at the 2016 ANNUAL MEETING OF THE ASSOCIATION OF SOUTHERN EUROPEAN ECONOMIC THEORISTS (ASSET), which was held in Thessaloniki (Greece) on November 9 and 10, and gave a conference at the VI HURWICZ WORKSHOP ON MECHANISM DESIGN THEORY hosted in Warsaw on December 2 and 3. Finally, in Bilbao on December 15, he was a speaker at the 41st SIMPOSIUM OF THE SPANISH ECONOMIC ASSOCIATION.

Antonio Villar participated in the second session with the program 'El fracaso escolar, reflejo de un fracaso político y social. ¿Qué debe cambiar en el sistema educativo, en las familias, en la ciudad?' within the CICLO DE INICIATIVA SEVILLA ABIERTA-ISA, which took place in Seville on January 25 and was organized by the Fundación Cruzcampo. In April, in Washington (USA), he presented a paper at the ANNUAL MEETING OF THE

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION-AERA and gave a lecture at the Inter-American Development Bank-IDB. In May, he gave the seminar 'LEVELS OF PROFICIENCY, PERFORMANCE AND EQUITY IN EDUCATIONAL OUTCOMES: THE OECD ACCORDING TO PISA 2012' at the University of Huelva. He was guest speaker at the opening plenary session at the OECD SYMPOSIUM 'FROM INCLUSION AND EQUITY IN EDUCATION TO SOCIAL AND ECONOMIC PROSPERITY' hosted at the OECD head offices in Paris on June 16 and 17. Finally, he was speaker at the meeting 'EQUALITY OF EDUCATIONAL OPPORTUNITIES: NEW DEVELOPMENTS AND POLICIES', which was held in Barcelona on November 3-4.

10. DISSEMINATION

10.1. PRESENTATION OF STUDIES

During 2016, nine studies by the **Ivie** researchers and technicians were presented:

- The public presentation of the report on the Socioeconomic Contribution of Valencian Public Universities La Contribución Socioeconómica de las Universidades Públicas Valencianas was held on January 27, at the Bancaja Cultural Centre in Valencia. The event was attended by the President of the Valencian Government, Ximo Puig, and the five rectors of the universities that make up the Valencian Public University System (SUPV): Esteban Morcillo (Universitat de València); Francisco Mora (Polytechnic University of Valencia); Vicent Climent (Jaume I University); Manuel Palomar (University of Alicante); and Jesús Pastor (Miguel Hernández University of Elche). The authors of the study, Francisco Pérez, José Manuel Pastor and Carlos Peraita, presented an overview of the situation and results of the SUPV, its economic impact on the Valencian Community, as well as its strengths and weaknesses.
- Vicent Cucarella, Ivie Research Technician and author of the book on the Valencian funding system El finançament valencià, de la submissió al canvi necessary, continued giving talks in 2016 on the problem of underfunding in Valencia. He gave talks at the head offices of Lo Rat Penat and Ca Revolta on 27 and 28 January, respectively, in Vilafranca (Castellón) on February 20 and in Alaquàs (Valencia) on June 1.
- The report on Education Accounts in Spain 2000-2013, Cuentas de la Educación en España 2000-2013: Recursos, gastos y resultados, was presented at the head office of the BBVA Foundation on March 8. The study was directed by Francisco Pérez and Ezequiel Uriel, Ivie Researchers and Professors at the Universitat de València, and provides an in-depth analysis of the situation of education in Spain since the beginning of this century.
- The Town Hall of Valencia, the sports association Sociedad Deportiva Correcaminos, the Trinidad Alfonso Foundation and the Ivie presented the economic impact report Impacto Económico del 35.º Maratón Valencia Trinidad Alfonso 2015 at the sports complex Complejo Deportivo Cultural La Petxina, in Valencia on March 15. The results were presented by the director of the study, Joaquín Maudos.
- The results of the fourth edition of U-Ranking were presented at the BBVA Foundation head office in Madrid on March 31. The project, developed by the BBVA Foundation and the Ivie, was directed by Ivie Research Director Francisco Pérez and Ivie Research Professor Joaquín Aldás, both of whom are Professors at the Universitat de València. Ivie research technicians Irene Zaera, Rodrigo Aragón and Héctor García collaborated on the report *U-Ranking 2016: Synthetic Indicators of Spanish Universities*.
- Also at the BBVA Foundation head office in Madrid was the presentation of the study on income distribution Distribución de la renta, crisis económica y políticas redistributivas on May 6. The study was directed by Francisco Goerlich, Professor at the Universitat de València and Ivie Research Professor, in collaboration with Vicent Cucarella, Laura Hernández, Héctor García and Irene Zaera and analyzed the effect of public policies on the distribution of income in Spain for the period 2003-2013.
- The Economic Report on the Food and Drink Industry 2015, prepared by the Ivie for the Spanish Food and Drink Federation (FIAB), was presented by the Managing Director of FIAB, Mauricio García Quevedo, on June 16 at Madrid's business fair IFEMA. The report was directed by Joaquín Maudos, Deputy Director of the Ivie, and Professor at the Universitat de València.

- The report *La competitividad de las regiones españolas ante la economía del conocimiento,* undertaken by the **Ivie** for the BBVA Foundation, examined the relationship between the use of knowledge by each autonomous community and its greater or lesser capacity to generate income and wealth. The results of the study were presented at the BBVA Foundation head office in Madrid on November 28. Among those attending the event were the Director of the BBVA Foundation Rafael Pardo, the director of the study Ernest Reig, **Ivie** Researcher and Professor at the Universitat de Valencia, and co-author Francisco Pérez, **Ivie** Research Director.
- Finally, a seminar was organized by the BBVA Foundation and the **Ivie** on Spanish university performance. The event was held in Madrid on December 13 and the main results of the research *La Universidad Española: Grupos Estratégicos y Desempeño* were presented and discussed. The study was directed by Joaquín Aldás, **Ivie** Researcher and Professor at the Universitat de València, in collaboration with **Ivie** Researcher Alejandro Escribá and with Universitat de València Professors, María Iborra and Vicente Safón.

10.2. ESENCIALES SERIES

Esenciales [Essentials] is a series of periodicals designed to disseminate the main results of the Research Program carried out by the BBVA Foundation and the **Ivie**.

Brief, accessible and updated with the latest data available, these periodicals examine the issues dealt with in the main areas of research conducted by the BBVA Foundation and the **Ivie:** growth and competitiveness; human capital and knowledge; the productive structure; welfare and social capital, and regional development and demographics. In 2016, eleven issues were published:

- No. 2/2016. Las empresas españolas han reducido su endeudamiento y vulnerabilidad, acercándose a los niveles de la eurozona
- No. 3/2016. La formación ha avanzado durante la crisis, pero el abandono escolar, los desajustes en competencias y el paro limitan el aprovechamiento del esfuerzo educativo
- No. 4/2016. España crea muchas empresas, pero su baja supervivencia y el reducido tamaño medio condiciona la productividad
- No. 5/2016. Las Administraciones han mantenido el gasto en pensiones durante la crisis, pero las trayectorias del gasto en salud, educación y otros servicios de protección social han resultado financieramente insostenibles
- No. 6/2016. El 70% de los 6,4 millones de españoles que viven en municipios rurales accede a los servicios de las ciudades en menos de 45 minutos
- No. 7/2016. España pierde 1,6 millones de jóvenes desde 2012, entre nacionales y extranjeros, tras más de un siglo de crecimiento continuado de la población total
- No. 8/2016. El coste de financiación bancaria que asumen las empresas cae un 45% en los últimos cuatro años.
- No. 9/2016. La inversión directa exterior en España aumenta un 13% en el primer semestre de 2016, aunque se orienta hacia las actividades inmobiliarias
- No. 10/2016. El gasto público en la formación de los desempleados cayó un 30% en el periodo 2007-2013, mientras que las empresas duplicaron la inversión para formar a sus trabajadores
- No. 11/2016. La confianza en las instituciones públicas perdida durante la crisis apenas se ha recuperado, pese a la mejora económica
- No. 12/2016. La formación de los emprendedores españoles mejora, pero el peso de los que solo tienen educación obligatoria es el doble que en la Unión Europea

10.3. WEBSITES

The **Ivie**'s website (www.ivie.es) offers up-to-date information on the organization of the Institute, its objectives and activities. The website has been designed to be used as a regular link between the **Ivie** and those who may wish to use it in their study and economic research tasks.

The contents of the website are structured in thematic sections with the aim of facilitating access to the information. These sections refer to the **Ivie** as an institution, the curricula and profiles of the people who work at and collaborate with the Institute, its publications and databases, the Institute's research projects, the Spanish and international networks in which the **Ivie** participates, the seminars and other scientific meetings it organizes, and a section aimed specifically at the media.

In the Publications section information can be accessed on the monographs prepared by the **Ivie**, the scientific articles published by its researchers, the **Ivie**'s working papers series and the various dissemination materials: Human Capital Notes, Capital and Growth, Immigration at a Glance, Population, InnDEA notebooks and the BBVA Foundation-**Ivie** *Esenciales* Series. In addition, different research reports and documents can be downloaded.

Ivie's publication *Essentials* [*Esenciales*] has a direct link on the home page. This section was created in December of 2015 when the first issue was disseminated among the media. These periodicals on social and economic issues in form of press releases are written in a concise and direct language. During 2016 11 new issues were published.

The Databases section also allows access to a wide range of statistical information in the databases developed by the **Ivie**. In 2016 the databases Education Accounts in Spain 2000-2013 and Homogeneous Series of Population were uploaded to this section, which also includes the following databases: Capital Stock, Human Capital, Regional Differences in the Public Sector, Basic Public Services, Public Health Expenditure, Intangible Assets, EU KLEMS, Human Development, ICT R&D Macro data, Social Capital, Human Development, Transition, Inequality, Life Tables, Financial Integration, Trade Integration and Migrations.

Press and Activities are the sections that gather information aimed at a non-specialized public on the different lines of research in which the **Ivie** works. The contents offered in these sections are also intended for journalists interested in publicising the Institute's work. In addition to the news, press releases and other dissemination materials developed at the **Ivie**, a list of key words is provided showing the public the research areas in which it specializes. The Videos Section provides access to reports, interviews and news on television in which **Ivie** researchers appear, as well as videos recorded in the events organized by the Institute. In this case, the nine videos on the Cañada Blanch 2016 Forum are particularly worth mentioning.

Ivie researchers regularly write opinion articles for journals and in different Spanish media, which are gathered in the section Opinion Articles within the section Activities. In 2016, a total of 50 articles were published, analyzing general topics of current interest as well as works and studies published by members of the Institute.

The five most recent opinion articles, in addition to the latest news, are highlighted on the home page to make it easier to locate. Also on the home page of the website is information about the Agenda, which includes the future activities of the **Ivie** and its research staff.

The social networks and the possibility of following the profiles and channels of the **Ivie** are shown in the upper bar of the website, with the icons that represent them. In addition to SlideShare, YouTube and Twitter, the professional network LinkedIn has been added this year.

To achieve a greater dissemination of the activities and studies that the Institute wants to promote, the visual impact of the slide is used, located at the top of the website. These images provide links to the information content of their subject matter and are renewed periodically.

the **Ivie** website reached almost 56,400 visits in 2016, which is 1.7% more than in 2015. 75% of these visits were from users in Spain, while the remaining 25% came from 135 countries, of which Russia, Mexico and the United States stand out.

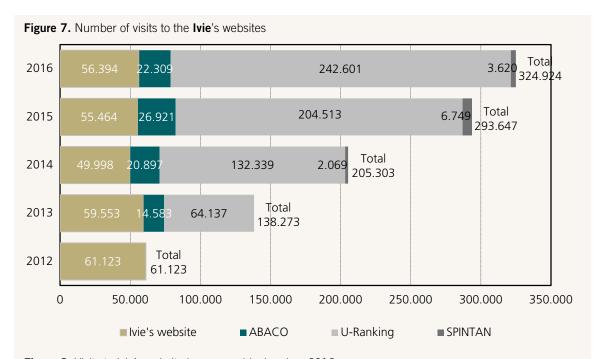
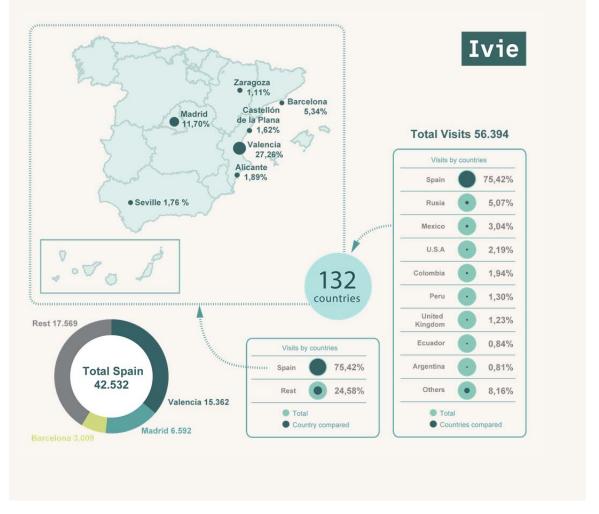


Figure 8. Visits to Ivie's website by geographical region. 2016



The Ivie also manages and maintains the following websites: ABACO (Observatory of Knowledge-Based Activities) at http:www.observatorioabaco, U-Ranking at www.u-ranking.es and SPINTAN at www.spintan.net, the website of the European project of which the Ivie has been the coordinator, and the website of the Valencian Public University System of Information (SIUVP), which offers a complete information system with more than 60 indicators for the 5 Valencian public universities.

10.4. CIRCULATION IN PRESS AND ONLINE

The Ivie has continued increasing its presence in the media, as a result of the attention given to publicizing its work. This progress is clearly shown by the 2,308 news items that appeared in the press in 2016 on the research conducted at the Institute and by the 50 opinion articles written the Ivie researchers.

The research concluded in 2016 and its activities undertaken were publicized through 13 press releases and also through 11 Esenciales releases. In 2016, 149 activities by the Ivie researchers were reported in the agenda and news section of the Institute's website, including the publication of articles by researchers and technicians in scientific journals, and the presentation of papers at different congresses.

Among the topics that have had the most impact in the media in 2016 is the 4th edition of U-Ranking, with 422 news items; the Essentials series, which generated 355 news items; the studies on income distribution and on education accounts; and information related to regional funding. In addition, the contributions made by researchers to the media, in which they offered their expert views on certain topics, led to more than 370 press clippings.

Roughly 44% of the information disseminated about the Ivie in 2016 was published in the regional press (Valencian Community and other regions), around 14% was in the national press, while 12.6% was in the financial press.

Social networks have also served as a platform to publicize the activity carried out by the Ivie. With 2,800 published tweets, the Institute's Twitter profile surpassed 2,000 followers in 2016, 32% more than 2015. Meanwhile, U-Ranking and ABACO Twitter accounts increased their followers by 52% and 20%, respectively. Regarding the Ivie YouTube Channel, it received more than 5,200 visits, while the presentations on the Slideshare platform were viewed on 37,300 occasions throughout 2016. The Ivie profile on LinkedIn (network aimed at the professional field) was also created in 2016, with the aim of strengthening relations with the academic and research world.

In 2016, a monthly newsletter was launched in which each issue contains the main current news about the Institute, the latest research, opinion articles by the researchers and important events on the agenda. This newsletter is sent by e-mail to more than 7,000 contacts.



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