

ICEBRS

International Conference on Economics
and Business Roads to Sustainability

June 29th to July 1st 2023

Faculty of Economics of the
University of Coimbra



Book of abstracts



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Welcome Message

The organizing and scientific committees of the International Conference on Economics and Business Roads to Sustainability (ICEBRS) are pleased to welcome you at the Faculty of Economics of the University of Coimbra, which is celebrating 50 years.

The fast pace of change is threatening the viability of the world as we know it, generating diverse and overwhelming challenges for current and future generations. Meeting the needs and goals of the present must not compromise the sustainable development of the world. Addressing such challenges entails major transformations for businesses, economies and society at large.

By drawing on the actual and potential contributions from economics and management, we hope that the conference's interdisciplinary nature contributes to finding solutions to charting a suitable path concerning the environmental, economic and social dimensions of sustainability.

This conference welcomes over 100 presentations and brings together approximately 150 participants, including scholars and experts from 19 countries across all continents.

The conference also counts with three distinguished academics as keynote speakers: Reinhard Madlener from RWTH Aachen University, Ricardo Reis from the London School of Economics, and Quentin Grafton from the Australian National University.

The conference features a session in partnership with E-REDES (the main electricity distribution grid operator in Portugal) on the "Challenges and Opportunities in Energy Transition" and a session organized by the OECD, focused on the transition to a green economy. It also includes two sessions with alumni of the Faculty of Economics: a round table with economics and management alumni from different generations, who will discuss how sustainability has been evolved over the past 50 years, and a session with research insights from alumni who are recognized academics at other universities.

The conference also hosts a poster competition for students co-organized with the Regional Directorate of the Center and Alentejo (DRCA) – Portuguese Economic Association.

We hope that you enjoy the scientific and social programmes we put forward. We also hope that you have the time to appreciate the city of Coimbra - recognized as a World Heritage Site.

Conference Location

Location

ICEBRS 2023 will take place at the Faculty of Economics of the University of Coimbra

Address:

Av. Dr. Dias da Silva, 165

3004-512 COIMBRA

PORTUGAL

GPS: 40.214698 -8.408988



General information

Attendance certificates

Certificates of participation will be distributed with the conference documentation and the badge, upon registration.

Badges

Participants are required to wear the badges during the conference events.

Lunch

Lunches will be served at the Cafeteria (4th floor of the faculty).

Opening Session

The opening session will take place on Thursday, the June 29st between **2:00 pm to 2:30 pm**.

Conference venue overview

All parallel sessions will take place on the 4th floor of the Faculty of Economics.

All plenary sessions will take place at the Auditorium (3th floor).

Posters will be exhibited at the 4th floor.

Internet access

To connect to Wi-Fi through Eduroam, you can use the following credentials:

Username: fe.eventos@uc (It does not include the .pt extension)

Password: FE+event06.23

For more detailed configuration information, you can visit the website

<https://www.uc.pt/feuc/cifeuc/servicos/wireless-eduroam/>

Further information

For further information and specific queries, please visit the conference's web site

<https://www.uc.pt/feuc/icebrs-2023/> or send an email to icebrs@fe.uc.pt

Organizing Committee

Rita Martins (Chair)

Carla Teotónio

Filipe Coelho

Óscar Lourenço

Pedro Silva

Sofia Antunes

Scientific Committee

Carlos Carreira (Chair), University of Coimbra, CeBER
Maria João Alves (Chair), University of Coimbra, CeBER

Álvaro Santos Pereira, OECD, Economics Department
Ana Paula Póvoa, IST Técnico Lisboa
Andrea Guerrini, WAREG - European network of water regulators
António Martins, University of Coimbra, CeBER
Babak Taheri, Nottingham Trent University
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Céline Nauges, Toulouse School of Economics
Cláudia Simões, University of Minho
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Jutta Geldermann, University of Duisburg-Essen
Linda Veiga, University of Minho
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Luís Dias, University of Coimbra, CeBER
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Patrícia Pereira da Silva, University of Coimbra, CeBER
Paul Buijs, University of Groningen
Paulino Teixeira, University of Coimbra, CeBER
Paulo Rodrigues, Banco de Portugal
Pedro Godinho, University of Coimbra, CeBER
Pedro Pita Barros, NOVA School of Business & Economics
Pedro Torres, University of Coimbra, CeBER
Rita Martins, University of Coimbra, CeBER
Rui de Albuquerque, Boston College
Rui Ferreira Santos, NOVA School of Science & Technology
Tiago Sequeira, University of Coimbra, CeBER

Acknowledgements

The organizing and scientific committees of ICEBRS would like to express our sincere gratitude to the management and staff of the University of Coimbra and of the Center for Business and Economics Research for all their logistical and financial support.

We would also like to thank our sponsors and partners:

- ┌ E-REDES,
- ┌ Bank of Portugal,
- ┌ OECD,
- ┌ Regional Directorate of the Center and Alentejo (DRCA) – Portuguese Economic Association
- ┌ Foundation for Science and Technology

Last but not least, a special thanks to our keynote speakers and participants. The success of this event would not have been possible without their contribution.



With national funding through projects UIDB/05603/2020 and UIDP/05603/2020



BANCO DE PORTUGA
EUROSISTEMA



Social Programme

Welcome reception

The welcome reception will take place on June 29th (Thursday) at 19:15, on the ground floor of ICEBRS's venue - Faculdade de Economia da Universidade de Coimbra (FEUC).

This event will include a 'Coimbra Fado' concert, a music genre closely connected with Coimbra academic traditions. The fado concert will be performed by the *àCapella Group*.

Gala Dinner

The Gala Dinner will take place on Friday, 30th of June, at 19:45 at the Convent of São Francisco, which is located downtown on the left bank of the Mondego River.

This convent was founded in the early 1600s and served various functions throughout its history, including a hospital and barracks, and it housed an important textile factory. Acquired by the Municipality of Coimbra in July 1986, the building was restored and now serves as a Cultural and Congress Center.



*Convento São Francisco
Avenida da Guarda Inglesa, n.º1A
3040-193 Santa Clara, Coimbra
Latitude 40° 12' 11" N | Longitude
08° 26' 09" W*

The Gala Dinner venue is within walking distance of FEUC (approximately 40 minutes). All participants who wish to walk from the faculty to the dinner site are invited to meet a member of the organization in the Faculty's lobby at 19:10. The pleasant journey takes you through some of the city's historical areas (the Old University), leading towards Convent of São Francisco.

Guided tour of the old University

On Saturday, the 1st of July, at 15:00, there will be a guided tour of the old University for those who have registered for this tour. This tour will guide you through some of the most iconic buildings of the University.

Founded in 1290 by King D. Dinis, the University of Coimbra is the oldest Portuguese-speaking university and one of the oldest in the world. With 730 years of history, the University of Coimbra is an unavoidable institution in the history of Portugal and the entire Portuguese-speaking world, and was declared a UNESCO World Heritage Site in 2013, due to its unique material and immaterial heritage, fundamental to the history of Portuguese, European and world scientific culture.

The meeting point for the guided tour is Largo da Porta Férrea (Iron Gate) at 15:00.



Largo da Porta Férrea

It is within walking distance of the Faculty (approximately 20 minutes) as well as from the main hotels of the city.

Conference General Schedule

June 29	June 30	July 1
	9h15 - 10h50 - Parallel sessions B0-B4	9h15 - 10h30 - Parallel sessions E0-E4
	Coffee break	Coffee break
	11:00- 12:00 - Plenary session: Ricardo Reis	10:45- 11:30 - Plenary session: Quentin Grafton
		11:30 - 12:45 - Alumni Session: Highlights from academics
Registration starting at 13:00	12:30 - 14:00 - Lunch	13:00 - Poster award and Closing session
14:00 -14:30 Opening session	14:00 -15:15 - Parallel sessions C0-C4	13:15 - 14:15 - Lunch box
14:30- 15:30 - Plenary session: Reinhard Madlener		15:00 - Guided tour of the old University
15h45 - 17h00 - Parallel sessions A0-A4	15:30 -17:05 - Parallel sessions D0-D3	
Coffee break	Coffee break	
17:30- 19:00 - OECD Session: Supporting the green transition	17:30- 19:00 - Round table with Alumni: 50 years of FEUC	
19:15 - Welcome Reception		
	19:45 - Gala Dinner	

Full Programme

Day 1 - June 29

Starting at 13:00	Registration	Lobby
14:00 – 14:30	Opening session	Auditorium
14:30 – 15:30	Plenary Session <i>Challenges Towards Higher Shares of Renewable Energy</i> Reinhard Madlener RWTH Aachen University	Chair: Luís Dias Auditorium
15:45 – 17:00	Parallel sessions A0 - A4	
June 29 15:45 – 17:00	A0: Regional and Spatial Economics	Chair: Luís Cruz
	<i>Wildfires and tourism in Portugal</i> João Cerejeira, Rita Sousa and António Bento-Gonçalves	Room Keynes
	<i>Revisiting Methods for Estimating Interregional Input-Output Accounts: It's Not Just About Trade Flows</i> Ana Sargento, Michael Lahr, João Pedro Ferreira and Fernando de la Torre Cuevas	
	<i>Under the Canopy: Mining and deforestation in Sub-Saharan Africa</i> Mboundor Diouf, Ahmed Tritah, Raja Chakir	
	<i>The PREMMIA approach: a tool for regional economic impacts analysis</i> Luís Cruz, João-Pedro Ferreira, Vitor Raposo, José-Miguel Rebolho, Luís Lopes, Carla Teotónio, Eduardo Barata and Ana Sargento	
June 29 15:45 – 17:00	A1: Health Economics I	Chair: Carlota Quintal
	<i>Socioeconomic context, disability and the Long Term Care System in Spain</i> Marta Pascual-Sáez and Javier Lera	Room 4.1
	<i>Long-term care: inputs or goods?</i> Liliane Bonnal, Pascal Favard and Thomas Maurice	
	<i>Breast and cervical cancer screening in Portugal: figuring out regional prevalence and inequalities using the Portuguese Health Interview Survey 2019</i>	

Micaela Antunes and Carlota Quintal

┌ *Determinants of colorectal cancer screening among target and non-target groups, by sex, in European countries*

Carlota Quintal and Micaela Antunes

A2: Decision Analysis

Chair: João Paulo Costa

┌ *Probabilities of default estimated from derivative securities*

Ana Monteiro and António Alberto Santos

Room 4.2

┌ *Prospective multi-criteria analysis in the water-energy nexus*

Sebastian Schär and Jutta Geldermann

┌ *Considering risk events and decision-makers' attitudes towards risk in the Cournot model*

José Diogo, Pedro Godinho and João Paulo Costa

┌ *Social Network Analysis as a data mining tool for improving problem understanding from online social networks' discourse*

Manuela Freire, Francisco Antunes and João Paulo Costa

A3: Business Strategy

Chair: Pedro Torres

┌ *European Higher Education Students' CSR and Sustainability Expectations towards Retail Companies: A Qualitative Study*

Tanja Vesala-Varttala and Carmina Nunes

Room 4.3

┌ *Sustainability Key-Indicators for Higher Education Institutions in Portugal - Common Framework for Performance Assessment*

Sónia Rodrigues, Patrícia Pereira da Silva and Sandra Caeiro

┌ *Big data - Implications for decision-making*

Liliana Oliveira, Mário Augusto and Pedro Torres

A4: International Trade

Chair: Luís Lopes

┌ *Export Restrictions and COVID-19*

Setembrino Benur Andrade Varela

Room 4.4

┌ *The Portuguese Export Miracle during the Great Recession: Learning-to-Export or Vent-for-Surplus?*

João Coelho, Carlos Carreira and Luís Lopes

┌ *The export productivity of Brazil and Portugal by technological intensity: a spatial comparative analysis*

Luís Lopes, Carlos Carreira and Antonio Carlos de Campos

June 29
15:45 – 17:00

June 29
15:45 – 17:00

June 29
15:45 – 17:00

17:00-17:30

Coffee-Break

Cafeteria

 OECD Session

Chair: Tiago Sequeira

17:30 – 19:00 **Supporting the Green Transition**

Auditorium

┌ *The relationships between firm performance and environmental efficiency*

Josh De Lyon, Antoine Dechezleprêtre, Isabelle Desnoyers-James, Xavier Koch and Francesco Manaresi

┌ *The market microstructure of industrial ecosystems in the digital and green transitions: How can production networks help design better industrial policies?*

Chiara Criscuolo, Antoine Dechezleprêtre, Louise Guillouet, Guy Lalanne and Francesco Manaresi

┌ *Did covid-19 accelerate the green transition? An international assessment of fiscal spending measures to support low-carbon technologies*

Frida Aulie, Antoine Dechezleprêtre, Fernando Galindo-Rueda, Clara Kögel, Inès Pitavy and Alzbeta Vitkova

┌ *Quantifying industrial strategies (QuIS): Cross-country evidence on 9 OECD countries*

Chiara Criscuolo, Luis Diaz, Louise Guillouet, Guy Lalanne, Charles-Édouard Van de Put, Camilla Weder and Hadas Zazon Deutsch

19:15

Welcome reception
Coimbra Fado by the àCapella group

Floor room

Day 2 - June 30

09:15 – 10:50

Parallel sessions B0 - B4

B0: Energy Economics I

Chair: Diogo Bárbara

┌ *Risk Management in Renewable Power Purchase Agreements: An Overview*

Andrews Danquah, Pedro Cerqueira, Patrícia Silva and Nuno Figueiredo

Room Keynes

┌ *To join or not to join? Assessing citizens' trade-offs in forming Energy Communities through a Preference Learning approach*

Giulio Cavana and Marta Bottero

┌ *The impact of financial development on renewable energy sector growth in EU countries: a panel data approach*

João Coelho, Beatriz Rodrigues, Herivalda Afonso and Inês Ribeiro

┌ *Determinants and forecasts of wholesale electricity prices in Iberian Peninsula: an approach grounded on econometric models*

Diogo Bárbara, Sérgio Cruz, Vítor Marques, André Rocha and Paulo Paulino

┌ *An innovative framework for evaluating the adoption of energy efficiency technology using multiple impacts assessment*

Marcos Tenente, Álvaro Gomes, Carla Henriques and Patrícia Silva

B1: Health Economics II

Chair: David Cantarero-

Prieto

┌ *Income elasticity for proteins, animal foods and animal proteins*

Diana Kmetkova and Milan Scasny

Room 4.1

┌ *Are Portuguese hospitals prepared for the privacy and interoperability of data? – a first analysis using a 2019 data survey*

Luís Caridade, Paulo Melo and Vítor Raposo

┌ *How large is the association between past unemployment spells and alcohol consumption? Evidence for Europe*

Gustavo Longo and Óscar Lourenço

┌ *Association between unmet healthcare needs and health outcomes: evidence from SHARE Corona Surveys*

Luis M. Ramos, Carlota Quintal, Óscar Lourenço and Micaela Antunes

┌ *Does social capital determine European older adults' health?*

Javier Lera, David Cantarero-Prieto and Sara Pinillos-Franco

June 30
09:15 – 10:50

June 30
09:15 – 10:50

June 30
09:15 – 10:50

B2: Operations Research

Chair: Humberto Rocha

┌ *A heuristic to compute a lower bound for a Joint Replenishment Problem obsolescence model*

Room 4.2

Ricardo Afonso, Pedro Godinho and João Paulo Costa

┌ *Intelligent system for the container loading problem with dynamic stability on the road*

Daniel Hernando Cuellar-Usaquen, David Alvarez-Martinez, Ana Maria Montes and Alejandra Tabares

┌ *The long-term-care caregiver routing and scheduling problem*

Jenn-Rong Lin and Saowapa Pattanapungsit

┌ *Comparing different approaches to compute the Pareto front in Multiobjective Mixed-Integer Linear Fractional Programming*

João Paulo Costa and Maria João Alves

┌ *On hybrid probabilistic-deterministic strategies for direct-search approaches*

Humberto Rocha and Joana Dias

B3: Human Resources Management & Organizational Behaviour

Chair: Isabel Dimas

┌ *A systematic literature review on sustainable HRM and its relations with employees' attitudes: state of art and future research agenda*

Room 4.3

Gabriela Gomes, Arnaldo Coelho and Neuza Ribeiro

┌ *Attitudes towards ethics and social responsibility: business students perspectives as future managerial and non-managerial employees*

Hau Thi Kim Do

┌ *How responsible leadership relates to individual performance: the sequential mediation of affective commitment and individual creativity*

Luís Simões and Ana Patrícia Duarte

┌ *Can virtuality lead to more innovative and satisfied teams? The mediating role of teamwork management*

Isabel Dimas, Teresa Rebelo, Lourenço Paulo Renato and Marta Alves

June 30
09:15 – 10:50

June 30
09:15 – 10:50

B4: Economic Growth and Development

Chair: Adelino Fortunato

┌ *An application of panel vector error corrections models to distinguish between the short vs. long-run effects of social expenditure composition on inequality and economic growth*

Pedro Bação, Joshua Duarte and Marta Simões

Room 4.4

┌ *Socioeconomic impacts of climate change extreme weather events: lessons from 2017 in Portugal*

Luis Escalante, Rita Sousa, Antonio Gomez-Plana and Cristiana Gião

┌ *Poverty, Inequality and Economic Growth: Non-Linearities and Growth Regimes*

Marta Simões, João Andrade, Claude Berthomieu and Adelaide Duarte

┌ *Revisiting the debate on the Eurozone crisis: causes, clustering periphery and core, and the role of interest rate convergence*

Gonçalo Amado

┌ *The economics of the ecological transformation: post-growth or new accumulation system?*

Adelino Fortunato

10:50-11:00

Coffee-Break

Cafeteria

Plenary Session

Chair: Paulino Teixeira

11:00 – 12:00

┌ *Which r-star: public bonds or private investment? Measurement and policy implications*

Ricardo Reis

London School of Economics

Auditorium

12:30 - 14:00

Lunch

Cafeteria

14:00 – 15:15

Parallel sessions C0-C4

C0: Energy Economics II

Chair: Isabel Soares

┌ *Government's Role in the Energy Transition: The Case of Nordic Countries*

Yaroslav Talyzin and José Fuinhas

Room Keynes

┌ *Ethanol production in sugarcane countries: Paving a Path toward Sustainable Energy Security*

Rômulo Ely and Michael Lahr

┌ *Energy affordability in European countries: bringing together the energy burden and the impoverishment approaches*

Carla Teotónio, Micaela Antunes, Rita Martins and Carlota Quintal

┌ *Assessment of the economic shocks on the times to the activity changes in the Portuguese firms. A comparative study by types of organizations and economic indicators*

Gustavo Soutinho, Vítor Ribeiro and Isabel Soares

C1: Monetary Policy and Central Bank Communication

Chair: Anne- Gaël Vaubourg

┌ *What do people believe about monetary finance and what can('t) we do about it? Evidence from a large-scale multi-country experiment*

Julien Pinter, Cars Hommes and Isabelle Salle

Room 4.1

┌ *Trust, Inflation Expectations and Media Sentiment on the ECB in Six European Countries*

Wiem Ghazouani, Matthieu Picault and Julien Pinter

┌ *Shedding light on a Blind Spot: New empirical evidence on the Accountability of the Eurosystem National Central Banks*

Adriano do Vale and Léo Malherbe

┌ *Unconventional monetary policy and central bank communication: between surprise and predictability*

Quentin Bro de Comeres, Léonore Hannotin, Cornel Oros, Marc Pourroy and Anne-Gaël Vaubourg

June 30
14:00 – 15:15June 30
14:00 – 15:15

June 30
14:00 – 15:15

C2: Accounting and Taxation

Chair: Liliana Oliveira

┌ *Construction of a Social Accounting Matrix for Portugal: the study of the tourism sector in a climate change reality*

Room 4.2

Cristiana Gião and Rita Sousa

┌ *The moderating effect of gender diversity on the impact of political connections and remuneration of eurozone bank boards' members*

Catarina Proença, Mário Augusto and José Murteira

┌ *Fiscal Devaluation, Innovation, and Household Welfare in an Open Economy*

Jin Sui

┌ *Impact of the Tourism Sector on Local Government Finances*

Sara Vieira, Rita Sousa and Linda Veiga

C3: Marketing - Consumer Behaviour

Chair: Filipe Coelho

┌ *Understanding observing customer's coping strategies with stress from service incivility in an intercultural encounter: The role of wellbeing*

Room 4.3

Ruby Zhang, Cristiana Raquel Lages and Mohamed Sobhy Temerak

┌ *Bibliometric Research toward Slow Fashion Consumption and Consumer Well-being*

Haozhe Ma and Arnaldo Coelho

┌ *Exploring Sustainable Fashion Consumption: Does it makes me feel good? Am I willing to pay more? Comparing consumers from Portugal, Brazil and China*

Shiqing Song, Arnaldo Coelho and Cristela Bairrada

┌ *Individual differences and online shopping cart abandonment*

Filipe Coelho, Cristela Bairrada, Pedro Silva and Nuno Fortes

June 30
14:00 – 15:15

June 30
14:00 – 15:15

C4: Environmental Economics

Chair: Celeste Eusébio

┌ *From fork to fish: The role of consumer preferences on the sustainability of fisheries*

Coralie Kersulec, Luc Doyen and Abdoul Ahad Cissé

Room 4.4

┌ *Circular Economy Processes in the Tourism sector: a holistic conceptual framework based on a systematic literature review*

Ana Gomes, Celeste Eusébio and Margarita Robaina

┌ *Tourism and air pollution in Italian regions*

Sara Ciarlantini, Mara Madaleno, Margarita Robaina, Alexandra Monteiro, Carla Gama, Maria João Carneiro and Celeste Eusébio

┌ *Air quality and visitors' behaviours: diversity and implications on sustainable development*

Celeste Eusébio, Maria João Carneiro, Vítor Rodrigues, Margarita Robaina, Mara Madaleno and Alexandra Monteiro

15:30 – 17:05
Parallel sessions D0 – D4

Session in partnership with E-REDES

Chair: Carlos Henggeler

D0: Challenges and Opportunities in Energy Transition

Room Keynes

┌ *Electricity market and the renewables transition*

Nuno Carvalho Figueiredo

┌ *E-REDES Open Data Platform: Data democratization accelerating the energy transition*

Luís Tiago Ferreira

┌ *Conceptualization of flexibility solutions as an alternative to traditional investment in distribution grids*

Rui Miguel Bento

┌ *Local Energy Markets - from business model innovation to a nascent market design*

Luísa Matos

┌ *Discussion*

All participants

June 30
15:30 – 17:05

D1: Financial Economics

Chair: Diana Cheung

┌ *The relationship between tourism investments and financial inclusion in the European Union (EU) countries*

Daniela Castilho and José Alberto Fuinhas

Room 4.1

┌ *The Role of the Financial Performance for the Green Deal Targets of the Biggest European Companies*

Raminta Vaitiekuniene and Kristina Sutiene

June 30
15:30 – 17:05

- ┌ *Affect and financial management: Initial insights*
Filipe Coelho, Maria Pereira, Isabel Dimas, Cristela Bairrada and Paulo Gama
- ┌ *Analysis of Factors That Influence Financial Inclusion: The Case of OECD Countries*
Daniel Freitas
- ┌ *From safety nets to productive nets? Impacts and spillover effects of cash transfers in a fragile setting*
Diana Cheung, Soazic Elise Wang Sonne and Quentin Stoeffler

D2: Environmental Economics - Water Sector

Chair: Marian Garcia
Valiñas

Room 4.2

- ┌ *Dynamic assessment of water supply operators' performance: A Multi-Period and Multicriteria Approach*
Sandra Tralhão, Rita Martins and João Paulo Costa
 - ┌ *Performance monitoring of Portuguese water supply service providers*
António Luís Amaral, Rita Martins and Luís Dias
 - ┌ *Benchmarking the energy efficiency in the provision of drinking water services: an efficiency analysis tree approach*
Maria Molinos-Senante, Alexandros Maziotis, Ramon Sala-Garrido and Manuel Mocholi-Arce
 - ┌ *Ecological footprint of Portuguese agriculture*
Miguel Viegas, Sara Moreno Pires, Elisa Biagetti and Silvio Franco
 - ┌ *Assessing environmental profiles: An analysis of water consumption and waste recycling habits*
Marian Garcia Valiñas, Fernando Arbues and Roberto Balado-Naves
-

June 30
15:30 – 17:05

June 30
15:30 – 17:05**D3: Social Economics & Public Policy**

Chair: Maria Pereira

┌ *Determinants of meat and fish consumption in five European countries*

Diana Kmetkova, Milan Scasny, Iva Zverinova and Vojtech Maca

Room 4.3

┌ *The impact of regulatory pressures in environmental innovation performance*

Joana Costa

┌ *Medical education and healthcare services: A model to cope with medical dualities and patient's holistic needs*

Catarina Martins Lopes, Nuno Lourenço-Silva, Jorge F.S. Gomes, José Fragata, Emília C. Monteiro and Isabel F. Albuquerque

┌ *Sustainable Development Goals (SDGs) in European countries: an analytical and econometric approach*

Inês Pereira and Margarita Robaina

┌ *Paths to national subjective well-being*

Maria Pereira, Filipe Coelho and Graça Silva

17:05 – 17:30**Coffee-Break**

Cafeteria

Round table with Alumni

Chair: José Reis

┌ *Ao longo de 50 anos como é que fomos pensando a sustentabilidade? [in Portuguese]*

Room Keynes

17:30 – 19:00

Isabel Soares - Professora Emérita da Faculdade de Economia da Universidade do Porto

José Couto - Presidente do Conselho Empresarial do Centro

Pedro Girão - CEO da Triber Agency

Celso Fuinhas - Erasmus Mundus na Università degli Studi di Torino

Convento São Francisco

**19:45****Gala Dinner**

Day 3 - July 01

09:15 – 10:30 Parallel sessions E0 - E4

E0: European Integration and Covid-19 Pandemic

Chair: António Portugal

┌ *The Next Generation EU: A Political and Normative Outlook of a Debtor Country*

Dina Sebastião

Room Keynes

┌ *COVID-19 Crisis and the EU Response. Can the NextGeneration Fund be the key to a more integrated Eurozone?*

Ignacio Martínez, Luis Palma and Marycruz Arcos

┌ *The EU and the Pandemic Crisis: From 'Road to Nowhere' to 'I Still Haven't Found What I'm Looking For'*

Isabel Camisão and Paulo Vila Maior

┌ *The impacts of Covid-19 pandemic in some European Union countries: a forecast analysis*

António Portugal Duarte and Fátima Sol Murta

E1: Political Economy & Labor

Chair: Carlos Carreira

┌ *Time-Related Underemployment: Why, when, and for whom?*

William Kratochwill and Paulino Teixeira

Room 4.1

┌ *Terrorism and Reporting on Immigration in the Media: Evidence from France*

Ahmed Tritah, Daniel Mirza, Matthieu Picault and Mamadou Sacko

┌ *Green Jobs in Portugal: Bottom-up Approaches*

Sergey Volozhenin, João Cerejeira and Rita Sousa

┌ *Immigrants and the Portuguese labor market: Threat or Advantage?*

Parisa Ghasemi, Paulino Teixeira and Carlos Carreira

July 01
09:15 – 10:30July 01
09:15 – 10:30

July 01
09:15 – 10:30

E2: Marketing

Chair: Emilio Ruzo-Sanmartín

┌ *The impact of supplier greenwashing on sustainability, mediated by information sharing and green trust: an analysis from the customer's perspective in a B-to-B context*
Célia Santos, Arnaldo Coelho and Alzira Marques

Room 4.2

┌ *Employee labour strategies and brand love*
Patrícia Cardoso, Filipe Coelho, Cristela Bairrada and Pedro Espírito Santo

┌ *Understanding and managing the holistic patient experience to improve patient well-being and healthcare service delivery*
Teresa Sofia Amorim Lopes, Cláudia Simões, Patrício Costa and Joana César Machado

┌ *The importance of export commitment and distribution adaptation on export performance*
Carlos M.P. Sousa, Emilio Ruzo-Sanmartín, Concepción Varela-Neira and Qun Tan

July 01
09:15 – 10:30

E3: Finance

Chair: Carlos Alves

┌ *ESG & Systematic Risk: The moderating effect of Financial Performance*
Maria Roszkowska-Menkes and Laetitia Pozniak

Room 4.3

┌ *Portuguese's financial literacy: does the area of the course influence financial literacy?*
Paula Sarabando, Pedro Vasconcelos, Rogério Matias and Tiago Miguel

┌ *International Portfolio Selection with Machine-Learning and Asymmetric Dynamic Conditional Correlations*
Ana Sofia Monteiro, Nuno Silva and Helder Sebastião

┌ *The impact of ESG practices on the cost of debt: evidence for the US, Europe and Brazil*
Carlos Alves and Lilian Meneses

July 01
09:15 – 10:30

E4: Industrial organization & Innovation

Chair: Ernesto Nieto-Carrillo

┌ *Platform-based ecosystem for secondary construction materials toward Circular Economy: challenges and barriers*
Linh Truong and Peter Kawalek

Room 4.4

┌ *Measuring the societal impacts of university-industry R&D collaborations: A systematic literature review and future directions for research*
Maria Cohen, Gabriela Fernandes and Pedro Godinho

┌ *Firm growth, age and the intensity of international trade*
Segundo Camino Mogro and Alberto López

┌ *The paradox of Schumpeterian competition: Competitive regime and productivity growth in Portugal over 1986-2018*
Ernesto Nieto-Carrillo, Carlos Carreira and Paulino Teixeira

10:30-10:45	Coffee-Break	Cafeteria
10:45 – 11:30	Plenary Session <i>Responding to the world water crisis</i> Quentin Grafton The Australian National University	Chair: Rita Martins Auditorium
11:30 – 12:45	Alumni Session From Students to Academics: Research Highlights by Alumni <i>Human capital and productivity: the puzzle of the Portuguese economy</i> Fernando Alexandre – School of Economics and Management, University of Minho <i>Rules for rewarding the development of AI applications: A market design approach</i> Joana Pais – ISEG, University of Lisbon <i>The Neoliberalism Strawman</i> Pedro Brinca – Nova SBE <i>From politics to econometrics; from econometrics to game theory; from theory to the laboratory; and back to the laboratory – the history of a research project on quorum rules in referenda</i> Luís Aguiar-Conraria - School of Economics and Management, University of Minho	Chair: João Sousa Andrade Auditorium
13:00 – 13:30	Poster Award and Closing Session	Auditorium
13:30 – 14:00	Lunch box	Cafeteria
15:00	Guided tour of the Old University	Meeting point: Porta Férrea UC 

Abstracts of Oral Presentations

Plenary Session I - Challenges Towards Higher Shares of Renewable Energy

Reinhard Madlener
RWTH Aachen University

This talk provides an overview of the various supply, demand and grid-side flexibility options related to the integration of high shares of renewables, relative merits and some inherent challenges in terms of investment and financing needs, modeling issues, technological lock-ins/path dependence, preference elicitation, value stacking, and NIMBYism. The cost of centralized versus decentralized flexibility and markets for redispatch are addressed as well. Moreover, the state-of-the-art in the “solar rebound” research, a key prosumer topic, is discussed. Finally, a review of the latest IEA Renewable Energy Market Update of June 2023 is given and some overall conclusions offered.

Session A0: Regional and Spatial Economics

Wildfires and tourism in Portugal

João Cerejeira¹, Rita Sousa¹, António Bento-Gonçalves²

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Fire intensity and size incite visitation decrease and recreational losses, relevant tourism variables for European economies. As a result of climate change, this reality is becoming more evident. Due to significant gaps in analyzing the relationship between wildfires and tourism demand, this paper aims to explain how tourism demand reacts to wildfires in Portugal. We use a novel approach in these studies and estimate a spatial econometric model to analyze the relationship between total burned areas and overnight stays in a touristic establishment in a given municipality and its neighbouring municipalities. Our results show that wildfires negatively affect the overnight stays in the same location but also cause spillover effects in neighbouring municipalities. Also, the wildfire occurrences are positively related to the number of overnight stays after three months, suggesting a delay in tourism activities.

Revisiting Methods for Estimating Interregional Input-Output Accounts: It's Not Just About Trade Flows

Ana Sargento¹, Michael Lahr², João Pedro Ferreira³, Fernando de la Torre Cuevas⁴

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Interregional input-output tables largely differ in the quantity and nature of the set of available information pertaining to interregional trade. With respect to ability to replicate interregional trade accurately, research to date suggests decreasing returns to scale persist with regard to both more theoretical expectations and added empirical data. A basic underlying assumption is that intermediate industry accounts of the economies in the interregional input-output tables exist and are accurate. In fact, if they exist at the subnational level, such accounts are, at best, roughly estimated and predicated on far less empirical information than is available for economies of nations. Moreover, intra-economy intermediate-industry flows are typically markedly larger than the set of a region's commodity in- and out-flows. So, if intermediate industry flows in a set of interregional input-output accounts are noticeably mis-estimated, it follows that interregional trade coincidentally derived using them must be even more conspicuously in error. In this piece, we identify a few approaches typically used by researchers worldwide to develop subnational interregional input-output models: (1) a European approach that uses data available for NUTS 2 regions, (2) an American approach that uses data available for U.S. states, and (3) a very basic approach in which researchers have only employment data by region and reasonable travel time information among regions. We also examine variants of (1) and (2) in which we generate estimates of intermediate industry accounts via best-practice methods, i.e., those detailed in Lahr, Ferreira, and Többen (2020). The original variants estimate the accounts strictly via RAS and a gravity model. We further test to see how well the approaches estimate interregional input-output accounts of member states in the European Union (EU). In essence, aggregate all economies of the 27 member states, while maintaining sectoral detail, to produce a "national account". We then apply the five approaches — (1a), (1b), (2a), (2b), and (3) — so that each produces a coherent set of interregional accounts. Finally, we compare each to actual interregional accounts of EU member states published by Eurostat and, in turn, examine the benefits and trade-offs inherent to them.

Under the Canopy: Mining and deforestation in Sub-Saharan Africa

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Demand for minerals has been surging over the past twenty years, particularly in Sub-Saharan Africa. This paper evaluates the impact of rising mining activities on deforestation in the region from 2001 to 2018. We combined geo-referenced data on the extraction of 14 minerals combined with measures of deforestation at different levels of aggregation. We use Two-Way Fixed Effect-Difference in Difference (TWFE-DID) methods to uncover the dynamic effects of mining, including prospecting activities, on deforestation. We found strong evidence that mining activities contribute to deforestation at the buffer zone, cell, and district levels. We show that indirect impacts outweigh direct effects, with deforestation extending up to 80 km from mine sites. These results are supported by robustness checks using exogenous variations in world mineral prices. Using causal mediation analysis, we identify channels through which mining activities lead to deforestation. These channels include local economic activity, agricultural production, urbanization, conflict, and infrastructure development. We also find that impacts on deforestation vary by mine size, mineral type, mine ownership, and mining intensity in the region.

The PReMMIA approach: a tool for regional economic impacts analysis

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The economic structure of the regions, even in a small country, can be very heterogeneous, implying that the regions react differently to similar shocks. When a shock reaches a certain sector, in a given region, it does not see its effects confined to the region that suffered the initial shock, which previously spread to other sectors and regions. These effects are called spillover effects. Knowledge of one region's trade balance, discriminating exports and imports by products, is one of the elements characterizing the region's economy more difficult to obtain. But it is simultaneously one of the most valuables. Inter-regional I-O models allow this distinction to be made and to understand how a specific shock in one or several products can end up resulting in a shock for the region, for the rest of the country or in terms of international imports. These spatial linkages are precisely what distinguishes complete interregional from single-region models. Multi-Regional Input-Output (MRIO) models represent a relevant advance regarding the former and most frequently applied single-region I-O models. MRIO models improve the recognition of the interdependencies established between economic agents located in different regions. However, MRIO models demand a significant amount of data, which is not directly available from the National Statistical Offices. One of the main challenges is precisely the estimation of interregional trade, by product and between each pair of regions, since this information is not provided, in the generality of the countries, by official statistics systems. This work presents an overview of the different steps in estimating the data that support the development of the Portuguese Regions Model for Multi Impact Analysis (PReMMIA), departing from several official data sources, with distinct sectoral and territorial disaggregation levels. The PReMMIA approach is, at the basis, a database including a consistent set of I-O regional tables for all the seven Portuguese NUTS II regions (for 2017), describing the intra-regional flows in each of these regions. This is then expanded to estimate also the trade between regions (interregional trade) and derive (seven) bi-regional models – for each of the Portuguese NUT II Regions and the 'Rest of the Country'. Noteworthy, this modeling framework has a significant level of detail concerning the number of products (431) and the number of industries (134) producing and using them. Therefore, PReMMIA provides an integrated, detailed and consistent database on intra and interregional flows, allowing for an adequate characterization of each Portuguese NUTS II region economic base. Further, as a MRIO framework, PReMMIA is a quantitative model with strong capability to perform scenarios analysis, allowing the estimation of economic impacts that may result from different shocks in

one region's economy. Accordingly, PReMMIA intends to be a tool to support regional and national authorities in enhancing their capacity to the monitoring and evaluation of different policies or events.

Session A1: Health economics I

Socioeconomic context, disability and the Long Term Care System in Spain

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At the end of 2006, it was approved in Spain the Act on Promotion of Personal Autonomy and Assistance for Persons in a Situation of Dependency (SAAD, 2006). In Spain the number of persons aged six and over with a disability was 4.32 million in 2020. Disability is a complex, and multi-dimensional concept. Indeed, the access to Long Term Care is still very dependent on socioeconomic conditions although it is an economic growth generator and a useful instrument to improve equity. The aim of this paper is to study socioeconomic characteristics of the people with some type of disability and their primary caregivers in Spain paying attention to the equity in the access to care. To do so, we use data from the EU Statistics on Income and Living Conditions (EU-SILC). We develop several logit regression models and evaluation techniques. Our results show differences by caregiver (parents, spouse, partner or descendants). Moreover, considering the demographic aging of Spanish population, LTC is very important from an economic and social point of view. Also, LTC expenditure as % of GDP is analyzed considering institutional care, home care and day centers. Finally, in this paper, poverty and income inequalities among people with disabilities are analysed.

Long-term care: inputs or goods?

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Using data from wave 8 of SHARE (Survey on Health, Ageing and Retirement), we study the use of home help by elderly people in Europe. We simultaneously estimate the probabilities of receiving formal and informal help and the number of hours of formal help received, taking into account the reciprocal interactions between the helps. One might think that these aids are used by an elderly person because he or she is physically unable to perform them. Formal and informal help would be substitutable inputs to produce a given task except in the case of financial constraints or limited availability. We choose to consider the possibility that these aids are at least for some elderly people a means of having - of consuming - social contacts. In this case, the aids would be, indirectly, desirable goods, which could explain the low substitutability or even complementarity found in the literature. By using "psychological" variables such as loneliness, the number of trusted people, EURO-D and the gap between the GALI that we estimate from "objective" data and the stated GALI we show that these variables significantly affect the consumption of aid despite the fact that our model incorporates all the data classically used in the literature. To reinforce our results, we conduct a study differentiated according to whether the help is domestic or personal. Psychological variables have a greater effect on domestic help than on personal help. If an elderly person wishes to use help to have social contacts, it is understandable that he or she prefers to use domestic help rather than personal help. Because the performance of domestic tasks is a physical but also a cognitive activity, these results may have consequences, the age of dependence could be advanced.

Breast and cervical cancer screening in Portugal: figuring out regional prevalence and inequalities using the Portuguese Health Interview Survey 2019

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Worldwide, breast cancer (BC) is the most prevalent, while cervical cancer (CC) is the fourth most common among women. According to the most recent data from the International Agency for Research on Cancer, in 2020, 7,041 and 1,238 new cases of BC and CC were diagnosed, respectively, in Portugal. Screening for both cancers is strongly associated with a reduction in cancer-related morbidity and mortality, for women of average risk. All Portuguese regions have now implemented population-based screening programs for both and CC. According to the World Health Organization, the performance of any health system will be the better the higher the health gains, but also the smaller the avoidable and unfair health inequalities. It is thus relevant to monitor participation rates among target groups, as well as inequalities. We identify as 'extreme under-screening' women from target groups who never screened. Women screening more frequently than recommended or screening out of target groups correspond to over-screening, which is also a matter of concern for public health policy. Not only it is a waste of resources, but it also raises questions on whether women are making informed choices. Our aim is to analyze the level of, as well as income-related inequalities in, screening attendance, for target and non-target groups and different time frames across Portuguese regions for both cancers.

Methods: We use data from the Portuguese Health Interview Survey 2019 (PHIS 2019), at the NUTS2 level, both for target (women aged 50-69 for BC and 25-64, for CC) and non-target groups (8,194 and 8,032 observations for BC and CC, respectively), in and out of the recommended interval (two years for mammography; three years for pap smear test). For the inequality analysis, we compute concentration indexes (CI). Whenever relevant, outcomes are compared with those from the PHIS 2014. Sample weights provided in the dataset are used.

Results: Globally, the evidence suggests that screening attendance in target group/recommended interval is higher for BC (81%) than for CC (72%). At the regional level, the North generally displays more favorable outcomes, while Alentejo and Azores generally lay on the other extreme.

Extreme under-screening for BC is 3.4% in 2019, about the same as in 2014 and when we look at older women, who lost their opportunity of timely screening, the share is 13.4% in 2019 (vs 20% in 2014). For CC, extreme under-screening increased from 13.2% in 2014 to 15.7% in 2019. At the opposite end, over-screening is still an issue: for BC, the problem seems to be screening of women younger than recommended, whereas for CC the problem seems to be mostly screening more frequently than recommended.

We did not obtain evidence of inequality in target group/recommended interval for BC screening in both years, while it seems to have worsened for CC, given that the concentration of screening among richer women has aggravated (CI=0.038, in 2019 vs CI=0.028, in 2014). Over-screening is concentrated among richer women. Extreme under-screening is concentrated among poorer women for CC.

Conclusions: Overall attendance is high, and inequalities are low in the case of BC screening. Future attention should focus on over-screening, ensuring that women are making informed choices. Regarding CC screening, two extreme situations coexist: for the target group, some women are screening annually while other women, of lower income, are not screening at all.

Determinants of colorectal cancer screening among target and non-target groups, by sex, in European countries

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Objectives: Estimates for 2020, in Europe, show that colorectal cancer [CRC] ranked second (third) for women (men) after breast (prostate and lung) cancers, in terms of incidence, with 238,106 (281,714)

newly diagnosed cases. There is evidence that screening individuals of average risk decreases cancer-related morbidity and mortality. The recommendation is to screen persons aged 50 to 74, every 2 years for faecal test or every 10 years for colonoscopy. While policy-driven concerns are usually focused on target groups, overscreening (screening more frequently than recommended or screening individuals younger/older than recommended) should not be overlooked. Overscreening can cause harm and represents a waste of resources. In CRC it is difficult to weigh pros and cons of screening, raising issues of informed decision making. Our objective is to investigate the determinants of CRC screening in Europe, for men and women, in both target and non-target groups.

Methods: Data come from the last wave of the European Health Interview Survey (27 countries; 2019). For Portugal, we use the Portuguese survey to investigate regional effects. We use socioeconomic and geographic variables, and self-assessed health, to evaluate their marginal impacts over the probability of screening (in target/non-target group), separately for male and female, using logistic regression.

Results: At this stage we only have preliminary results for Portugal. Results for Europe will be available in June. In Portugal, within the target group, 67% (65%) of women (men) were screened. For women (men) up to 49 years, 22% (19%) were screened at least once in their lives. The evidence for the target group (women and men) suggests that basic/secondary education (for women/men) and living in North positively affect use. Income (except 2nd quintile) is significant for men. Double/triple insurance and urban area have positive impact for women. For both sexes, good/very good health and living in Alentejo decreases use. For women, living in islands has negative impact. For younger than recommended age, education (all levels) shows negative impact on screening in men, not significant for women. Income (for women only 2nd quintile) increases use, while better health decreases it. Insurance status and living in urban areas do not affect screening in both sexes. Regions NUT II mainly not significant.

Discussion: Attendance rates for CRC screening are still relatively low. Restricting the analysis to individuals who never did a colonoscopy (in Portugal, it is recommended only for cases with a positive result in the faecal test), rates are even lower, reaching 40%.

When it comes to screening individuals of average risk, everyone is deemed to have the same need in each age group (target and non-target). The results obtained in this study suggest that there is unequal use for equal need, in target group. Men with higher income seem to have greater access to screening, though, income also seems to increase use when it is not recommended. For women in target group, insurance and urban area are more impacting on use. Education is always a protective factor for men and women, not affecting use or affecting it in the best direction. There is no evidence of inducement of use outside target due to insurance or greater availability of services in urban areas. A worrisome result concerns geographic inequities in target groups, which might stem from differences in regional implementation programmes.

Session A2: Decision Analysis

Probabilities of default estimated from derivative securities

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Option prices can reveal market expectations about the future price of the underlying asset, more after they can present information about the probability of default of the firm. There are several approaches to estimate this probability of default. We propose parametric approaches that extend Black-Scholes-Merton model and consider a mixture of lognormal densities augmented by a probability of default. The models are tested by calibrating them to option prices from different types of firms. Here, we consider the Intel corporation and Beyond Meat corporation.

Other authors show that good ESG performance is penalized with higher cost of debt (Goss & Roberts, 2011; Menz, 2010), lending support to the overinvestment hypothesis (Barnea & Rubin, 2010) stating that ESG spending is a wasteful activity and an illustration of agency cost (Renneboog et al., 2008).

The aim of this research is to address the inconsistencies in prior research and explore the impact of ESG on systematic risk as moderated by financial performance. For ESG not to be perceived as overinvestment (Barnea & Rubin, 2010) or agency cost (Friedman, 1970; Karnani, 2011) it needs to be strategic, that is focused on shared value creation (Porter & Kramer, 2011). Capability to integrated social and environmental considerations within core business strategy and simultaneously strive for competitive advantage and responsibility can be a sign of superior management skills or the “good management” (Waddock & Graves, 1997: 604). This, in turn may suggest that a company is more effective is business and financial planning and consequently and, as a result, should enjoy improved financial stability (Oikonomou et al., 2012). In light of this we predict the following: H1: ESG performance is positively associated with systematic risk H2: The positive relationship between ESG performance and systematic risk is negatively moderate by firm’s financial performance.

We test our hypotheses on a sample of 5754 firm-year observations (retrieved from Bloomberg and Refinitiv databases). We use panel analysis with fixed-effects and employ instrumental variable approach (two stage least squares regression) to control for the endogeneity of ESG performance.

Our results indicate that ESG performance is significantly positively associated with systematic risk, providing support for H1. Further, the statistically significant coefficient of almost -0.01 on the interaction term suggests, in line with our hypothesis (H2), that financial performance negatively moderates the relationship between ESG score and Beta. This suggest that while high ESG performance in low profitable companies may result of overinvestment and is associated with increased systematic risk, the relationship is opposite for companies with sound financial performance.

Prospective multi-criteria analysis in the water-energy nexus

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Water and energy are two vital resources that play a crucial role in human well-being, functioning of modern societies and economic development. However, the demand for water and energy is increasing rapidly due to population growth and economic development, leading to challenges in supply and allocation under increasing scarcity. To add, the water and energy sector are interrelated. Water is necessary, e.g. for the production of energy through hydroelectric power, cooling of thermal power plants or extraction of fossil fuels, while energy is needed to pump, treat, and transport water for domestic, agricultural, and industrial use. The management of water and energy must consider the trade-offs and synergies between these resources to ensure a sustainable and efficient use of both resources. The water-energy nexus refers to the interrelations of the water and energy sector. Therefore, the nexus perspective recognizes the importance of considering the impacts and trade-offs of decisions made in one sector on the other, as well as the potential for synergies through integrated resource management. Nevertheless, strategic decision making in the water-energy nexus can be complex and subject to

uncertainty, since there may be trade-offs or conflicting goals that need to be balanced and multiple, interrelated factors that need to be considered when evaluating the consequences of decisions. The methods of multiple criteria decision analysis (MCDA) provide a systematic, structured approach to evaluate and compare alternative options based on multiple objectives, which can help decision makers make more informed and well-reasoned decisions. Furthermore, MCDA methods allow for the explicit consideration of multiple stakeholders or stakeholder groups and provide means for consensus facilitation. We present a framework based on system dynamics and the Preference Ranking Organization Method for Enrichment Evaluations (PROMETHEE) for strategic decision-making in the water-energy nexus to address interrelationships of the water-energy nexus in the assessment of alternatives. Qualitative system dynamic approaches are applied to reveal interdependencies between criteria and to identify criteria subject to reinforcing feedback loops. A case study for the evaluation of alternatives in Integrated Water Resources Management (IWRM) in the Middle East illustrates how the methodological integration of system dynamics into the outranking method PROMETHEE enables a prospective assessment of technical solutions in strategic decisions.

CONSIDERING RISK EVENTS AND DECISION-MAKERS' ATTITUDES TOWARDS RISK IN THE COURNOT MODEL

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The Cournot model is often applied to oligopoly structures in which companies produce a homogenous product and independently decide the amount to produce. The classical formulation of the Cournot model does not consider risk, but risk is an essential component of the environment in which firms compete. Many companies face operational risk, with the possibility of unexpected events that lead to higher operational costs. We use the Cournot model to encompass a stochastic risk framework consisting of a non-catastrophic event, with an impact on operational costs. We assume that the production cost can be partly controlled by the companies, but there is a trade-off between the cost without the event and the cost when the risk event occurs: the lowest the cost without event, the more significant is the impact of the risk event in the costs faced by the company. The study initially considers risk-neutral firms. Risk attitudes are then introduced by using utility functions. We analyze how different risk attitudes can impact the expected value of the profit. Each decision-maker (DM) is affected by earlier experience, training, and by his/her personal perspective regarding the context, and this is materialized in a specific risk attitude which can go from an extreme risk-seeker (optimistic) to an extreme risk-averse (pessimistic) attitude. Assuming these different attitudes towards risk, we used the concept of expected utility to analyze the different equilibrium situations considering the new factor represented by the risk event. Furthermore, DMs (the managers) and the company owners have different attitudes towards risk. Managers often have short and medium-term perspectives associated with their performance incentives, and their personal intrinsic characteristics and may lead to different risk attitudes. Company owners (shareholders) are usually able to reduce company-specific risk from their portfolios by diversification and, therefore, they often have, in the framework of their investments, a neutral attitude towards company-specific risk. We developed analytical formulations and performed numerical experiments to better understand the model behavior, particularly to find out whether the model produces sensible results and to better understand the impact of several parameters. The work provides two main contributions. Firstly, the model incorporates risk in a novel way, assuming that its impact is partially controllable by the companies. Secondly, agency issues are analyzed in the context of the Cournot model. We take a distinctive look at agency issues and analyze the risk attitudes of the managers that best serves the owners. Following financial literature, we assume risk-neutrality of the owners, but we assume that managers may have different risk attitudes. We address this question: if owners may choose managers with different risk attitudes (assessed, for example, by their history), which is the attitude that they should choose? We find that the highest expected profit in the equilibrium is reached when the managers present some degree of risk-seeking behavior. The results show that the model reflects a sound approach to real-world behavior and can be used to define strategic adjustments and present a quantitative assessment tool for different strategic approaches.

Social Network Analysis as a data mining tool for improving problem understanding from online social networks' discourse

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During a strike period, we examined the Facebook account of an airline company with the goal of evaluating their service level and responsiveness. Additionally, we aimed to create indicators that could aid in improving customer service. In this case study, data exploration and analysis focused on customer satisfaction and conflict identification during the strike, for the purpose of decision support. In crisis situations, companies typically rely on small data samples or surveys to measure and analyze customer dissatisfaction, usually using conventional communication channels such as call centers, email, and service desks. However, customers are increasingly turning to online social networks (OSN) when no response is provided through conventional channels. The strike that occurred at TAP was tumultuous, and many customers resorted to Facebook to express their complaints, confirm flight cancellations, and cancel reservations. We monitored TAP's Facebook FanPage data every two days to gain better insights into the situation. The primary objectives of the case study were twofold: firstly, to employ Social Network Analysis (SNA) on a large volume of data to identify keywords that summarize web discourse, and secondly, to determine whether semantic contents, gathered at regular intervals, could provide decision support in a crisis context. The study found that utilizing SNA metrics and analyzing multiple networks allowed for a more structured view of those involved in the discourse (TAP and its clients) and most used concepts. The analysis and visualization of concepts also indicated that it could also serve as input for monitoring and supporting decision making, such as determining which communication channels to include or reinforce, to reduce the company's response time to customers. The results of the semantic analysis provided valuable insights on used keywords, which could aid in analyzing various problem alternatives and supporting decision making. Additionally, the analysis of post contents could enable their classification into categories, leading to better management of organizational resources for directing requests. Although it is not easy to capture and process the textual content, due to language specificities, its analysis makes it possible to identify dissatisfied customers, by recognizing used key concepts in web discourse. After identifying dissatisfied customers and characterizing their complaints, companies can decide on appropriate interventions, such as making personalized telephone calls, to explore the sources of dissatisfaction, and resolve them. The decision problem of identifying dissatisfied customers is the same across traditional and current decision-making methods. However, access to data and available techniques for assisting in the decision process differ. Our research found that it is possible to structure data from OSNs by integrating social interaction and network structure, using SNA to study the network. Based on social interactions, decision support indicators can be developed to generate insights for decision-making.

Session A3: Business Strategy

European Higher Education Students' CSR and Sustainability Expectations towards Retail Companies: A Qualitative Study

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The aim of modern-day corporate social responsibility (CSR) is to benefit companies and their stakeholder groups in ways that generate shared value, including and beyond profit making. To develop long-term sustainability impacts, CSR must be strategic in nature and key stakeholder needs and expectations should be carefully integrated into CSR plans. CSR strategy is a systematic approach to business decision-making linked to ethical values, compliance with legal requirements, and respect for people, communities, and the environment (Aaronson, 2003). Creating shared value aims at economic value that contributes to society's needs and challenges. Shared value creation encompasses all corporate policies and practices that enhance competitiveness, while also developing social, environmental, and economic conditions in communities and societies. Shared value can be created through redefining productivity in the value-chain; recreating products and markets; and enabling local cluster developments (Porter and Kramer, 2011). Haski-Leventhal (2021) defined strategic CSR as a holistic and long-term approach to broader responsibilities of business, focusing on stakeholder integration when utilising the firm's resources and brand to address societal and environmental issues. This approach implies that CSR is present in all aspects of the company's operations and decision-making must be based on ethical and responsible reasoning. Strategic CSR is about shifting focus from the short-term to long term views and solutions. Stakeholders' needs and expectations should be integrated in decision-making to cover perspectives of all stakeholders. This requires courage and transparency from companies, as decision making for shared value creation is often a difficult balancing act. However, addressing societal and environmental issues is related to increased competitive advantage. Our research purpose is to explore stakeholder expectations to develop methods for collaboration and interaction between companies and their stakeholders. Our qualitative case study is focused on CSR and sustainability expectations of 126 international higher education students towards retail brands of their choice. The students took part in a CSR course at the Faculty of Economics of the University of Coimbra in autumn 2022 and worked in teams to investigate the CSR actions of selected retail companies. They gathered data through websites and by interviewing consumers, employees, and managers. As their final project, they proposed a CSR action plan for the respective retail company of their choice. We present the results of a qualitative content analysis of the CSR action plans (N=21), summarizing and discussing students' CSR needs and expectations towards retail companies. To conclude, we propose improvements in collaboration between retail brands and European higher education students. We believe that it is beneficial for retail brands to involve these future decision-makers, consumers, employers, and managers in joint CSR planning, decision-making, and shared value creation.

Sustainability Key-Indicators for Higher Education Institutions in Portugal - Common Framework for Performance Assessment

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For this study, 34 Portuguese public HEIs, including polytechnics and universities, were contacted, and two data collection techniques were used: document analysis and a questionnaire. This study made it possible to present a common framework for evaluating the performance of HEIs, comprising 36 indicators, divided into 5 dimensions - environmental, economic, social, academic, and institutional. The

findings also allowed for the identification of the information dispersion as the HEIs' main point of frustration in the assessment and reporting process, highlighting the requirement for a system that compiles all the data. The HEIs believe that a unified model of sustainability reporting would be beneficial, but with the option for each HEI to include more specific indicators to reflect the various organizational contexts, and there is a unanimous need to develop a practical guide on how to assess sustainability at HEIs in Portugal. The majority of HEIs also believe that reporting and evaluating sustainability in HEIs should occur annually, and that having standards in place would be advantageous and may even assist to advance the issue. This thesis fills a gap in the literature by proposing a common framework of key indicators that allows for the easy and comparable evaluation and reporting of sustainability implementation in Portuguese HEIs, serving as a guiding instrument for a first internal diagnosis and compiling relevant information for future government policies in this area.

Big data - Implications for decision-making

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Big data encompasses a vast set of structured, semi-structured and unstructured data (Sheng et al., 2017), generated through various sources (George et al., 2014), and under different formats (Davenport et al., 2012). Although there is no universal definition of big data, it is common to find associated three main aspects that characterize it since the concept emerged: volume, variety, and speed (Sheng et al., 2017). Among the many critical aspects that stem from the availability of data with these characteristics, some authors point out the change in the way decision-making is made (McAfee & Brynjolfsson, 2012). However, existing literature does not explore the effect of big data on the decision-making style of managers: rational and analytical or of an intuitive nature. Given this gap, it is intended to explore the impact of big data in the way managers will tend to make decisions in the future and, more specifically, the trend-changing style of decision-making that big data advertises, more data-driven over intuition-based. There are two distinct systems responsible for our decisions: the intuitive and the rational decision-making system. We call these two ways of thinking and deciding: reasoning and intuition. Reasoning is deliberate, requires effort, and is relatively slower, while intuitive thinking arises in our mind automatically, unconsciously, through rapid cognitive operations (Dane et al., 2012). Although rationality and intuition are often seen as two dimensions of decision-making, real-life decisions are not entirely rational or totally intuitive (Bratianu et al., 2020) and both systems, although distinct, work in parallel, interacting in a complex way (Hammond et al., 1987). The literature suggests that most of our thoughts are intuitive in nature (Kahneman, 2003). In business practice, we find, objectively, situations in which intuition is useful in the decision-making process, namely: i) in environments of high uncertainty; ii) in the presence of few precedents or several alternatives; iii) time and a lot of pressure to decide, and iv) insufficient or expensive information available. In contrast, the rational decision-making model consists of identifying and evaluating relevant information to the decision, analyzing objective data, evaluating costs and benefits, and ultimately making a decision. When data is scarce, expensive to obtain, or not available, it may make sense for managers to make decisions based on their experience and intuition. On the contrary, when there is information, evidence-based decision-making is possible. And big data enables informed decisions (Farrokhi et al., 2020; Ghasemaghahi & Turel, 2021). We assume that the effect of big data plays a determining role in a paradigm shift in the way decisions are made. While organizations have recently adopted big data technologies to support data-based and evidence-based decision-making - with reduced human errors and without cognitive biases - several researchers argue that intuition remains important for strategic decisions. Consequently, although we expect that human managers do not want to exclude, entirely, the intuition of their decisions, the degree to which they resort to it will tend to be less and, rationally, subject to scrutiny. The antecedents affecting the decision style in this new context require further research, at the level of the profiles of decision-makers, contextual conditions, and the type of decision with which they are faced.

Session A4: International Trade

Export Restrictions and COVID-19

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As a result of COVID-19, the export of medical goods has been subject to various global restrictions. Consequently, several countries have increased the supply of medical goods to alleviate the effects of this health crisis. This study entails a theoretical and empirical analysis of the effects of such remedial measures. To this end, we have utilized a consistent conjectural variation in a three-country model entailing firms competing in two reciprocal markets in Cournot. When the restrictions are unilateral, the number of medical goods available in the exporting country tends to increase, culminating in better management of the pandemic. In contrast, bilateral restrictions typically reduce the total output of medical goods; therefore, they are inappropriate in a pandemic situation.

The Portuguese Export Miracle during the Great Recession: Learning-to-Export or Vent-for-Surplus?

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We will investigate the Portuguese trade miracle during the Great Recession using firm-level data from 2004 to 2019. After tumbling during the global trade collapse of 2009, Portuguese firms' exports quickly recovered and grew by an accumulated 33.2% between 2010 and 2013. In the same period, the export-to-GDP ratio increased from 27.3% to 40.2%. What explains this extraordinary export growth during the Great Recession? We will relate the export boom directly to the collapse in domestic demand. The unexpected reduction in domestic sales freed up fixed productive capacity that firms use to serve foreign customers to maintain profitability or simply its activity (Almunia et al. 2021). We propose to test whether the decision to start exporting during the Great Recession depended on productivity performance or rather than on a lower-markup (the "learning-to-export" and the "vent-for-surplus" hypotheses, respectively). Firms in the pre-export stage increase their knowledge of export markets, their understanding of market requirements and of the practical barriers to exporting. Melitz (2003) pointed out the existence of fixed export costs, to conclude that only firms who can afford such costs (i.e., high-productive ones) can export. Consequently, only the most productive firms will enter export markets while less productive firms will tend to remain in domestic ones. The hypothesis of self-selection is well supported empirically in the literature, also apparently for Portugal (Manso Machado, 2019). The other explanation resonates with the Smith's "vent-for-surplus" theory of the benefits of international trade. Adam Smith stated in *The Wealth of Nations* that "when the produce of any particular branch of industry exceeds what the demand of the country requires, the surplus must be sent abroad (...). Without such exportation, a part of the productive labor of the country must cease, and the value of its annual produce diminish." (Smith, 1776: Book II, Chapter V). This can be accomplished by exporting with a lower difference between price and marginal cost, which, however, seems not to be the case for Portugal, given that markup rises upon entry to export markets (Soares and Sousa, 2023). The methodology will consist in a decomposition of the changes in export values using the Bernard et al. (2009) methodology (firm-country). Non-exporting firms can decide starting to export and exporting firms can decide to continue or to quit. Continuing firms can decide to export to new destinations, to continue a destination or to quit. Then, we will analyze whether exporters have higher productivity and whether their markups change during the crisis period. To test the differences between exporters and non-exporters, we will estimate a modified version of empirical model proposed by Bernard and Jensen (1995; 1999). Exporters will be controlled by size, industry, and destination countries. To study the effect of industry heterogeneity, we use the new taxonomy of the OECD (Galindo-Rueda and Verger, 2016), which divides economic activities

into five groups of technological intensity, considering manufacturing and non-manufacturing activities: High, Medium-High, Medium, Medium-Low and Low technological intensities.

The export productivity of Brazil and Portugal by technological intensity: a spatial comparative analysis

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This article examines the export productivity of Brazil and Portugal from High and Medium-High technological intensity as well as Low technological intensity sectors, for the period 2008 to 2019. The methodological framework consisted of spatial econometric models from parameter estimation and Moran's I and LISA. The results revealed the importance of considering spatial interactions in the export productivity analyses. The Moran index and the LISA confirmed previous results, showing spatial dependence for both technological intensity sectors for Brazil and for the High and Medium-High technological intensity sector for Portugal and revealed spatial clusters. In this specific case, it is worth noting that the Low technological intensity sector of Portugal has a random spatial distribution of productivity of its exports. Using spatial econometric techniques, we have estimated the determinants of export productivity by sector in each country, considering as explanatory variables agglomerations economies, either specialization or diversification, and regional knowledge. The spatial model that best fits the data is the SAR model for High and Medium-High technological intensity sector in Portugal, being therefore present global spillovers. whereas for Brazil is SEM model, being present in this case local spillovers. To the Low technological intensity sector of Brazil, the best model is the SDM model, where the global spillovers are also present. We have confirmed the importance of agglomeration economies, that impact export productivity, and also regional knowledge, having as a source R&D expenditure.

Session OECD: Supporting the Green Transition

The relationships between firm performance and environmental efficiency

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The green transition is accelerating, while productivity growth remains slow in many OECD countries. Firms respond to new green policies and rising energy prices by adapting their production processes and investing in new technologies. These adjustments affect both environmental and economic outcomes. This project explores the relationships between carbon efficiency, measured as value added per emissions, and typical measures of firm performance such as productivity and employment growth. To study these relationships, micro-distributed data will be collected across countries. Preliminary evidence using French and Croatian firm-level data shows that: (1) there is huge dispersion in carbon efficiency across firms, even within narrowly defined industries, and there is greater variance in carbon efficiency than in labour productivity; (2) within-industry dispersion in environmental efficiency and productivity are correlated across industries, as are changes in these dispersion measures; (3) carbon efficiency and labour productivity are strongly positively correlated, both in levels and in within-firm changes, controlling for firm characteristics.

The market microstructure of industrial ecosystems in the digital and green transitions: How can production networks help design better industrial policies?

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This paper exploits granular firm-to-firm VAT data for the whole Estonian business sector to provide new evidence on firms' linkages and interdependencies within supply chains. We match survey data to the VAT data to study how different types of firms are integrated into production networks (for instance by firm size, age, export status, sector, digital maturity, or electricity consumption) and how energy-efficient technologies can spread through the production network. The paper first provides a description of the Estonian domestic production network economy. It shows that a few "superstar" firms are very central to the Estonian production network. Superstar firms are also shown to adopt more energy-efficient technologies. This could suggest a particular role for these firms in the diffusion of green and digital technologies through the production network. Exploiting the EU-ETS price increase after 2018, we then show that green behaviour ripple from firms that were directly hit by ETS price shock through the production network.

Did covid-19 accelerate the green transition? An international assessment of fiscal spending measures to support low-carbon technologies

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Fiscal spending policies adopted in the wake of the COVID-19 pandemic have been presented as a unique opportunity to "build back better" and re-ignite the economy while accelerating the transition to a low-carbon economy. This paper analyses 1 166 funding measures announced by 51 countries and the European Union in 2020-21 to support development and diffusion of low-carbon technologies. These measures – amounting to USD 1.29 trillion – can make an important contribution to filling the climate investment gap, particularly in emerging technologies such as Carbon Capture, Usage and Storage and green hydrogen. A modelling analysis suggests that they could have large impacts on greenhouse gas

emissions and bring about significant co-benefits in terms of clean sectors' output growth and reductions in fossil fuel imports.

Quantifying industrial strategies (QuIS): Cross-country evidence on 9 OECD countries

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Industrial policy has resurfaced prominently in academic and policy discussions in the wake of major shocks and long-term trends. However, quantifying industrial strategies across countries remains difficult. The 'Quantifying Industrial Strategies' (QuIS) project measures industrial policy expenditures by gathering and harmonising publicly available data, based on a new methodology. This report summarises the composition of industrial strategies in the first nine participating countries in terms of expenditures, priorities, and policy instruments for the period 2019-21. The report finds that industrial policies are sizeable, with 1.4% of GDP spent on grants and tax expenditures, and with an important heterogeneity across countries in terms of strategic priorities; green instruments are important and rose significantly in six out of nine countries between 2019 and 2021; and industrial strategies mainly rely on sectoral instruments, representing on average 29% of grants and tax expenditures.

Session B0: Energy Economics I

Risk Management in Renewable Power Purchase Agreements: An Overview

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Corporate Renewable Power Purchase Agreements (PPAs) are long-term power contracts between a producer and a corporate buyer for the output from renewable generating assets. PPAs have seen significant growth in capacity additions (a 58% annual growth rate in Europe between 2018 and 2021) as organizations, particularly large ones, perceive it as an opportunity to decarbonize operations while contributing to climate change mitigation goals. However, because the output is weather-dependent and the market is volatile, the parties may face significant risks, albeit differently depending on the type of contract that the parties enter. This article outlines the various contracts, the risks that parties to these PPAs face, and how these risks can be assessed and managed. Systematic and traditional procedures for selecting relevant literature were used, followed by careful reading and synthesis, and writing of the major findings with respect to the study's objectives. The study finds that the major risks to parties in PPA contracts are volume, shape or profile, balancing, basis, change in law or policy, and price risks. We find the value-at-risk and the more coherent conditional-value-at-risks measurements to be adequate for assessing these risks.

To join or not to join? Assessing citizens' trade-offs in forming Energy Communities through a Preference Learning approach.

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European Commission's goal of achieving a more sustainable society relies heavily on the wide diffusion of renewable energy production and the electrification of consumption. At the urban scale, one of the most interesting initiatives aiming at promoting such diffusion, while reducing the energy consumed at the building level, is the adoption of Energy Communities. Energy Communities are defined by the EU as legal entities aiming at optimizing the self-consumption of energy produced locally by renewable sources owned by the members of the community itself. In joining the community, consumers pursue both individual as well as collective economic, environmental and social goals, while, at the same time, contributing to national targets related to the decarbonisation of the energy system. Together with their role in decentralising and democratising energy market, these entities have also been seen as potential additional revenue streams for profit-oriented stakeholders such as energy services suppliers and aggregators. Nonetheless, Energy Communities face several barriers in their implementation, both of socio-economic and financial nature, but also in the form of lack of initiative from local members in involving in their formation. Indeed, Energy Communities are usually approached in mainly two ways: as an optimization problem in which economic goals are the dominant objective, or as a multi-scenario selection, in which other objective such as environmental goals are also considered. In this second case, different consumers might have different trade-offs concerning economic, environmental and social performances when considering the opportunity to join or not an Energy Community, with consistent impacts on both the community members and the other external stakeholders making investment or policy decisions. Aim of the paper is to propose a methodology to assess customer trade-offs in deciding to associate or not in Energy Communities in order to evaluate their optimal configuration based on potential members' preferences. These trade-offs among performance indicators might have an impact on the construction of possible alternatives in different locations and at different scales, as well as on the potential participation of additional stakeholders, such as public Decision-Maker and profit-oriented ones. In this research a meta-analysis of the literature on Energy Communities will be conducted in order to examine the different multi-objective goals proposed in already published case studies to build an N-

dimension Pareto Front of possible alternatives. Grounding on these results, a specific survey will be implemented to evaluate customer trade-offs in Energy Community scenario selection for the specific case of the city of Turin (Italy), and different user profiles will be determined by means of a Preference Learning approach. The final goal of this methodology will be to determine the performance goals that a possible Energy Community configuration would have to achieve to be considered appealing to different users at different scale and in different location at city level. These results will aid public Decision-Makers in promoting context specific policies that would increase citizens' participation by reducing the barriers that they will face in joining an Energy Community, as well as private actors in identifying possible investment areas, in order to achieve an optimal configuration for all the stakeholders involved in the process.

The impact of financial development on renewable energy sector growth in EU countries: a panel data approach

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This paper offers preliminary results on financial development's role in deploying renewable energy capacity, using data from the 27 EU member states from 2000 to 2019. It also provides additional results regarding whether financial instability and regulatory measures hamper the financial system's capacity to support the green energy sector. This research is based on a model with renewable energy capacity (contrary to most of the literature on this matter, which tends to concentrate on consumption) as a function of the banking sector, equity and bond markets development indicators. Our empirical results highlight that if the banking sector and the stock market development are inferior to a certain threshold, they facilitate the growth of renewable industries and encourage the implementation of green technologies in the electricity production systems. These non-linear relationships have profound implications regarding the damaging effects of an oversized financial system on clean energy sources. Conversely, the bond market development has shown to have no significant influence on the evolution of the renewable energy sector. Regarding the impact of financial instability on the renewable energy sector, the results suggest that the adverse effects of crises limit the banking system and equity market's ability to foster the adoption of renewable energy sources. Additionally, we did not find evidence that capital and liquidity requirements faced by banks by dint of the third version of the Basel accord constrain their ability to provide the external capital required to enhance the adoption of renewable energy technologies. This ongoing research contributes to the existing literature focusing on how financial development supports and promotes the adoption of renewable energy sources in a European Union member state.

Determinants and forecasts of wholesale electricity prices in Iberian Peninsula: an approach grounded on econometric models

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Electricity wholesale market prices are one of the major components of the consumer's electricity bill. 2021 and 2022 were characterised by a significant increase in electricity prices in the European wholesale markets in general and in the Iberian market (MIBEL) in particular, due to the current macroeconomic and geopolitical context and exacerbated by meteorological conditions. In addition to their impact on economic development, wholesale market prices signal the level of investment and the most appropriate technologies for the development of the energy sector, with particular relevance to the current energy transition period and respective increase in the electricity production from renewable technologies. The main objective of this research is to implement an econometric methodology that analyses the main factors influencing the price evolution in the Iberian Peninsula and Portuguese wholesale market between 2009 and 2021, focused on the Portuguese pole. The development of an econometric model also creates the possibility of making forecasts of future price evolution, namely in the short and medium term, which can be compared with future market prices. The literature review identified the most relevant variables,

namely fuel and CO₂ prices, renewable energy production and weather conditions. Factors related to consumption levels, interconnection capacity and macroeconomic variables were also considered. In order to reduce volatility and comparability effects, data was collected on a quarterly basis. This type of analysis is relevant from a regulatory point of view in order to provide decision regulatory tools, in particular for decisions related to the short and medium term forecast of tariff evolution and the economic and financial sustainability of the Portuguese Electricity System, namely due to its impact on the Political and Economic Costs (CIEG) associated with electricity generation. For this purpose, two econometric techniques were analysed, namely multiple linear regression and univariate ARMA models. The results of the estimations and the corresponding tests show that the ARMA model is the most robust. The results indicate a significant impact of the price of gas and renewable energy production in the Iberian Peninsula, while in the case of oil and coal, there is a decrease in the respective causality with the price. Over the period analysed, macroeconomic variables and consumption-related factors are shown to have a low relevance for the formation of wholesale market prices, while weather conditions are significantly correlated with the determinants of renewable generation. The final model shows a good predictive ability, with deviations from the actual results only due to market design policies or extreme effects. The results of this study show the changes that have taken place recently, highlighting the current period of increased energy production from the renewable mix and the recent crisis characterised by increasing prices and volatility. Thus, this study provides an updated insight on the evolution of the factors that influence wholesale prices. Future monitoring and research are required to ensure that the models remain adequate to the transformations in the energy sector, namely market design policies, coupling between energy vectors, introduction of new technologies, in particular hydrogen, and new flexibility solutions.

An innovative framework for evaluating the adoption of energy efficiency technology using multiple impacts assessment

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Programs designed to promote Energy Efficiency (EE) frequently depend on cost-benefit approaches considering only the energy and environmental impacts on the use phase, ignoring other potential impacts. To support decision-makers in designing suitable funding programs, an innovative and practical tool combining Hybrid Input-Output Lifecycle Analysis with energy simulation methods was developed to assess the impacts connected to the adoption of EE solutions in the Portuguese residential sector. Ten indicators involving energy, economic, environmental, and social concerns were used. With this aim, 109,553 EE packages were simulated by blending distinct thermal insulation options for roofs and façades, window replacement, and explicitly addressing the use of space heating and cooling and domestic heating water systems. The evaluation of the impacts of the adoption of these packages was made by accounting for five climate zones. Findings show that only greenhouse gas (GHG) payback time (GPBT), energy payback time (EPBT), savings-to-investment ratio (SIR), and impact on family budget indicators maintain their best performances in packages adopted across all regions. Contrarily, avoided GHG emissions and energy savings only change their best performances in the packages adopted in Lisbon and Faro, respectively. Additionally, the packages that best boost employment and GVA while also cutting the potential number of premature deaths differ from city to city. Nevertheless, if gas-using systems are omitted, GPBT, EPBT, SIR, and NPV indicators change radically from their best performance packages. Finally, with the methodology employed, it was possible to perceive that the impacts of manufacturing, packaging, installation, and maintenance phases are crucial in determining the greatest reductions in GHG emissions and premature deaths or the highest growth of employment and GVA.

Session B1: Health economics II

Income elasticity for proteins, animal foods and animal proteins

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Dietary choices are one of the main causes of mortality and environmental degradation. Plant-based diets, compared to diets rich in animal products, are considered to be more sustainable because they use fewer natural resources and come with a lower environmental burden, resulting in lower greenhouse gas emissions. However, a rapid increase in global population and wealth has led to an increased demand for foods of animal origin. Getting enough protein might be one of the reasons people consume animal products but its increased consumption could negatively impact our health and environment. The aim of this paper is to examine economic and socio-demographic factors that influence animal food intake and animal-based protein intake in the worldwide diet. An econometric analysis of country-level panel data allows us to investigate the Environmental Kuznets Curve hypothesis in the context of a sustainable diet. Our findings suggest that the relationship between GDP per capita and animal-based food and protein supply resembles an N-shaped curve. First turning point (maximum) is estimated to be around \$34,000 (\$31,500) for the amount of animal food supply (animal protein) and \$30,500 (\$30,000) for the share of animal food supply (animal protein). These decreases will slow down at around \$47,000 and the amount or the share of animal food supply (animal protein) is likely to increase again from \$61,000 (\$63,000). The resulting income elasticity shows to be inelastic across the domain, however, the specific values vary depending on the country's level of GDP. The elasticity is positive for low- to middle-income countries with its maximum of 0.29; and it becomes negative once a country reaches a GDP level of about \$55,000.

Are Portuguese hospitals prepared for the privacy and interoperability of data? – a first analysis using a 2019 data survey

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Health information systems have taken advantage of the evolution of technology. They are now indispensable in providing face-to-face and remote health care, discovering innovative therapeutic techniques and even, with artificial intelligence, predicting the onset and prevalence of diseases. Associated with these developments applied to the health context, interoperability and data privacy plays a crucial role in ensuring the clinical safety of patients and professionals at all levels of care, in all types of entities and all geographic locations. We aimed to assess, in 2019, the level of preparedness of the information systems (IS) of public and private hospital health entities in Portugal regarding the European EHR exchange format and the General Data Protection Regulation (GDPR). Therefore, a survey was developed based on eHealth Network technical guidelines for the interoperability parameter and the SPMS self-assessment instrument for compliance with the GDPR rules for the privacy parameter. It was applied using the UC LimeSurvey platform to the IS managers and Data Protection Officers of 53 NHS entities and 53 Portuguese Association of Private Hospitalization (APHP) entities. SPSS was used to process the collected data and the following activities: (i) creation of the database and variables definition, where variables were treated in relative terms, giving rise to eight compliance quotients ranging from 0 to 100; (ii) interpretation of data from descriptive statistics, having obtained a total of 30 valid responses; (iii) formulation of hypotheses in which we mainly compared independent samples (public and private), assuming, at the outset, their equality; (iv) application of parametric and non-parametric tests, according to the normality of variables and homogeneity of variances. Finally, (v) testing the null hypothesis of the formulated hypotheses and (vi) interpreting the results obtained in the hypothesis tests. From the results obtained: (i) 41.5% of the SNS entities completed the questionnaire, contrasting with 15.1% of the APHP-associated entities which completed the questionnaire; (ii) 28.3% of the APHP-associated entities

declined the invitation to participate in the questionnaire, representing more than double the number of SNS entities which declined the invitation, with 11.3%; and (iii) 63% of the entities which completed the questionnaire, did so through their IS manager. Private entities' IS show lower compliance in the total compliance quotient (interoperability and privacy), in the interoperability quotient, and the compliance quotient for the sub-parameter Patient Clinical Data (interoperability). Regarding the ISs of public entities, they present lower compliance in the compliance quotient for the sub-parameter Data (privacy). Therefore, we can conclude that NHS entities are more willing to participate and demonstrate the reality of their ISs. Furthermore, they showed higher total compliance when compared to the private sector, except in the compliance with the GDPR (privacy parameter), sub-parameter Data, where it showed lower compliance. This conclusion may be because, in the first three years after the application of the GDPR, unlike public hospitals, private hospitals couldn't obtain an exemption from fines from the National Data Protection Commission (CNPD).

How large is the association between past unemployment spells and alcohol consumption?: Evidence for Europe

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Excessive alcohol consumption has been linked to higher unemployment rates. Research on the subject generally found that individuals who consume more alcohol; 1) are more likely to become unemployed, 2) have difficulty finding employment, 3) have shorter employment durations than those who consume less alcohol. In addition, can have an impact also on the workplace, leading to poorer work performance and absenteeism, which can make it more difficult for individuals to remain employed. The reverse direction of the causality impact of the unemployment on alcohol consumption, has also been subject of investigation. Data from United States of America, found evidence of increases in alcohol consumption because of long periods of unemployment. There is, however, scarce evidence of this relationship for European countries. The purpose of this paper is to explore the association between alcohol consumption and long-term unemployment for Europe. Material and methods – We adopted a two-level linear regression model. All variables were generated from the 2014 European Social Survey as well from Eurostat. The dependent variable is the weekly alcohol consumption (in grams) and was generated from two variables collected in the survey. The main independent variable, unemployment scar was generated as a categorical variable with three levels. The categories were defined based on the citizens' lifetime experience with unemployment. No unemployment spell- Never been unemployed for more than three months; unemployment spell 1 - Unemployed for a period between 3 and 12 months; unemployment spell 2 - Unemployed for a period longer than 12 months. A set of variables were also used as controls, both at the individual level (sex, schooling, income, religion e etc.) and contextual at the country level (unemployment rate). Results – Summary statistics show that the average alcohol consumption of European citizens is 65 grams per week, ranging from 18 (minimum) to 112 (maximum) grams per week in the countries participating in the survey. Staying unemployed between 3 and 12 months is associated with an increase in average alcohol consumption of 12 grams, and 20 grams per week for periods longer than 12 months. Conclusion – The cross-section and observational characteristic of the data, (no longitudinal data was available) limit our estimates to associations with no causal relationship. The estimates, however, are consistent with the values identified in the literature between unemployment and alcohol consumption. There is evidence showing that being unemployed in the last five years for a period longer than 12 months increases alcohol consumption, on average, by between 19% (women) and 43% (men).

Association between unmet healthcare needs and health outcomes: evidence from SHARE Corona Surveys

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Self-reported unmet healthcare needs, SUN, have become an important indicator of access to healthcare. Many studies analyse the determinants of SUN, but much fewer have analysed the association between SUN and health outcomes. During the COVID-19 pandemic, SUN achieved unprecedented high levels around the world. Older people were more vulnerable to SUN in the pandemic context as they are frequent users of healthcare. In this study, we rely on data from the Survey of Health Ageing and Retirement in Europe (SHARE), which targets individuals aged 50 or over, to analyse the association between SUN reported during the first wave of the pandemic, in 2020, and three health outcomes reported one year later, in 2021 – cancer, mortality and poor or fair self-assessed health (SAH). Methods data come from SHARE Corona Surveys, launched in 2020 and 2021, SC1 and SC2, respectively, and from regular waves of SHARE (used to construct some control variables). Our final working database has 48,356 individuals (from 28 countries, including all EU countries except Ireland, plus Switzerland and Israel) with valid interviews in SC1 and SC2, plus 1,199 individuals who were interviewed in 2020 and died before the 2021 interview. Three types of SUN were surveyed: care foregone due to fear of contracting COVID-19 (SUN_Fear), pre-scheduled care postponed (SUN_Postponement), and inability to get medical appointments or treatments demanded (SUN_Unavailability). We also consider SUN for any reason (SUN_Global). We resort on the relative risk (RR) and the logit specification to investigate the association between SUN and health outcomes. To avoid simultaneity, 1-year lagged SUN variables are used. Results SUN levels remained high in both years but there was a decrease (SUN_Global decreased from 33%, in 2020, to 22%, in 2021). The RR is greater than one for cancer and poor/fair SAH and lower than one for mortality. Coefficients are all statistically significant except for SUN_Unavailability in mortality and SAH. Once the control variables are included in the analysis, the signs of the associations do not change but they are no longer significant in the case of SAH, while for cancer it is significant only for SUN_Global - Odds Ratio (OR)=1.27. The negative and statistically significant association between SUN and mortality still holds for SUN_Postponement and SUN_Global: OR=0.78 and OR=0.74, respectively. We further investigated the impact higher levels of income and education on the association between SUN and health outcomes. Although they seemed to weaken this association, results are not significant. Conclusions for mortality, our results do not agree with previous evidence which found a positive association between SUN and worse health outcomes. Bearing in mind the special context of the study, this might mean that individuals with greater risk of dying were prioritised (and hence less subject to postponement or denial of care) and did not shy away from services. For cancer, although it is unlikely that the new cases of cancer would have been prevented in the absence of SUN, healthcare foregone might mean a delayed cancer diagnosis, which might translate into greater morbidity and mortality in the future. We did not find evidence that SUN is associated with SAH though this result might be affected by our baseline population (that is, we analyse the effect of SUN on individuals with very good or excellent SAH before the pandemic).

Does social capital determine European older adults' health?

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Social capital is considered one of the indicators that influences individual and collective health. Nevertheless, there is no unanimity on a concrete definition. The literature accepts as proxy indicators those that measure the degree of trust and adherence to rules, quantify collective action and/or indicate membership in some group or association. Additionally, there is a lack of recent evidence for European countries and there are wide divergences in the use of social capital temporary definition. Thus, we aim

at exploring how social capital (both bonding and bridging) is associated with self-assessed health among elder Europeans. We used the 4th, 6th, and 8th waves of the Survey of Health, Ageing and Retirement in Europe (SHARE) and included 13 countries. We measured social capital through a large variety of variables that enabled us to create two different scales measuring both bonding and bridging. We control for personal and socioeconomic characteristics such as age, gender, marital status, education level, labor situation or the capacity of making ends meet, and health variables. Several econometric techniques such as Principal Component Analysis, logistic regressions and tests to control for reverse causality are developed. We found that higher levels of social capital reduced the odds of reporting poor health, especially bridging social capital. These results are consistent in the different estimated models. There is remarkable consistency in direction of the relevant role social capital (both bonding and bridging) in determining health across the European older adults. Our analysis can be considered in order to disentangle policy intervention measures to increase social activities and their quality to promote older adults' health.

Session B2: Operations Research

A heuristic to compute a lower bound for a Joint Replenishment Problem obsolescence model

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The Joint Replenishment Problem (JRP) tackles the coordinated replenishment of multiple items by minimizing the total cost, composed of ordering (or setup) costs and holding costs, in order to satisfy the demand. The setup costs include two components: one major ordering cost, or the major setup cost, which is independent of the number of different items in the order, and several minor ordering costs, for the different types of items included in the order. The complexity of the problem increases when the items are subject to obsolescence, meaning that they may face an abrupt decline in demand at an uncertain time in the future, due to rapid advancements in technology, going out of fashion, or ceasing to be economically viable. This presentation describes a JRP model under obsolescence of the items, where the time value of the money is considered and where the obsolescence time, or the lifetime of the item types, follows a negative exponential distribution. Then, it discusses a recursive optimization process to solve the model, which may require a high computational effort, particularly when the number of items is large. A strategy to overcome this shortcoming is proposed through a heuristic that determines a lower bound for the optimal solution. The lower bound is defined by discarding some terms of the cost function, specifically the terms that are expected to have small values, since they correspond to situations with small probabilities of occurring. The discarded terms are replaced with other terms that are previously determined by the recursive procedure. Some numerical results are presented in terms of both the costs and the running times obtained.

Intelligent system for the container loading problem with dynamic stability on the road

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In the Container Loading Problem (CLP), the construction of packing patterns is driven by the maximization of the volume occupied, which compromises several constraints such as weight balance, operational safety, material handling, and the prevention of cargo damage during container shipping. Previous works introduced dynamic stability indicators using simulation or statistical approaches. However, the first exponentially increases the computational burden, and the second misrepresents the essential kinetic mechanical aspects. This paper presented an intelligent packing system based on a metaheuristic algorithm embedding a mechanical model to guarantee dynamic stability on the road and reach efficient packing patterns. The mechanical model dynamically analyses the forces and accelerations acting on the load to predict the loss of support, overturning, or reaching the critical velocity that would damage it. This one is embedded into a reactive GRASP algorithm, which lets the user know the percentage of dropped and damaged boxes from a packing pattern. The effectiveness of the proposed approach has been tested using a real-world set of instances based on a logistic company from Colombia, obtaining adequate accuracy solutions within a short computational time. The resulting scheme integrates real-world problem conditions and achieves dynamic stability solutions with an acceptable computational effort; the intelligent packing system has been developed to tackle practitioners' requirements with many features, such as visualization and editing packing patterns with a few precise interactions. In future work, it is suggested to integrate the loading processes with the distribution and vehicle routing plan to model daily decisions inside logistics-based companies.

The long-term-care caregiver routing and scheduling problem

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Taiwan has become an aged society. Senior citizens above 65 years old exceed 14% of the total population already. With increasing elderly citizens yearly, there are more and more elderly people need long-term care (LTC) service. In order to help more elderly and disabled people in need, the Ministry of Health and Welfare has launched the Long-Term Care plan 2.0 in 2015. The long-term care service institutions are responsible for providing home-based LTC service according to the plan setting up by the responsible integrated community service center and family members of the elderly in need. This is a huge challenge to long-term care service institutions since there is a growing demand of home-based LTC service but with insufficient home-based LTC caregivers for providing service. Efficient and effective caregiver routes and schedules are essential to conquer the challenge. The setting up of robust home-based caregiver routes and schedules can not only enhance operating efficiency, but can also improve the customer service levels, caregiver's working conditions and encourage job retention. The robust planning of home-based LTC caregiver routes and schedules is a very intricate engineering task, since it requires considerations of the management of caregivers' working rules and workloads, the matching of caregivers' skills and customers' service requests and their preferences and complicated analysis among the selection of customers, the staffing of full-time and part-time caregivers, and numerous time-window and space constraints which are highly correlated with each other in a plan horizon. However, LTC service institutions usually plan home-based caregiver service routes and schedules by following a trial and error process based on their experiences. It takes a lot of manager time. In addition, the planned caregiver routes and schedules may not be efficient, or may not be feasible to satisfy all complicate assignment and working rules. Therefore, the purpose of this study is to develop a robust planning model to help LTC service institutions plan home-based caregiver routes and schedules. The study focuses on formulating and analyzing a robust planning model for home-based LTC caregiver routing and scheduling with the considerations of working rules, workloads, service items, service time windows and service route duration. A home-based LTC caregiver routing and scheduling routing model is presented. A solution procedure is also proposed for this problem. Numerical examples are created to illustrate and to test the proposed model.

Comparing different approaches to compute the Pareto front in Multiobjective Mixed-Integer Linear Fractional Programming

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Multiobjective fractional programming is useful to model problem situations with several objective functions where all or some of them are ratios of two functions. This type of models has several applications, namely to model economic processes. In this work, we address multiobjective fractional programming with linear (or affine) functions and all or a subset of variables are integer: multiobjective mixed-integer linear fractional programming (MOMILFP). In this talk, we compare several Branch & Bound approaches to compute all nondominated solutions in MOMILFP. The proposed techniques provide not only supported but also unsupported nondominated solutions, i.e., solutions that are dominated by unfeasible convex combinations of other nondominated solutions. Note that this type of solutions cannot be attainable by the weighted-sum technique. However, it can be observed that the nondominated solution set of a MOMILFP problem has, in general, a significant part of unsupported solutions. The Branch & Bound approaches share the same structure: i) Select the next nondominated region. ii) Divide this region into two sub-regions, by imposing constraints on one of the objective functions. iii) Compute the pay-off tables of the new sub-regions in order to characterize them. The process is repeated for every sub-region until the remaining sub-regions are 'smaller' than a predefined tolerance. A sub-region is 'smaller' than a predefined tolerance when the range of values of each objective function in the pay-off table of that sub-region is lower than the tolerance value. The proposed approaches

differ in the way the constraints of step ii) are imposed. Several tests will be presented, comparing the performance of the different approaches.

On hybrid probabilistic-deterministic strategies for direct-search approaches

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Direct-search methods have been widely used to address real-world challenging optimization problems, including the beam angle optimization (BAO) problem in radiation therapy treatment planning. BAO is a highly non-convex optimization problem typically treated as the optimization of an expensive multi-modal black-box function which results in a computationally time-consuming procedure. Direct-search methods are derivative-free algorithms that evaluate the objective function at a finite number of points using a step size and a set of polling directions. For a minimization problem, in an n -dimensional space, positive spanning sets with at least $n + 1$ directions are typically used to ensure that at least one of the polling directions is a descent one. This requirement of deterministic convergent approaches can be a burden for expensive functions in terms of computational time. Randomization of poll directions is one of the possible strategies for enhancing computational time efficiency. Recently, almost-sure probabilistic convergent direct-search approaches reported excellent numerical results with faster computational time by considering a reduced number (as low as two) of random poll directions at each iteration. However, despite the excellent mean results for the BAO problem, outliers were observed, which is often ignored in the literature. While, for general global optimization problems, mean results (or obtaining the global optimum once) might be enough for assessing the performance of the randomized method, in real-world problems one should not disregard the worst-case scenario and beware of the possibility of poor results since, many times, it is only possible to run once the optimization problem. This is even more important in healthcare applications where the mean patient doesn't exist and the best treatment possible must be assured for every patient. In this study, we propose hybrid probabilistic-deterministic strategies to take advantage of the best of each one of them (speed and consistency of results, respectively). The BAO problem is used to assess the performance of the proposed hybrid probabilistic-deterministic approaches and to compare with the performance of probabilistic and deterministic counterparts.

Session B3: Human Resources Management & Organizational Behaviour

A systematic literature review on sustainable HRM and its relations with employees' attitudes: state of art and future research agenda

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The interest in sustainable human resource management has grown in the last decades. However, comprehensive, and systematic research concentrating on the evolution of this field, is still needed. The purpose of this study is to provide an overview and synthesis of the existing body of knowledge on human resource management (HRM) related to sustainability through a bibliometric study of articles published until 2022, identifying the most relevant research in this field. In the literature review, special attention is given to articles that link sustainable HRM to employees' attitudes, identifying gaps and future research opportunities. A bibliometric analysis and literature review was performed over 105 documents obtained from the WoS database, using VOSviewer software program, from which 27 were selected for full-text reading. The applied database filters were: document type (article and early access); index (SSCI and SCI-expanded) and year (2019 - 2022). The results show that: sustainable HRM literature is growing, especially after 2019; "Sustainability" is the journal with more publications; and England is the leading country. The network of co-occurrence of keywords analysis unveiled that performance, job satisfaction, and behaviors are the most frequently studied topics in HRM. Additionally, through the Systematic Literature Review carried out on the articles published from 2019 to 2022, it was possible to identify opportunities for future research. These topics include employees' perceptions of the implementation of sustainable HRM practices in companies, as well as the impact of these practices on their attitudes and behaviors, taking into account the various HRM practices.

Attitudes towards ethics and social responsibility: business students perspectives as future managerial and non-managerial employees

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Ethics and social responsibility play an essential part in the strategic planning process of organizations. Ethical training for employees (including managerial and non-managerial roles) who could be responsible for the ethical report system is necessary for establishing a solid corporate ethical culture. Also, the business school built a well-ethical training when employees were still business students. Therefore, the study aims to respond to the call to investigate student attitudes toward ethics and social responsibility as managerial and non-managerial employees in different contexts. Results show that business students have positive attitudes toward ethics and social responsibility. There is a difference in attitudes towards the perceived importance of ethics and social responsibility between business students who will be managerial or non-managerial employees, controversial to most literature, with non-managerial employees presenting substantial support. A thorough explanation with evidence supports is provided insight into the study. The implications of these results and future research suggestions on the management of people are also discussed.

How responsible leadership relates to individual performance: the sequential mediation of affective commitment and individual creativity

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For the past decade, there has been a growing interest in responsible leadership, as a way to answer to the social, environmental, and political scandals as well as to make the stakeholders trust their organizations and leaders (Carroll & Shabana, 2010; Friedland & Jain, 2022). Responsible leadership (RL) has been defined as “a relational and ethical phenomenon that occurs in social processes of interaction with those who affect or are affected by leadership and have a stake in the purpose and vision of the leadership relationship” (Maak & Pless, 2006, p. 103). This means that a responsible leader conceivably shifts the way organizations perceive and are accountable for their stakeholders, and bring change in a societal level, while maintaining the achievement of economic goals. Despite the interest in the topic, there is a lack of research regarding the impact of RL on an individual level of analysis. Taking this into account, this study focuses in understand the impact of RL on behaviors and attitudes of the main stakeholder, the employees (Haque et al., 2018, 2021a; Miska & Mendenhall, 2018; Voetglin et al., 2012, 2020). Previous research has identified a positive and significant relationship between RL and individual performance (IP; e.g., Lin et al., 2020), affective commitment (AC; e.g., Afsar et al., 2020; Haque et al., 2018, 2021a) and individual creativity (IC; e.g., Castro-González et al., 2019). However, to our knowledge, studies that incorporated these four constructs on the same model are inexistent, contributing for the originality of this research. To test the proposed research model, a cross-sectional correlational quantitative study based on an electronic survey to workers was done (n=284). To control for common method bias, the Harman single-factor and marker variable techniques were used (Podsakoff et al., 2003). The results from multiple regression analysis indicated a significant relationship between RL and IP. Furthermore, the indirect effect of AC on the relationship between RL and IP is significant, indicating that RL indirectly influences IP through the promotion of AC. However, the indirect effect of IC on the relationship between RL and IP is not significant, indicating that in this sample RL does not indirectly influence IP by increasing IC at work. As for the third indirect effect, referring to the sequential effect of AC and IC in the relationship between RL and IP, it was significant. This indicates that RL contributes to strengthening the subordinates’ AC to the organization, which increases their IC at work, which, in turn, reinforces their IP. The direct effect of RL on IP is no longer significant when the mediators are present, so there is a full mediation effect. The results obtained are convergent with the results found by previous literature regarding the direct effects between RL and both IP and AC. However, contrary to expectations, the results indicate that RL does not directly affect IC, making the mediating effect not possible (cf. Castro-González et al., 2019). More research is needed to better understand this issue. The results also indicate that the relationship between RL and IP can be sequentially explained by both AC and IC. Despite the previous literature confirming these direct effects, the present study adds to literature by analyzing the constructs’ sequential effects. The implications for practice and theory will be discussed.

Can virtuality lead to more innovative and satisfied teams? The mediating role of teamwork management

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Advances in communication technology have enabled companies to use different types of virtual work arrangements to reduce or even eliminate time and space restrictions. As a result, nowadays, most of the teams are at some extend virtual. Team virtuality can be conceptualize as a continuum that corresponds to the degree to which team members use communication media to coordinate their actions and perform their tasks. Studies are not conclusive about the effects of virtuality on team processes and

results. Indeed, while some studies reveal that team virtuality can contribute to better team results, other studies found a negative influence of this characteristic on team functioning and outcomes. In the present study, we intend to contribute to clarify how virtuality impacts team innovation (i.e., the intentional introduction and adoption of new ideas and solutions in the group) and team member satisfaction (i.e., an affective response of members toward the group, its characteristics and functioning) through its influence on teamwork management. Teamwork management is associated with the degree to which team members structure and plan their work to facilitate the implementation of new practices and monitor the work progress and involves the following dimensions: work planning/organization, resource management and support for innovation. We expect that virtuality will lead the teams to adopt more teamwork management behaviours, what will translate into higher levels of satisfaction and more innovation. Three hundred and fifty-eight team members from 88 teams were surveyed. A two-wave data collection procedure was implemented with a time lag of about two months. Data was collected from two sources: team members were surveyed about virtuality, teamwork management and team member satisfaction, while team leaders assessed the levels of innovation of their teams. Due to the multilevel nature of data (team member satisfaction is at the individual level and the remaining variables at the group level), hypotheses were tested through Multilevel Path Analysis in Stata. Results revealed that virtuality presented a positive relationship with teamwork management and a negative direct relationship with innovation. The indirect effect of virtuality on innovation through teamwork management was positive and significant, as well as the indirect effect on team member satisfaction. The findings emphasize that virtuality, by generating more behaviours regarding planning the work, organizing resources, and providing support to each other, will generate a positive attitude towards the team and the introduction of new ideas and procedures.

Session B4: Economic Growth and Development

An application of panel vector error corrections models to distinguish between the short vs. long-run effects of social expenditure composition on inequality and economic growth

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Elected governments tend to pursue short-sighted policies that neglect future effects since they may not be in power when the latter become effective, a feature that applies to social policy. It is thus important to distinguish between the short vs. long run impacts of public social spending, which can also be used to influence the economy besides its traditional protective function against risks. At the same time, different types of social spending may play different parts and so the composition of social expenditure matters. Evaluating this is important for social policy design as it aids in the distribution of resources across different social policy intervention areas that is the most effective. Against this backdrop, in this study we want to know to what extent welfare provisions influence inequality and economic growth both in the short and the long run and whether that influence varies according to areas of intervention. For this purpose, we investigate whether the totality and specific components of the welfare state influence inequality and economic growth in a sample of 17 OECD countries observed over the period 1980-2017 employing panel unit root tests, panel cointegration analysis, and a panel vector error correction (PVECM) approach. As is common in empirical growth studies, to compute our measure of economic growth we use real GDP per capita as this is a good indicator of the standards of living of the population. As a proxy for income inequality we use an estimate of the Gini index of inequality in the distribution of equivalized market (pre-tax, pre-transfer) obtained from the Standardized World Income Inequality Database (SWIID). Public social expenditure is measured as a percentage of GDP and comes from the OECD Social Expenditure database. The use of this dataset guarantees that the social expenditure data is comparable across countries and over time and allows us to take into account nine different types of social expenditure: old age pensions, survivors' pensions, incapacity-related benefits, healthcare, unemployment benefits, active labour market policies (ALMP), family benefits, housing and other social policy areas. The results point towards a heterogeneity of effects not only across social expenditure categories but also between the short and the long run with only a few of spending categories actually displaying a long run causality effect despite the fact that most of these show short run impacts.

Socioeconomic impacts of climate change extreme weather events: lessons from 2017 in Portugal

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Disaster events have become increasingly visible worldwide, affecting economic sectors and populations. However, the effects on specific issues, such as employment, household welfare, or tourism sector dynamics, remain understudied. The purpose of this paper is to identify a way to account for climate change impacts in a computable general equilibrium model (CGE). This study relies on an ex-post analysis of climate change related disasters recorded in Portugal. Specifically, we model the impact of wildfires as damage to the physical capital of affected sectors. The simulations reveal that the negative impacts initially observed in the directly affected sectors such as agriculture, forestry, or transportation are transmitted to other sectors, affecting the economy as a whole. Employment is reduced mainly in the directly affected sectors, but also in sectors related to the tourism sector, such as the food, entertainment, and particularly the travels and tour operators industry. As a result, unemployment rate increases, suggesting that specific infrastructure damage is particularly detrimental to employment dynamics. The results also reveal drastic reductions in wages that affect the purchasing power and consumption levels of economic agents (government, and households), with households being the big losers from the devastating events of 2017. Finally, our results also allow us to suggest that policy measures focused on

supporting the tourism and related sectors could be an important means to stimulate the Portuguese economy, mainly to recover the jobs lost after the climate disasters.

Poverty, Inequality and Economic Growth: Non-Linearities and Growth Regimes

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United Nations Sustainable Development Goal no. 1, No Poverty, will not be reached by 2030. Around 600 million people in the world are expected to be in a situation of extreme poverty by then corresponding to a rate of global poverty of 7%(1). Countries more vulnerable to this level of poverty may experience lower prospects of growth or even stagnation. Poverty, inequality, and growth exhibit complex links due to multiple transmission mechanisms between them; moreover, causality may exist in both directions(2). In the economic growth literature, the study of the relationship between poverty, inequality and economic growth has been less explored(3). In this work we test the following hypotheses: i) the bilateral relationships between our variables of interest are non-linear; and ii) poverty traps may apply at (very) high levels of poverty. We use non-parametric techniques(4) to test for i) and threshold models(5), with poverty as the threshold variable, to a standard growth equation, to find evidence for ii). We build a worldwide annual panel database comprising 110 countries, covering the period between 1981 and 2019, that includes the standard variables used in growth equations and different poverty and inequality proxies (main data source: WB (Poverty and Inequality Platform)).

Revisiting the debate on the Eurozone crisis: causes, clustering periphery and core, and the role of interest rate convergence

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The paper investigates the mechanisms that explain the euro crisis, developing the argument that the countries most affected by the crisis were those that had accumulated external deficits until then. Also, it developed the idea that the convergence of nominal long-term interest rates played a causal role in these imbalances. A set of non-obvious mechanisms, with different interpretations, generated the Eurozone crisis, and the literature has diverged in explaining them. Even so, the rise in the sovereign spreads of some crisis-stricken countries (Portugal, Ireland, Italy, Greece, and Spain) vis-à-vis Germany seems to be the most visible form of the phenomenon. The evolution of spreads is strongly correlated with the presence of external deficits (Gros, 2011; Shambaugh, 2012; De Grauwe and Ji, 2013), and the most penalized countries were those with current account deficits. Although this is a heavily discussed issue in the literature, this paper offers a point of order in the literature by contrasting the different arguments. An innovative way to expose a literature survey on the Eurozone crisis will be constructed, explaining the intra-Eurozone external imbalances, considering the three items of the fundamental macroeconomic identity: current account differences reflecting different levels of external competitiveness; financial flows in North-South direction; excess of investment over savings both in public and private sectors. These three main explanations communicate with each other (through different transmission mechanisms), being non-mutually exclusive. And, within each, there are divergences between authors, following mainstream or non-mainstream approaches, which makes it a political economy issue. The literature calls for the analysis of numerous economic indicators to explain the crisis. So, taking the variables that the authors point out as explanatory for the external imbalances, we test the statistical significance concerning changes in the cumulative current account, between 1999 and 2007. Some empirical published works inspire these univariate linear (ordinary least squares) regressions (see Kohler and Stockhammer, 2020; Shambaugh, 2012)) and concern the same group of countries: the eleven countries that joined the euro in the first stage (1999), plus Greece, which entered in 2000. We develop a cluster analysis for the variables in which we find statistical significance against changes in the cumulative

current account. Here, the separation between the periphery (Portugal, Greece, Spain, and Ireland), and core countries (Germany and Finland) is evident. Then, we expand the argument that the convergence of nominal long-term interest rates in the periphery cluster countries, relative to the core cluster countries, was the trigger for the three “fundamental causes” mentioned above, showing the mechanisms for that. As such, we test the hypothesis that nominal long-term interest rates convergence after the Madrid Summit (1995) caused subsequent variations in the current account balances, of periphery Eurozone countries. The paper uses Granger causality tests, and the conclusions are straightforward: for Greece, Ireland, Spain, and Portugal, there is a strong and significant link between interest rate spreads vis-à-vis core countries and changes in the current account over a one to two years horizon, between 1996 and 2007. The hypothesis of no reverse causality between these two variables is not rejected.

The economics of the ecological transformation: post-growth or new accumulation system?

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Fight against climate changes by means of decarbonisation is the most important economic and ecological goal for the twenty-first century, with the decades until 2050 setting the course for the second half of the century. The Paris Declaration 2015 suggested the 1.5° C goal for limiting global earth warming above the pre-industrial temperature by 2050. The declaration also refers to all greenhouses gases (GHG) emissions, which should be lowered to a level in balance with the available natural sinks and that means a pathway in line with the goal of 95 percent reduction of emissions in the year of 2050. Ecological transformation means decarbonisation and reduction of all GHG emissions down to a very low level.

The main stream economists believe the climate issue is not related to GDP growth. They believe that innovation and economic transformation will spur economic growth in tandem with decarbonisation. The question is that reducing the emission intensity (EI) of GDP – that is, GHG per unit of GDP - to a level close to the Paris goal cannot be isolated from the GDP growth trend. Since decarbonisation can be reached by a reduction of EI or by a reduction of economic growth, the mix implies a trade-off. The reduction rate of EI (here measured with a positive sign) has to exceed the GDP growth rate in order to reduce emissions. “Green Growth” would require the EI to fall more than GDP rises so that emissions shrink and those who opt for unconditional high GDP growth have to guarantee very high reduction rates in EI. A deliberate reduction of future growth rates, potentially down to zero, cannot be excluded if the Paris goals are seriously looked at and whether temporary de-growth is necessary has to be investigated too.

With continuous zero growth, capitalism is a closed economy as mentioned by Kalecki (1971): wealth owners would have to consume their profits and workers would have to cease saving. As in Marx’s simple reproduction scheme, entrepreneurs would transmute into simple commodity producers, would stop accumulating capital, would abandon their “animal spirits” and become good consumers instead.

A scenario of expected temporary GDP de-growth would be a medium-term phase that would likely lead to zero growth in its aftermath. It would require targeted de-growth in certain input and energy intensive and polluting sectors, and less than compensating growth in clean sectors. When the “animal spirits” of a considerable number of entrepreneurs vanish, new lifestyles with less dispensable consumption would be cherished, with a working-time reduction by large parts of the population.

Both scenarios make appeal to a post-growth or post-capitalist economy (JACKSON, 2021). However, beyond expected eco modernist “green growth” critics of post-growth (TERZI, 2022), ecosocialists sustained that “There is no question that there are important critiques of de-growth to be made from a Marxist perspective. Whereas Marxism’s critique of capitalism flows from a study of the historically determinate way it realizes value – through the exploitation of labour and the natural world – de-growth instead opts for an abstract critique of ‘growth’ as such.” (KEY HARON, 2022).

I defend that the historically way economies realize value is the specific accumulation system of surplus they are able to choose. That means that the effective debate about ecological transformation is the debate about the accumulation system of the economy and not only its growth regime.

Plenary Session II - Which r-star: public bonds or private investment?

Measurement and policy implications

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Measures of the decline in r -star are (almost) exclusively based on a fall in government bond yields. Yet, measures of the return on private aggregate capital are roughly constant, or slightly increasing. This lecture will first show that this aggregate fact is robust across countries, measures of capital, and measures of income, from both the perspectives of the demand and of the supply of capital. A model of monetary policy and capital misallocation concludes that the public bond r -star is relevant for the constraint on policy, but the private investment r -star is relevant for the transmission of policy. As a result, relative to the literature, monetary policy is less powerful, rises in inflation are less beneficial, aggregate demand stimulus is less important, and supply-side reforms are more central.

Session C0: Energy Economics II

Government's Role in the Energy Transition: The Case of Nordic Countries

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The present study looks at a set of European countries, for the period between 2000 and 2021, to study and evaluate the effects of governmental policies related to energy transition. The selected countries present high levels of renewable energy shares in their total mix, and which are located mainly in the north of Europe and share a common energy market structure, known as NORDPOOL. Energy transition is modelled as a ratio between renewable over non-renewable primary energy supply, in an effort to represent the non-linear implementation efforts required at the different stages of clean energy integration in the different economic sectors. Environmental tax revenue and public gross fixed capital formation are used to explain the behaviour of energy transition, being directly linked to the government's influence on the market. Emission of carbon dioxide is included in the study as a control variable. A second model is constructed with the inclusion of the ratio of private investment over GDP, as a proxy for private sector's influence. We apply the ARDL (auto-regressive distributed lag) model to account for the data structure and dynamics observed between the variables, as well as to isolate long-term from short-term effects on the main variable under study. The results indicate that both tax revenue and gross fixed capital formation have a positive and statistically significant effect on the long-run, yet fail to present statistical significance over the short-run. Private sector's proxy presents a statistically significant negative effect on the long-run, which might point to difficulties felt by the private sector in adjusting to the energy transition process as it leaves its early stages of integration. Additionally, through the analysis of residuals, we apply a correction to shocks to the model with the inclusion of dummies for outliers. Whilst the model returns similar conclusions as mentioned above, there is a significant shift in the ECM coefficient, which might imply that energy transition is vulnerable to shocks. In light of recent events, it has become essential to extract lessons from countries at the forefront of the energy transition process. The findings of this study further reinforce the importance of government policy planning and coordination, both to achieve the long-term benefits of clean energy and to ensure any program's longevity. Remarkably, the sensitivity of the ECM, after the introduction of dummies in the model, reinforces the argument for long-term compromise with energy transition policies, under the risk of short-term efforts becoming irrelevant. Additionally, a one-for-all solution is not advised, as the study's results point to different degrees of efficacy for the instruments available to the government, given the country's specific characteristics and stage of renewable energy integration.

Ethanol production in sugarcane countries: Paving a Path toward Sustainable Energy Security

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Since the 1970s, Brazil has done extraordinary work stimulating its sugarcane industry, promoting the large-scale production of ethanol nationwide in response to the first oil shock. Today, the technologies behind ethanol production are well established. Brazil is the world's largest sugarcane supplier, producing its ethanol at a competitive price. If other sugarcane producing countries decided to join Brazil's move toward the production of this biofuel, what impacts might there be for each country's economy and employment? This is what we investigate in this paper. Prime candidates for ethanol production include Australia, China, Colombia, India, Indonesia, Mexico, Pakistan, the Philippines, Thailand, and the United States of America. We evaluated the potential socioeconomic impacts of developing this promising industry by using an input-output approach. More specifically, we adapted the Brazilian method of producing ethanol to these countries' distinct economies. We augmented the input-output table of each country, inserting a new ethanol industry based on the Brazilian ethanol production model. We also augmented their new ethanol industry's sales following a hypothetical hydrous and anhydrous ethanol

consumption scenario. Thereafter, we reconcile the national accounts, concluding our analysis by quantifying and comparing the different net effects of this new industry for each of the assessed countries for the year of 2009. We demonstrate which industries would be expected to be positively or negatively impacted by this substitution in each country; and find that not all of the countries we assessed would experience positive socioeconomic results from emulating Brazil's production of ethanol.

Energy affordability in European countries: bringing together the energy burden and the impoverishment approaches

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Universal access to energy services crucially depends on affordability, assessed through different approaches. The burden approach has been widely used and relies on the computation of affordability ratios (EAR) between energy expenditure and income. Other strands focus on the impoverishing effect of energy expenditures. In this work, we reconcile the two approaches, proposing a framework that distinguishes, within households with high/low energy EAR, between those who fall into poverty due to energy expenses and those who do not. This framework also identifies situations where energy expenditures push families already below the poverty line (PL), further into poverty. Our objectives are to assess the prevalence of all these possibilities in 25 European countries, using microeconomic data, as well as to analyse the profile of impoverished families and the intensity of this effect. Methods. Data come from the latest wave of the European Household Budget Survey. To compute EAR, we resort on households' reported expenditures on energy (electricity, piped gas, liquefied gas in cylinder, liquid fuels, coal, other solid fuels, and thermal energy) and on their net income (total income from all sources including non-monetary components, minus income taxes). The PL is computed per country, considering 60% of the median equivalised net income. Burdened households are those with an EAR higher than 10%. Impoverished households are those whose income before energy payments is above the PL but then falls below the PL after such payments. Deepened-poor households are those whose income is already below the PL before energy payments. Sample weights from the database are used. Results, the percentage of burdened households ranges from 2.2% in Luxembourg to 45.0% in Hungary. The proportion of impoverished households varies from 1.8% in Finland to 9.7% in Latvia. Some households are impoverished despite being non-burdened. This applies to 2.7% of families in Cyprus, and 2.3% in Denmark, Portugal and Ireland. Considering only burdened families, in 15 countries, more than half were below the PL before, or have fallen below the PL after, paying for energy services. Those families whose EAR is less than 10% and whose income is below the PL before energy payments (non-burdened & deepened-poor) are left out from the usual approaches. In some countries, the average EAR for these families is as high as 7.6% in Latvia, or 7.3% in Bulgaria and Slovenia. The intensity analysis shows that, for deepened-poor families, energy expenditures increased, on average, the gap between their income and the PL by more than 13 percentage points (p.p.) in Slovakia, Latvia, and Czechia. For impoverished families, on average, their final income is 92% of the PL (lowest value is 87.5% in Poland). Compared to the total population, burdened & impoverished households have larger proportions of families with elderly and living in sparsely populated areas. Conclusions, this work unveils energy affordability problems hidden in the usual approaches. In 15 countries, more than half of burdened families are simultaneously poor or impoverished; in 12 countries, more than half of impoverished families ended up in this situation despite being non-burdened. For families already poor before payments, energy payments, on average, pushed them further below the PL by 6.7 p.p..

Assessment of the economic shocks on the times to the activity changes in the Portuguese firms. A comparative study by types of organizations and economic indicators.

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This paper aims to investigate the impacts of economic shocks, such as pandemic crisis, war in Ukraine, subprime crisis or the period of Troika intervention, on the time to the activity changes of the Portuguese firms over the last two decades. In this sense, we propose to check the following hypotheses: A1: There were specific moments (economic crisis) that differently provoked changes in the activity (e.g., “insolvency”, “dissolution” or “liquidation”) of Portuguese firms; A2: COVID-19 pandemic and the subsequent war in Ukraine were the biggest economic crisis across time which led to unprecedented growth of activity changes in the firms; B: Micro-firms have been more affected by the economic crisis than small and medium firms over time; C: Firms with highest years of activity are more stable in terms activities changes than the others; D: Activities changes in the energy sector’s firms were more significant than in other moments during the pandemic period; E: The economic indicators, net profit and debt, were those with major impacts during the last three years on the activity changes of firms. Our data includes a set of indicators related to the Portuguese firms retrieved from the SABI web site [1]. Among the selected variables, current situation and date of current situation were used to obtain time to the event and the status (censoring or not). Always a company changes its status from “active” to other (“acquisition”, “insolvency”, “legal closing”, “temporally inactive”, “dissolution”, “merger”, “extension” or “liquidation”) were considered as an event. From the original data set, six subsets were selected to compare the evolution of activity changes of the Portuguese firms through periods of three years between 2005 and 2022. Methodologically, we apply a set of survival analysis and tree-based methods involving machine learning approaches. Since the dimension of data, we implement a more flexible nonparametric approach to identify the effect of economic indicators trough the CART algorithm for regression trees problems [2-3]. The firms were analyzed regarding their dimensions (micro, small and medium), years of activity (lower five years, between five and ten years and greater than ten years) and type of activity. In this context, we focus our attention on the energy sectors. Results confirm that the micro firms were those that were more affected by economic shocks. Several reasons may contribute for these firms to be more vulnerable. Among them, we could highlight the less diversification in their economic activities; their weaker financial structure; or their lower capitalization and credit rating [4]. Number of years of activity appear not be an important aspect to avoid activity changes and energy sector companies had worst time to activity changes during the pandemic period. We also examine the impact of economic indicators (debt, deadline for receipt, net profit and credit period) on these changes of activities. Results reveal that net profit and debt had more strong impacts during the last three years.

Session C1: Monetary Policy and Central Bank Communication

What do people believe about monetary finance and what can('t) we do about it? Evidence from a large-scale multi-country experiment

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We conduct a large-scale multi-country survey on households' understanding and beliefs about monetary finance. We first find that, despite a low level of economic knowledge, the majority of households have opinions on the issue. Through open-ended questions, we find that people's first-order concern with monetary finance relate to inflation. Second, we do not find strong evidence that households' expectations about future taxes and future inflation would differ much in the case of monetary versus debt-financing. Third, we find that people's views on monetary financing correlate strongly with support for budget discipline. Causality from the former aspect to the latter is suggested by the results of a randomized controlled trial using a real central bank communication on monetary financing as treatment. Fourth, we find that central banks' communications can affect views on monetary financing, with persistent effects one month after, and resist the effect of media texts presenting opposite views.

Trust, Inflation Expectations and Media Sentiment on the ECB in Six European Countries

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With 20 countries and 24 languages, the Euro Area presents a unique communication challenge to the European Central Bank especially when countries' inflation diverge. Using a unique dataset of more than 280 000 press articles from 38 journals in 6 countries between 2002 and 2021, we study how the media coverage of the ECB monetary policy varies across the Euro Area by studying both the volume of articles published and the content of the articles. To analyze the sentiment conveyed by the different articles in a multi-language corpus, we rely on both lexicon approach and deep learning Natural Language Processing models to improve the comparability of our quantitative measures. Using the newly released data from the Consumer Expectation Survey, we discuss how the information content of press articles on monetary policy can influence both households inflation expectations and their trust toward the central bank. Using a panel dataset with country specific inflation expectations from both professional and households, macroeconomic control variables and fixed effects, we show that the tonality of the media can significantly influence households inflation expectations between 2020 and 2022.

Shedding light on a Blind Spot: New empirical evidence on the Accountability of the Eurosystem National Central Banks

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According to the principles of modern central bank governance, accountability is the necessary counterpart of independence. The empirical literature on central bank governance has produced some indices of central bank accountability, but on a much smaller scale than those of central bank independence. Empirical research on the accountability of central banks in the Eurosystem is particularly lacking. Broadly speaking, recent empirical research focuses on the ECB practices and national central banks have not received much attention. This paper intends to shed light on the blind spots of the accountability of central banks in the Eurosystem. There are both gaps in the empirical literature and a lack of attention to the question of the accountability of Eurosystem central banks although these central banks continue to play a very important role, well beyond the tasks performed in the framework of the

Eurosystem, for instance in banking supervision. To do this, the paper updates the indices of accountability for the national central banks of the Eurosystem, analyzes and compares the accountability settings of national central banks. Despite homogeneity in the overall level of accountability, national central banks have very heterogeneous procedures when it comes to report to political authorities.

Unconventional monetary policy and central bank communication: between surprise and predictability

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Using a data set of speeches over the period 2008-2021, we investigate how the communication of the European Central Bank (ECB) influences the ability of market participants to predict its monetary decisions. Focusing on the programs and instruments that are mentioned in each monetary announcements, we build three new indicators of communication intensity and communication frequency. Predictability is measured by decomposing the surprises on the variation of asset prices around monetary policy meetings into « target » and « quantitative easing » (QE) factors. Our findings reveal that communication intensity reduces the QE factor while it increases the target factor. Hence, increasing the number of programs or instruments in the same announcement induces favorable surprises as regards the unconventional dimension of ECB monetary policy while it creates an unfavorable surprise concerning the conventional component. Our results also indicate that frequency has no effect on the QE factor. This suggests that the succession of programs or instruments progressively improves financial market participants' ability to understand and predict monetary policy.

Session C2: Accounting and Taxation

Construction of a Social Accounting Matrix for Portugal: the study of the tourism sector in a climate change reality

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A Social Accounting Matrix (SAM) can be used to measure the impacts of climate change on the tourism industry by analyzing the inter-industry relationships in the economy and estimating the effects of changes in the tourism sector on the rest of the economy. The SAM can help to identify which industries are most affected by the changes in the tourism sector and the magnitude of the impacts. In this work, we chose to add to the SAM a geographical dimension in order to get a closer perspective on the international tourism patterns related to the Portuguese economy. This information can be useful to develop General equilibrium models that can help policymakers in designing effective adaptation and mitigation strategies for the tourism industry.

The moderating effect of gender diversity on the impact of political connections and remuneration of eurozone bank boards' members

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This study investigates the impact of political connections of members of banks' Boards of Directors on these boards' remuneration, and the influence of gender diversity on this impact. Using a panel of observations on 69 eurozone banks supervised by the ECB for the period 2011 to 2019, and the generalized method of moments (GMM), our empirical results indicate that political connections negatively impact average remuneration. In our view, directors with political connections prefer other types of benefits, aiming at future political positions and not wanting to be associated with high remunerations. Meanwhile, gender diversity accentuates this negative effect, a finding that may be related to the fact that, by including female directors, shareholders try to reduce the level of opportunistic behavior associated with political connections. Overall, we find that our results are robust across different choices of measures of gender diversity.

Fiscal Devaluation, Innovation, and Household Welfare in an Open Economy

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Fiscal devaluation has often been the focus of policy discussion within the eurozone as it provides a means by which southern European countries can regain competitiveness. It takes the form of a subsidy on labour, financed by taxing consumption. This paper discusses the effects of fiscal devaluation on the main macroeconomic variables in a two-country model with monopolistic competition, innovation, endogenous entry, and endogenous tradability. I found that trade balance can only be improved when the market is highly competitive, but fiscal devaluation also causes utility to decrease in the country that implements it. Meanwhile, I found reverse outcomes in a less competitive case: a higher utility but a trade deficit. In all cases, fiscal devaluation can be a prosper-thy-neighbor policy. I also compared fiscal devaluation with more targeted subsidies, finding that only subsidizing labour in the innovation sector can lead to similar outcomes while only subsidizing producing labour may cause a decrease in consumption and utility.

Impact of the Tourism Sector on Local Government Finances

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Tourism is one of the most central sectors for development, notably in creating additional income for regional development, increasing exports, and creating new workplaces. However, tourism activities also have economic, social, and environmental costs that are not usually accounted for due to limitations in defining the limits of the activity. Although tourism activities are broadly regulated at the central government levels, local governments are the institutions faced with challenges and strategic decisions concerning the effective planning and management of the sector. It is generally accepted that the tourism sector is associated with several positive economic impacts on municipalities. However, little attention has been paid to the impact that the tourism sector can have on local government expenditure, with the assumption that municipal expenditure on the tourism sector is minimal relative to the additional revenue generated by the positive impacts associated with it. To this end, this study aims to understand the impact of the tourism sector on the finances of Portugal municipalities. The hypothesis is that there is a direct relationship between the degree of dependence of the local economy on tourism and the health of the finances of municipalities. To understand tourism's impact on local finances, we included the variable tourism intensity, which captures the local economy's dependence on the tourism sector. Therefore, we developed six regression models with panel data for 278 Portuguese municipalities from 2009 to 2019, whose dependent variables were total expenditure, investment expenditure, environmental protection expenditure, fiscal autonomy, tax revenue and debt of municipalities. The results indicate that there is a direct positive relationship between municipalities' expenditure per capita and tourism intensity, with the effect being higher when it comes to investment expenditure per capita. On the other hand, fiscal autonomy, tax revenue and debt per capita of municipalities are not affected by tourism intensity. The empirical results support the hypothesis that the tourism sector can significantly impact local government expenditure due to the increased resources required to manage capital facilities and infrastructure to support tourism promotion and development.

Session C3: Marketing - Consumer Behaviour

Understanding observing customer's coping strategies with stress from service incivility in an intercultural encounter: The role of wellbeing

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There is still a dearth of research on service incivility incidents, which are observed by other customers (Hwang et al., 2022; Argo and Dahl, 2020), especially in an intercultural service context. As one of the main objectives of service research, wellbeing has attracted extensive attention over the past few years (Smith and Diekmann, 2017). Most of the current service research has studied individual wellbeing of the focal consumers or employees, which ignores the fact that one's wellbeing is affected by and contributes to that of others, considering the interactions among different roles in the service (Gallan et al., 2019; Leo et al., 2019). Furthermore, many interactions between customers and employees in hospitality service take place in the presence of other customers (Han et al., 2022; Wan and Wyer Jr., 2019). Therefore, it is important for the hospitality businesses to understand how customers' wellbeing is affected by these interactions from the observation point (Mattila et al., 2014), especially in the context of service incivility incidents toward immigrants (Kabadayi, 2019) and members of minorities (Brewster et al., 2020). To address this research issue, this study investigated a mild service incivility incident by a culturally distant employee towards the focal customer from the observer's view. The service incivility in this study is defined as indifferent and rude behaviours directed towards other people with a lack of regard (Porath et al., 2011). We examined how the observing customers cope with the stress created as a result of this service incident and their wellbeing being affected by various coping strategies. We define observing customer as another customer who overhears or witnesses a social interaction between a service provider and a focal customer (Mattila et al., 2014). Using scenario-based experiments from native (i.e., British) and immigrant respondents and SEM, the results showed that being exposed to service incivility by a culturally distant employee towards the focal customer could increase observing customer's psychological stress. The stressed observing customer would adopt various coping strategies, including social support, problem solving and disengaging, rather than seeking for self-support. Our findings further suggest that by having social support and disengaging with the service encounter, the observing customer reported a better wellbeing status, whereas problem solving coping could aggravate the observer's wellbeing. This study extends the study of wellbeing in service incivility from the context of monoculture to an intercultural context from an observing customer perspective. It helps hospitality businesses to increase customer wellbeing, taking into account the observing customers' experience by understanding their coping strategies with mild forms of service incivility by a culturally distant service employee.

Bibliometric Research toward Slow Fashion Consumption and Consumer Well-being

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This study aims to map the research landscape in order to identify major research clusters and relevant journals pertaining to the issue of slow consumption across disciplines. It offers a comprehensive analysis of the current status of research on slow fashion consumption and consumer well-being. This study contributes to the existing body of literature by providing an up-to-date analysis of the larger sustainability research area. Using the Web of Science, this study includes keywords such as slow consumption, slow fashion consumption, ethical consumption, less consumption, anti-consumption, sustainable consumption, green consumption, alternative consumption, well-being, happiness, hedonism, and mindfulness. The study analyzes 211 references from 2,469 publications that have previously conducted research in this area through document co-citations. By integrating a sizable number of publications from

various disciplines and drawing on the knowledge of the larger scientific community, the use of bibliometric methods in conjunction with a systematic review allows this study to overcome limitations associated with traditional literature reviews. The research uses both VOSviewer and Bibliometrix in R language. It analyzes the conceptual underpinnings of the various research streams and identifies the main research clusters that define them. Additionally, the 10 most cited articles from the last 3 years are investigated to explore gaps and opportunities for future research in this field. Furthermore, this research creates a conceptual framework that may serve as a useful guide for academics and industry professionals.

Exploring Sustainable Fashion Consumption: Does it makes me feel good? Am I willing to pay more? Comparing consumers from Portugal, Brazil and China

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Purpose: The aim of this article is to understand the impact of different types of consciousness on ethical consumption and attitude towards eco-fashion, while exploring the impact of these two variables on life satisfaction and willingness to pay premium through a comparative study of Portugal, Brazil, and China. **Approach:** To respond to the objectives outlined, a questionnaire was applied to the consumers with 889 valid questionnaires – we compared the behavior of 346 Portuguese, 207 Brazilians and 336 Chinese costumers. A structural equation modeling was used to test the proposed hypotheses. **Findings:** The results indicate that ethical consumption and ecological consciousness can make consumers have a positive attitude towards sustainable fashion products, premium payment, and life satisfaction enhancement. However, if the price difference is considerable, they will choose the not sustainable option. Further, the costumers do not intend to buy sustainable products if they drastically change their lifestyle or fashionable appearance. **Limitations and future lines of research:** In our study, the sample space is majorly composed by undergraduate students. Therefore, a future work could expand the scope of the respondents, by including different ages, professions, and purchasing power. We could conduct include more countries to understand how culture could influences the customer behavior. A new questionnaire will include more information regarding the complete sustainability path behind the product (e.g., R&D, transparency of the supply chain, and others). **Originality:** This article analyses the influence of consumer and ethical determinants on sustainable fashion products, comparing respondents from different countries, and the effects of national cultures.

Individual differences and online shopping cart abandonment

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During an online shopping session, consumers get in contact with many products, select some as favorites, and place them in an online shopping cart (Jiang et al., 2021). However, nothing guarantees that they will effectively complete such purchases. In fact, the rate of online shopping cart abandonment (OSCA) is high, thus being considered an undesirable consumer behavior in online retailing (Garaus, 2018). Kukar-Kinney and Close (2010) define OSCA as the placing of item(s) by the consumer in their online shopping cart without purchasing any of those item(s) during that shopping session, and claim that a thorough understanding of the purchasing process also requires a sound knowledge over non-buying behavior. However, despite the growing interest that OSCA has been attracting, its antecedents are still under-researched (Rubin et al., 2020). This study looks at how certain consumers might have a predisposition to engage in OSCA to a greater extent. Specifically, we address the following research question: What is the relationship between trait affect and OSCA? Trait affect refers to an inclination to feel in specific ways across time, (Barsade & Gibson, 2007). Affect has been categorized into a two-dimensional structure, positive and negative affect (Watson et al., 1988). Given the complexity of human emotion, individuals can experience both negative and positive affect simultaneously (Chea & Luo, 2008).

Following the hierarchical model for the influence of psychological traits on human behavior, we predict that the relationship between trait affect and OSCA should be, at least partially, mediated by other variables. Drawing on past studies, we predict that decisional procrastination, online procrastination, and online flow mediate such relationship. OSCA involves a postponement of the purchase decision. In this context, procrastination appears as a potential mediator. Decisional procrastination is an individual's maladjusted pattern of postponing a decision when faced with a specific conflict and choice (Ferrari & Dovidio, 2000). We also consider online procrastination, which is the "consumers' tendency to use the internet for the purpose of avoiding unpleasant tasks or decisions" (Zanjani et al., 2016, p. 569). Existing research shows that online flow (i.e., state of mind characterized by a high level of immersion in an activity in a way that the surrounding environment loses meaning) has been found to mediate the relationship between online procrastination and purchase decisions. Therefore, we also consider whether online flow mediates the effects of trait affect and procrastination on OSCA. To test the proposed research model, we used structural equation modeling and a sample of 311 respondents obtained through MTURK. Overall, the results indicate that positive affect relates directly with OSCA, whereas negative affect relates to it indirectly. Decisional procrastination and online flow were also found to directly and positively influence OSCA. Individuals high on positive affect have more thorough decision-making processes, using shopping carts to collect information, thus, engaging in OSCA. Negative affect reduces approach behavior, enhancing decisional procrastination and increasing OSCA.

Session C4: Environmental Economics

From fork to fish: The role of consumer preferences on the sustainability of fisheries

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The increasing consumption of seafood products raises concerns over the sustainability of marine ecosystems. We examine the role of consumer preferences on seafood demand and consequently on the sustainability of fisheries. Our analysis relies on a bio-economic model combining a demand derived from a CES utility depending on different fish species, a mixed fishery supply based on the Schaefer production function, a market equilibrium and a multispecies resource-based dynamic. Using both a steady-state approach and bio-economic viability goals, we identify analytical conditions on consumer preferences making it possible to balance biodiversity conservation with viable profits. We exemplify the analytical results with the coastal fishery in French Guiana.

Circular Economy Processes in the Tourism sector: a holistic conceptual framework based on a systematic literature review

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The rising environmental concerns have brought forth initiatives to transform highly pollutant industries with more sustainable business models. Circular economy presents itself as an alternative to the current Linear economy of produce-consume-dispose. While initially applied to the manufacturing industry, circularity is slowly being applied to the tertiary sector. The tourism industry is predominantly a provider of services, contributing to over 10% of the World's GDP and having an important role in the development of economy, jobs, territory and infrastructures (WTTC, 2022). Simultaneously, it is one of the most polluting industries in the world. Despite the relevance of this research area, investigation on the topic of circular processes in tourism is still scarce. This study aims to develop a conceptual framework of circular processes in the tourism sector based on a systematic literature review. A Scopus search on circularity processes of the tourism industry and its various subsectors gave back 629 results. Using PRISMA, the selection criteria was to include only articles in English, that specifically studied circularity processes of the tourism supply. This resulted in 56 papers for review, using content analysis and bibliometric analysis with VOSViewer. The identified processes and strategies for the circularity of the tourism industry were categorized using Potting et al.'s 9R's model of circular economy (2017). While there are several studies that study specific tourism subsector's circular processes and implementation opportunities individually, content analysis revealed a gap in papers that explore this theme using a holistic, macro approach. Managing and reducing surplus and waste, particularly of food and urban waste, as well as improving resource consumption efficiency and efficacy and making better product choices (i.e.: choosing green, renewable and recyclable products, resources and energy) were the most commonly referenced processes in literature. Certain pro-circular models (i.e.: sharing economy business models; slow living tourism products), and specific marketing strategies (i.e.: nudging) were highlighted as a way to influence visitors to have a pro-circular behaviour, as well as the relevance of the consumer in the transition towards a circular economy tourism model. Results from the systematic review allowed for the construction of a holistic, macro conceptual framework for studying tourism circular economy processes in destinations.

Tourism and air pollution in Italian regions

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Environmental Kuznets Curve (EKC) hypothesis explains the relationship between environmental quality and economic growth, exhibiting an inverted U-shape (Stern, 2004). Previous studies that try to access the existence of a tourism induced EKC at a national level, generally focus on CO₂ emissions, neglecting other relevant air pollutants, that has been raising with the tourism development (Gamage et al., 2017). This study uses emission data for the most critical pollutants regarding air quality (AQ), also contributing to the literature by providing a regional analysis. It is intended to explore the impact of tourism on AQ, through the evidence of a tourism-induced EKC for Italian regions, including variables as GDP, energy consumption, and the number of nights spent at tourist accommodation establishments from both residents and foreign tourists. The analysis is conducted using the most critical air pollutants (NO_x, PM₁₀, and PM_{2.5}), over two different periods for comparison purposes: 2000-2008 and 2009-2018. Stationarity and integration of variables is proved by Levin-Lin-Chu unit root and by Pedroni cointegration tests respectively. The Pooled OLS Estimator and the Granger panel causality test are employed to check the variables relationship. The tourism induced EKC is not validated for any of the air pollutants, even if the findings show a decreasing relationship between economic growth and environmental pollution. Results also show slightly differences between the two periods. Understanding the relationship between emissions, economic growth, tourism, and energy consumption is relevant for policymakers and countries' governments, to review the current tourism-related environmental policies and regulations, complementing and modifying them if necessary. Well-planned and coordinated strategies for sustainable tourism development and emissions reduction should be implemented. Furthermore, a transformation from carbon-intensive tourism into green sustainable tourism should be pursued, through incentives and financial support.

Air quality and visitors' behaviours: diversity and implications on sustainable development

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Air pollution is a major environmental problem worldwide, with strong consequences on health and on tourism flows (Eusébio et al., 2022). Therefore, it is expected that visitors are becoming increasingly aware of the importance of selecting tourism destinations with good air quality (AQ). However, a limited number of studies examine the relevance of AQ in the selection of tourism destinations. To overcome this gap, this study intends to analyse the diversity of the tourism market based on the importance of AQ in travel planning. To achieve this aim, a segmentation study based on behaviours regarding search of AQ information and on the selection of sustainable tourism products, during travel planning, was carried out. A questionnaire survey (N=620) was conducted among visitors of the Central Region of Portugal, during 2019 and 2020. To identify homogenous groups of visitors, a hierarchical cluster analysis was conducted. Differences among clusters were examined through ANOVA, Kruskal-Wallis and Chi-square tests. Three clusters with different behaviours regarding the relevance of AQ in travel planning were identified: cluster 1 - the unconcerned (N=273, 44.0%); (ii) cluster 2 - the concerned with AQ (N=283,

45.7%); and (iii) cluster 3 - the highly concerned with AQ (N=64, 10.3%). Despite almost half of respondents (cluster 1) do not choose environmental-friendly tourism products nor look for AQ information during travel planning, there is a small group (cluster 3) already searching AQ information and booking environmentally sustainable tourism products. However, a considerable number of respondents (cluster 2), despite not searching for much information about AQ, already tries to select environmentally-friendly tourism products. Moreover, differences were also detected among the clusters identified regarding environmentally sustainable behaviours at home and at the tourism destination, behavioural intentions towards a hypothetical air pollution episode and sociodemographic characteristics. Results clearly reveal that the visitors more concerned with AQ (clusters 2 and 3) are older, have more environmentally sustainable behaviours both at home and at the tourism destination and show more adaptive behavioural intentions towards air pollution episodes (e.g. shorten the stay at the destination, avoid more exhausting physical activities, cancel scheduled outdoor activities). However, the cluster 3 – The highly concerned with AQ – even show intentions of adopting more drastic behaviours towards air pollution episodes, namely leaving the destination immediately, than cluster 2. The paper provides important information to design strategies to attract the more environmentally sustainable visitors, who also are the most concerned with AQ during travel planning.

Session D0: (E-REDES) Challenges and opportunities in energy transition

Electricity market and the renewables transition

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Renewable energy generation depresses electricity spot prices, creating the so-called “merit-order effect”. Renewable power reduces the available load for conventional power, displacing higher marginal cost generation out of the market. The “merit-order effect” explains the lower returns and the “missing money” of RES projects subject to normal electricity market risks. Furthermore, increasing market splitting jeopardizes market integration and security of supply.

The proposal for an amendment to EU regulations aims to improve the electricity market design, namely by including incentives for Corporate Power Purchase Agreements. These aim to decrease volatility and secure renewable project returns.

E-REDES Open Data Platform: Data democratization accelerating the energy transition

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As the operator of distribution networks in Portugal, E-REDES manages a vast amount of data. Through the Open Data Portal, E-REDES contributes to the democratization of access to data, serving as a catalyst for the country's energy and digital transition. This platform promotes innovation and extends data analysis to community members, such as the Scientific Community, aiming to strengthen interactions and stimulate co-creation of value. As an institutional source of information, E-REDES seeks to support the community and foster innovation. The Open Data portal provides energy transition indicators, including the implementation of electric mobility and renewables across the country. It also offers insights into consumption patterns, aiding agents in planning and promoting these trends. Furthermore, it enables analysis and comparison between districts, municipalities, and parishes. The portal provides indicators for evaluating energy performance and identifying opportunities for efficiency improvements in energy production and implementation of energy efficiency projects. The dissemination of knowledge and analysis through the portal contributes to the development of tools and projects that support society's electrification process and help the decarbonisation process. Additionally, the Open Data portal offers information on network operations, such as scheduled outages or ongoing disruptions. This allows municipalities and other entities to integrate this data into their digitization projects. One example of its practical use is the "Porto Ponto" project implemented by the Municipality of Porto, which collects data on scheduled interruptions and makes it available on the Porto Open Data platform, providing citizens with information about planned outages in their residential areas. The Open Data portal contains various datasets that are frequently accessed. For instance, information about the level of use and installed power of Secondary Substations (PTD's) helps operators of electric vehicle chargers (PCVE) determine optimal locations for expanding their charging networks. Another dataset concerns the installation of smart meters, which is crucial for consumption analysis and the implementation of self-consumption production units (UPAC). Furthermore, the portal provides UPAC installation values by municipality, serving as valuable data for different stakeholders. The availability of these datasets on the Open Data portal allows for the development of frameworks that facilitate a better understanding of energy consumption, identifying areas with potential for renewable energy investments. This approach promotes a shift towards local production and consumption, thereby enhancing overall system efficiency. It guides decision-making processes regarding the best places to invest in green infrastructure and technologies. It's important to note that data alone do not drive progress; they must be converted into information, knowledge, and initiatives. Therefore, the active participation of the academic community, municipalities, energy agencies, and the general public is crucial to accelerate the energy transition

Conceptualization of flexibility solutions as an alternative to traditional investment in distribution grids

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In recent years the traditional electrical system has been challenged by the high proliferation of distributed generation and the emergence of loads with new consumption dynamics (namely electric vehicles and self-consumption). These changes have been increasing uncertainty and variability in power system planning and operation. In Portugal, this context of change in the electrical system has been accompanied by a massive deployment of metering infrastructure. As a result, a large volume of metering data is becoming available, which allows us to have an in-depth knowledge of load dynamics. Building up on these developments, instead of reinforcing electrical grid due to technical constraints in a classical manner, the DSO has been challenged to provide solutions where one acting upon electrical loads eliminates the technical constraints, in a system named flexibility. In this context, E-REDES has studied a set of flexibility solutions as an alternative to traditional investment. In the methodology adopted, the technical constraints of the grid were translated into a functional specification of flexible loads which fulfillment eliminates the technical constraints. To achieve this, we performed a stochastic analysis of the loads. These technical specifications are agnostic to the technology upon which the flexibility function is executed. For instance, an overcurrent constraint due to a peak consumption can be eliminated either by a consumption reduction, an increase in generation or a battery injection to the grid. The flexibility supplier is the one who chooses how to comply with flexibility specification. The exercise was completed with an economic analysis to define the flexibility reservation price – the cost of the flexibility service which makes it a more interesting option compared to its traditional equivalent. In this case, the reservation cost corresponds to the economic benefit of deferring the reinforcing investment N years, weighted by the difference between the benefit of energy not supplied of the traditional and flexibility solution. This presentation will show the findings of the several analyses performed and, in more detail, relevant use cases. Finally, we will present a reflection on the difficulties and future challenges that E-REDES expects to face in this new paradigm of operation and planning of the electrical grid.

Local Energy Markets - from business model innovation to a nascent market design

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Advances on the deployment of renewable energy communities (REC) has enabled great progress on the knowledge of how to design local energy markets (LEM) and manage distributed energy resources aiming at accelerating energy transition towards a carbon-neutral economy. However, there are many challenges around the market scalability of these projects and how to overcome regulatory, social, and technical barriers. Business model innovation has the potential to unlock the growth of energy communities in an inclusive manner, embedding value creation mechanisms to enable benefits for both prosumers, consumers, asset owners, financiers, and grid operators. Following the study of nascent markets and by combining multiple business models developed for distributed renewables businesses, a new integrated LEM design can be presented. It offers a wider stakeholder view and key LEM interactions among the relevant participants. Four business model cases have been identified, focusing on the impact of ownership, centralized vs distributed ownership (competitive P2P), and the additional benefits from activating energy flexibility programs for energy community optimization or for DSO/TSO services to alleviate constraints on transmission and distribution networks. In sum, LEMs are being driven by multiple factors, considering a multi-layered economic perspective, there are strong contributions from both macroeconomic and microeconomic dimensions, namely related to (1) evolution of the legal and market regulatory frameworks, (2) evolution of grid-edge technologies, (3) growth of energy demand, (4) innovation in business models and emergence of new market players, and (5) increased world energy supply instability.

Session D1: Financial Economics

The relationship between tourism investments and financial inclusion in the European Union (EU) countries

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In recent years, financial inclusion proved to play an important role in the sustainable development path on a global scale since it can contribute to boosting sustainable growth (Nguyen, 2021; Soonthodu & Nagarjuna, 2015). In the tourism sector, access to financial services can raise touristic SME's competitiveness and reduce travelers' transaction costs, increasing tourism revenues (Shi et al., 2020). Bearing this in mind, it becomes really interesting to test the possible existence of a causal relationship between tourism investments and financial inclusion and see if these factors contribute to reducing poverty in the European Union. A Panel Vector Autoregression (PVAR) is applied to observe the Granger-causal relationships between the variables and the short-run effects. Moreover, the Panel dynamic ordinary least square (PDOLS) and the Panel fully modified ordinary least squares (PFMOLS) are used in order to access the long-run elasticities (Santiago et al., 2018). According to the previous brief empirical literature, the results seem to point to a positive impact of financial inclusion on tourism development (Shi et al., 2020) and tourism demand (Gopalan & Khalid, 2022). Furthermore, it was proved that tourism also positively affects financial inclusion (Bozkrt & Karakuş, 2020). Given these outcomes, it is expected that tourism capital investment (since it represents the sector's gross fixed capital formation) has positive impacts on financial inclusion and the other way around. The research limitations are linked to the fact that the financial inclusion measurement is still not consensual in the literature since, depending on the level of socioeconomic development of each country, it is defined in different aspects, which is also a topic of concern among researchers, governments, and policymakers. Following Shi et al. (2020), we construct an index using financial institutions' and markets' depth, access, and efficiency. Furthermore, to our best knowledge, no empirical study has investigated the impact of financial inclusion on tourism investment, which is a gap but also a limitation in corroborating our results.

The Role of the Financial Performance for the Green Deal Targets of the Biggest European Companies

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The European green deal envisages ensuring climate neutrality by 2050. This includes a modern and competitive economy based on the environment, climate, transport, energy, industry, agriculture, and sustainable finance. Companies are playing a very important role in this whole process. Therefore, the purpose of the research is to evaluate the performance of the largest European corporates, revealing how corporates contribute or do not contribute to the implementation of the green deal. Systematization of scientific literature, selection of input and output variables based on the results of scientific literature, and analysis of statistical relationships as the main research methods are applied to achieve the purpose. The results of the article show that the largest European companies, selected from the most significant European stock index Euro Stoxx 50, do not equally contribute to the implementation of the green deal. The companies' environmental, social, and governance indicator (ESG), which reflects the level of the company's green deal, ranges on average between 35.90 and 65.05 points. The highest score was achieved in Euro Stoxx 50 utilities sector companies (65.05 points), and the lowest score in real estate and communication services sector companies (accordingly, 35.90 points and 41.36 points). Part of the analyzed corporates from the consumer discretionary, financials, industrials, information technology, and real estate sectors could contribute more to the improvement of a sustainable environment and social responsibility, as these corporates demonstrate better financial performance. On the other hand, corporates from the consumer staples and materials sectors that are already actively contributing to the implementation of the green deal do not necessarily have accumulated greater financial resources. The

relationship between return on assets and companies' ESG indicator is positive in the communication services, industrials, information technology, and real estate sectors. In other sectors, the relationship is negative (consumer discretionary, consumer staples, energy, financials, health care, materials, and utility sectors). This can be explained by the fact that some companies seek to get a return on invested sustainable assets. Net income margin is positively correlated with the ESG indicator of companies in the communication services, consumer staples, industrials, information technology, materials, and real estate sectors. Net income margin is important for sustainability for many companies. To conclude the highest score was achieved in utility sector companies and the lowest score in real estate and communication services sector companies. Companies from such sectors as consumer discretionary, financials, industrials, information technology, and real estate could contribute more to implementing the green deal goals, as these corporates demonstrate better financial performance. Companies from sectors such as consumer staples and materials with lower financial indicators actively contribute to the green deal implementation activities.

Affect and financial management: Initial insights

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A considerable part of the population in developed countries are worried about their financial situation. In this context, there has been substantial research looking into the influence of psychological characteristics on individuals' financial management. However, to our knowledge, the role of trait affect remains under-researched. Trait affect is a dispositional variable that concerns the extent to which individuals are predisposed to experience certain affective states across time. The dominant view looks at affect as having two dimensions: Positive affect (PA) and negative affect (NA). Our model innovates by relating trait affect with financial management, both directly as well as indirectly. We predict that PA relates positively to financial management and that NA relates negatively to it. Moreover, following the hierarchical model for the effects of psychological characteristics on human attitudes and behaviour, we predict that the relationship between trait affect, and financial management might be partially mediated by objective and subjective financial literacy, as well as financial risk-taking. The data for this research was collected in the first half of 2022 in the central region of Portugal. We obtained 631 usable questionnaires, for a net response rate of 14%. All constructs are measured using seven-point Likert scales adopted from previous research. Confirmatory factor analysis provides support for both convergent and discriminant validity. Statistical tests also indicate that common method variance (CMV) should not be an issue. The structural model exhibited an adequate level of adjustment. In the estimations, we used age, gender, income, and education as control variables. In addition, we included a marker variable in the model to account for common method variance. The results show, as expected, that PA is directly and positively related to objective and subjective financial literacy, and financial management. NA is negatively related to objective financial literacy and financial management, and unrelated to subjective financial literacy. PA and NA are only indirectly related to financial risk-taking, in a positive and negative way, respectively, through objective and subjective financial literacy. We also observe a positive relationship between objective and subjective financial literacy. Moreover, there is a positive relationship between subjective financial literacy and both risk-taking and financial management. Both the direct and indirect relationships between objective financial literacy and risk-taking are also positive and significant. In contrast, the direct link between objective financial literacy and financial management is not statistically significant, but the indirect one is (through subjective financial literacy and risk-taking). Finally, we observe a negative and significant relationship between risk-taking and financial management. In summary, our study contributes to existing knowledge by relating trait affect with financial management behaviors, and also by considering the mediating role of financial literacy and financial risk-taking. However, it is not without its limitations, including the sample's gender imbalance (which we controlled for), the correlational nature of the study, and the reliance on one source data, though we also controlled for this. This study is planned to be followed by experimental studies.

Analysis of Factors That Influence Financial Inclusion: The Case of OECD Countries

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This research studies the relationships between financial literacy and inclusion, and in particular the imbalance between them, by studying the short-run impacts and long-run computed elasticities that macroeconomic and institutional factors and the key financial literacy determinants have on the three main financial inclusion dimensions and on financial illiteracy consequences, specifically on over-indebtedness. ARDL models were used to estimate the short-run impacts and to calculate the long-run computed elasticities, using panel data from 2004 to 2019, with a sample composed of 24 OECD countries. Due to the presence of first-order autocorrelation, group heteroscedasticity, and contemporaneous correlation in the models, Driscoll and Kraay estimations were carried out, as they were expected to be robust enough to deal with such conditions. Subsequently, the variables that did not present statistical significance were excluded from the equations to obtain the parsimonious sets of each model. Regarding macroeconomic and institutional factors, it was observed that emigration, banking concentration, and housing prices positively, and bureaucracy negatively, influence financial inclusion, with more noticeable effects in the long run. Furthermore, positive impacts on inclusion were also detected concerning income, education, and age, the key determinants of financial literacy. However, when analyzing the effects of these same factors and determinants on over-indebtedness, the signs become the opposite of those previously described. That is, the effects that the explanatory and control variables have on financial inclusion are the opposite on the consequences of financial illiteracy, making it possible to conclude that the factors considered, capturing the effects of financial literacy, can explain some discrepancies found in certain countries between the levels of financial literacy and inclusion, and the consequences that arise from these imbalances, such as over-indebtedness

From safety nets to productive nets? Impacts and spillover effects of cash transfers in a fragile setting

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This paper analyzes the short-term impact of a cash transfer intervention on productive activities in rural Cameroon. It addresses an important knowledge gap regarding the potential of unconditional transfers, in a very poor environment, to raise household well-being in the long term by stimulating investments. Using data collected in the Far North region of Cameroon, we evaluate the impact of the transfers on agricultural assets and activities. Besides direct impacts, we assess the spillover effects of the intervention on non-beneficiary households of the community that has benefited from the program. Causal effects are identified by comparing treatment and control communities using quasi-experimental methods (Propensity Score Matching combined with Difference-in-Difference). We find that the cash transfer intervention improves land access and value, agricultural production, crops diversification, and livestock owning among beneficiary households. However, the transfers do not increase the ability of households to cope with agricultural shocks, which may be due to their engagement in riskier but more productive activities. Importantly, we also find that the intervention has large spillover effects on non-beneficiary households, as these latter also experienced improved land access, agricultural production and sales, as well as livestock owning. One of the mechanisms explaining these spillovers may be the increased wages paid by beneficiaries to day laborers. These findings stress the essential role of cash transfers to alleviate poverty in the future. Monetary transfers do not only improve consumption and human capital but also increase the capacity of households to support themselves in the future by enhancing income generating activities, such as agriculture. The spillover effects on non-beneficiaries also suggests an important local economy impact in this environment, which has important policy implications in a context of limited, targeted transfers in areas with very high chronic poverty rates.

Session D2: Environmental Economics - Water Sector

Dynamic assessment of water supply operators' performance: A Multi-Period and Multicriteria Approach

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The 2019 World Water Report by UNESCO emphasizes the crucial role of water in promoting food and energy security, sustainable economic development, and environmental preservation on a global scale. Despite universal recognition of the importance of proper water management, the challenges faced in this area are highly diverse, with varying degrees of urgency, priorities, and complexity, depending on the context of the analysis. Water supply systems are natural monopolies, and other market failures affect the water industry. Hence, sector regulation is essential to replace competition and thus promote efficiency in the sector and balance the interests of consumers and service providers, without neglecting environmental protection. The MCDA methodologies have proven effective in addressing such problems, but Classical Multi-Criteria Decision Aid approaches assume that decision-making is based on a static set of criteria and a global view of all requirements. However, in real-world decision-making processes occur in dynamic environments and highlight the need to incorporate the impact of changes over time. This work proposes a dynamic MCDA model for assessing the performance evolution of the Portuguese water sector considering several perspectives, from 2018 to 2020. The first objective of this work is to develop a composite performance indicator that can integrate dynamic parameters. The second objective is to apply this indicator to assess the overall performance of the Portuguese water sector, criterion by criterion, over time, and to evaluate the operators' overall performance. By developing composite indicators and analyzing performance across multiple periods, we aim to gain a deeper understanding of the performance of the WSS in Portugal and identify areas for improvement in the current evaluation model. To achieve this objective, a composite indicator allowing the aggregation of multiple criteria performance indicators over several periods of analysis is developed by resorting to the Multiattribute Value Theory (MAVT), in which the importance of the criteria on different time periods can assume differentiated values, depending on the DM's preferences. Thus, in addition to the dimension associated with the alternatives and the dimension associated with the criteria, the decision matrix will now have a third dimension associated with time, constituting a multidimensional array. The study provides valuable information that is not visible with the current model of performance assessment implemented by the Portuguese regulator, which can be useful in the promotion of sector's strategic goals. When assessing the overall performance of the sector (criterion by criterion) highlight the good performance of the indicators "Safe water" and "Mains failures". The performance of the indicators "Mains rehabilitation" and "Non-revenue water" stands out in a negative way. From the analysis of performance over time, it becomes apparent that certain indicators consistently yield unsatisfactory results. When evaluating the overall performance of bulk operators, there is a tendency towards average performance levels that have not improved over time. The application context emphasizes the model's sensitivity to changes in scale factors, depending on the perspective analyzed, through the division of the bulk operators among different categories.

Performance monitoring of Portuguese water supply service providers

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Benchmarking is crucial to identify the water supply service providers (SP) with the best key technical, economical and sustainability indicators, which can be seen as role models for the industry. Since indicators are not static over time, it is also important to follow the evolution of the efficiency frontier, and the relative positioning of the SP, over time. In this study, the efficiency of the Portuguese water supply sector is surveyed from 2011 to 2020, considering three different periods: 2011-2014, 2015-2016, and

2017-2020, corresponding to aggregation and disaggregation processes occurring in some of the most relevant SP. Data envelopment analysis is used for the efficiency benchmarking, employing the slacks-based method. Energy consumption, total expenditures and allocated personnel are selected as inputs and water intake as a non-discretionary input. Revenue water, energy production, number of served households, water safety and revenues are selected as desirable outputs, whereas water losses and mains failures are considered as undesirable outputs. A Luenberger-Malmquist (LM) productivity index is employed to monitor productivity changes over time. The weighted average of the SP efficiency allows to identify the energy production as being the less efficiently generated product (with an efficiency score well below 0.5) closely followed by a poorly efficient mains failures management (efficiency just above 0.5). The other undesirable output, water losses, is the third operational input less efficiently managed (efficiency around 0.7). Allocated personnel and energy consumption are the less efficient employed resources (with efficiencies below and around 0.9, respectively). Revenue water is the second less efficiently generated (desirable) product, although with a production efficiency well above 0.9. The number of served households, total expenditures and revenues can be considered efficiently managed as well, with efficiency scores above 0.95. The provision of safe water is the most efficiently managed indicator (with an efficiency close to 1). The overall LM productivity index allows to assess a slight positive evolution of the weighted average productivity (around 0.05), with most (around 70%) of the SP increasing their efficiency from 2011 to 2020. This evolution seems to be mostly due to an overall increase of technical efficiency (around 0.05), although solely around 20% of the SP saw an increase, i.e. approaching the efficiency frontier, against around 40% that saw a decrease. These results allow inferring that the overall increase is due to the largest SP. On the other hand, no real technological change was asserted in this period. This being the case, the efficiency frontier remained mostly unchanged from 2011 to 2020. A process of aggregation in some of the most relevant SP took place in 2015 and, as a result, from 2014 to 2015 a slight increase occurred (around 0.05) in the weighted average productivity and technical efficiency (most probably driven by these SP). On the other hand, a partial disaggregation process occurred in 2017, with the weighted average productivity (and technical efficiency) again presenting an ever so slightly increase. Considering the seemingly conflicting productivity changes of the aggregation and disaggregation processes, and, in some cases, the partial reversions shortly after their occurrence, this studied allows for a better insight on the effect of such processes.

Benchmarking the energy efficiency in the provision of drinking water services: an efficiency analysis tree approach

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The move to a sustainable water industry from an economic and environmental perspective requires the assessment of energy efficiency of water services. Understanding the levels of energy efficiency and how it evolved over time could help regulators and companies to make informed decisions. Although the economics of energy is relevant for water companies, it is also important estimate its energy efficiency based on energy consumption (MWh/year). Moreover, it is also fundamental using reliable and robust approaches avoiding misleading conclusions. Traditionally, the assessment of performance in the water industry was conducted using linear programming methods such as data envelopment analysis (DEA) and Free disposal Hull (FDH). These approaches could suffer from overfitting problems potentially generating less reliable results. To overcome this issue, this study uses Efficiency Analysis Tree (EAT) method to estimate energy efficiency scores of a sample of water companies based on the energy consumed by them. The main findings can be summarized as follows. The average energy efficiency of the English and Welsh water industry between 2011 and 2020 was 0.767 which involves that water companies could save 23.3% of their energy consumption if they were energy efficient. Based on the energy used by water companies, on average, they could save 905,671 MWh/year. Although the industry showed moderate levels of energy efficiency, we need to point out that energy efficiency followed a downward trend over time. Thus, there is potential for both types of companies (water and sewerage companies -WaSCs- and water only companies -WoCs-) to achieve considerable savings in energy to

become more efficient. In particular, on average, energy efficiency of WoCs was 0.863 and potential energy savings were estimated at 91,004 MWh/year. By contrast, the average energy efficiency of WaSCs was 0.709 which involves 814,667 MWh/year as potential energy savings. The results from the bootstrapped truncated regression gave us a better insight on what drove energy performance. Thus, it was found that water treatment complexity, source of raw water and population density were the main factors that affected energy performance.

Ecological footprint of Portuguese agriculture

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The ecological footprint is a measure of the impact of human activities on the natural environment. Among the different uses, it is a useful tool for assessing the sustainability of agricultural practices. As all the production activities, agriculture uses natural resources to provide the inputs necessary for the production processes and to absorb waste. However, it is the only sector characterized by an availability of natural resources. This makes possible to generate an Ecological Balance, based on the difference between demand and supply of natural resources, through which it will be highlighted a situation of environmental surplus/deficit. In order to estimate the agriculture ecological footprint, we need to calculate the average of all the production processes considering all the inputs linked to croplands, livestock and other agricultural activities (i.e. amount of water, energy, working hours, machines hours and powerful, fertilizers and herbicides). Furthermore, we must assess the amount and type of energy (e.g., renewable or non-renewable) used in food production, including energy used to power machinery, transport products, and process food (Global Footprint Network, 2018). The Portuguese agricultural sector represents about 15% of national carbon emissions (Rodrigues et al., 2021). Considering its weight in greenhouse gas emissions, the Common Agricultural Policy poses important environmental challenges to Portuguese farmers. The new regulations require that at least 25% of support must be associated with measures to reduce carbon emissions. On the other hand, the new CAP will opt for a new results-oriented evaluation model. The CAP has been heavily criticized for encouraging intensive production. In this new multi-annual financial framework, dominated by the climate transition, policy evaluation models applied to agriculture sectors will assume great importance to assess whether the incentives are aligned with the main objectives of the European Union in environmental matters. Our article has three objectives. First, we estimate the ecological footprint of agricultural activity in Portugal, using data from the 2019 agricultural census of the National Institute of Statistics of Portugal (Instituto Nacional de Estatística, 2021). Secondly, we assess the agricultural ecological footprint of one municipality through a survey to producers, as well as the distribution of agricultural European funds from the last Multiannual Financial Framework with data from the European Union. From this we can understand the relationship between agricultural environmental sustainability and European funding.

Assessing environmental profiles: An analysis of water consumption and waste recycling habits

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The 2030 Agenda for Sustainable Development (ASD) proposes, within the context of Sustainable Development Goals (SDGs) 6 and 12, promoting sustainable patterns of consumption and production and the guarantee of access to water and sanitation for the entire population, fostering efficient water use. Therefore, some basic targets, such as the sustainable management and efficient use of natural resources, as well as limiting waste generation through prevention, reduction, recycling, and reuse, should be properly achieved by 2030. According to the most recent SDG Report, worldwide urban waste and water management still needs to be greatly improved. In 2021, while 82% of worldwide urban waste

was collected, only 55% of it was treated in controlled facilities. Moreover, only 22.8% of worldwide electronic waste was safely and correctly managed (recycling of components and safe treatment of hazardous parts), and 17 million metric tons of plastic were dumped into the world's oceans. On the other hand, 1.2 billion people lacked stable access to basic water services in 2020 and worldwide water withdrawal rates approached stress levels in 2019. All these facts expose a slowdown in the progress towards achieving said goals by 2030. In sum, there is still a long road towards achieving the SDGs. In this context, individual green behaviours play a significant role in improving sustainability. In that sense, it is important to identify groups of individuals that display the best pro-environmental habits and analyse their socio-demographic profiles. In this respect, our paper focuses on analysing the crossover between water saving behaviours and waste sorting and recycling activities at the household level, observing best practices and their main determinants. We assessed household profiles in terms of their water consumption and recycling patterns using Latent Class Analysis (LCA). This methodology allows for households to be classified into groups without imposing any ad hoc criteria when classifying them and provides information on the determinants of belonging to each group. To empirically assess these issues, we considered a microdata database consisting of a sample of households in the municipality of Gijón (Spain). The database itself is a significant contribution to this paper, merging information from a survey (self-reported environmental attitudes, and socioeconomic characteristics of the households) with real data on water consumption. The results showed five significant household groups, where smaller families located in urban areas containing at least one homemaker and equipped with water efficient devices are more likely to present the best pro-environmental attitudes and behaviours related to water use and recycling habits. Furthermore, we found that providing better information in terms of water and waste services and the environmental impact of human behaviour is also important to fostering environmentally friendly habits.

Session D3: Social Economics & Public Policy

Determinants of meat and fish consumption in five European countries

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Global food production practices and consumption patterns have changed notably in the last few decades. Current dietary patterns are characterized by increased consumption of refined sugars as well as higher intakes of heavily-processed and animal source foods, which results in higher obesity rates and increased prevalence of diet-related non-communicable diseases. Moreover, diets high in animal products are associated with a larger environmental burden. The aim of this paper is to examine the association between the consumption of meat and fish and economic and socio-demographic factors, different consumption habits and behaviours of individuals in five European countries. Using household-level data, descriptive analysis is presented and then, a regression using Heckman's standard sample selection model is conducted. Main reasons for not eating meat are ethics, environment, taste and health. Probit shows that income, gender, education, age, healthiness of diet, hypertension as well as country play a role in whether a person is vegetarian or not. From the sample selection model, gender, education, age and healthiness of diet are indeed important to predict whether a person consumes meat and fish or not. The number of kilocalories from meat and fish a person consumes is then influenced mainly by income, gender, age, smoking, BMI and education; and it differs significantly among analysed countries.

The impact of regulatory pressures in environmental innovation performance

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Over the last decades, firms have been scrutinized for wrongdoing in regard to sustainability, namely the environmental. However, the greener transitions are taking longer than needed. Institutional pressures are expected to trigger innovations with environmental outcomes. Environmental innovations only produce their expected returns in the long run, which disincentives investors; also, they have higher costs and risks. Still, these practices will lead to an increase in the efficiency of resource allocation generating societal gains. There is a generalized consensus about the desirability of environmental innovations, at least in regard to environmental and social sustainability, hence, very little is said in terms of the heterodox positioning of firms in terms of involvement in these activities. Empirical evidence based on the CIS 2020 (Community innovation survey), encompassing the Portuguese case, attests that regulatory pressures will raise the propensity to engage in innovations with environmental benefits. Conversely, incentives seem to be irrelevant for the involvement in greener innovation purposes. Additionally, the role of other policy instruments such as funding is not intertwined with the environmental outcomes, which proves that policy packages need to address the innovative strategy in a lato sensu, as public monies need to be attributed to projects raising social welfare. Blunt responses to an environmental emergency are required as most of the corporative initiatives are shallow, cosmetic, and greenwashing maneuvers. Firms are taking too much in embracing the commitment to the environment with critical societal consequences. In short, the article aims to contribute to the theoretical and empirical comprehension of the role of regulations in promoting environmental innovations; to analyze the importance of other firm structural characteristics to leverage the greener commitment and the identification of the letdowns in present policy packages. The awareness of these drivers of the green transition should be of great use to policymakers to build an integrated response to the collective problem of environmental harm, reducing the overall environmental damage as well as the deficiency gap in strategic sectors.

Medical education and healthcare services: A model to cope with medical dualities and patient's holistic needs

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Introduction: The notions of complexity and coproduction are used in the present research to address healthcare dualities and conflicting demands frequently found in medical education and healthcare service delivery. Complexity is a conjunctive thinking that integrates ambivalence and tolerates unpredictability, supports ambiguity and the inner tensions of clinical reasoning and practice. It is in sharp contrast with ordinary medical practice, characterized by what can be labeled a Newtonian-style of thinking, based on orderly and predictable principles underpinning rational and chain-type learning frameworks. The theoretical notion of coproduction also challenges tradition in medical practice, as it frames health service as a “service” open to patients’ needs, expectations and knowledge, and sees users as indispensable actors during service delivery. Stakeholders of the system need to be involved. It juxtaposes to the traditional perspective of health service still provider-focused and disease-driven, hindering a more patient-centered approach. Since doctors are the most influential element of the system, complexity and coproduction may impact on their thinking as well as in the process of healthcare delivery, challenging medical education models to promote familiarity with both concepts. **Objective:** To explore healthcare stakeholders’ reported experiences with healthcare services in order to explain patterns related to the process of how doctor’s cope with competing needs and demands, arising from their roles and healthcare processes, leading to future improvements in medical education and practice. **Method:** Following a systematic inductive concept approach the concepts of complexity and coproduction were developed through a grounded theory study upon healthcare stakeholder’s insights. Data was collected from 15 focus groups (115 participants). Additionally, the authors looked to highlight the relationships between the insights underpinning both concepts. **Results:** A theoretical model organized in four paradoxical dimensions is proposed to support medical education and training based on the aforesaid complexity and coproduction concepts: (1) medical proximity (social skills to better coproduce with patients and other professionals) versus expertise vigilance (cope with patients unexpected conditions), and (2) clinical and integrated structure (integrate protocols and guidelines with service organization) versus holism and diversity (feedback loop and patient navigator to cope with patients’ increasing complexity). Additionally, a new terminology is suggested to support and operate with the model. **Conclusions:** An innovative model using complexity and coproduction assumptions is proposed aiming to contribute to enlarge forthcoming doctors’ professional values, expectations and capabilities, as well as highlight medical dualities regarding patient’s holistic needs.

Paths to national subjective well-being

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Well-being is a universally cherished goal of life, and as such it has been a major concern for policy makers, economists and others. Evidence from international surveys shows considerable differences in subjective well-being (SWB) across countries. Our study contributes to the debate about the factors that affect a nation’s degree of SWB, by relying on a novel research approach. While past studies have focused on identifying the net effects of several determinants of SWB based on correlation-based approaches, we innovate by applying fuzzy-set Qualitative Comparative Analysis (fsQCA), which allows

for conjunctural complexity, equifinality and asymmetric causality. Previous research emphasized the role of income-related and institutional factors in determining SWB at the country level, but paid little attention to the role of culture. Moreover, past studies exploring the relationship between culture and SWB are frequently inconsistent. In this context, we adopt fsQCA to address the major research question of how national income, income inequality, quality of institutions, and cultural norms (power distance, individualism, masculinity, and uncertainty avoidance) combine to generate different recipes for eliciting high or low SWB at the national level. The study uses data from 75 countries, for which data are available for all the measures used. For measuring SWB we use the Cantril Self-Anchoring Scale (Gallup World Poll 2019). For national income we consider GDP per capita based on purchasing power parity for 2019 in constant 2017 international dollars (World Development Indicators; in log terms). For income inequality we take the Gini index (World Development Indicators; average of values for the 2017-2019 period, to minimize the loss of countries due to missing data). For the quality of institutions, we compute the average of six indicators of governance for 2019 (World Development Indicators). We rely on data for 2019, to avoid the disruptive effects of the covid-pandemic. We also undertake the analysis with data for 2015, to assess the robustness of the results for 2019. Finally, we consider the updated cultural scores available from Hofstede's website (<https://www.hofstede-insights.com/country-comparison/>). The results yield four combinations of conditions equally leading to high SWB, and three equally leading to low SWB, in which we observe that the latter are not necessarily symmetrical to the former. The configurations for a high SWB indicate that high GDP per capita is a necessary condition, and that income inequality can either be low or irrelevant for a high SWB. High-quality institutions is a condition present in these four configurations. Individualism is the single core condition for high SWB, whereas power distance, masculinity, and uncertainty avoidance can have positive effects, negative effects, or be irrelevant for high SWB. The configurations for low SWB show that low GDP per capita is not a necessary condition, that both high power distance and low individualism are necessary conditions for low SWB, and that low GDP and low-quality institutions are core conditions in some configurations.

Session E0: European Integration and Covid-19 Pandemic

The Next Generation EU: A Political and Normative Outlook of a Debtor Country

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Stemming from the principle that the Next Generation EU (NGEU) means an historical step towards European integration, this chapter questions the optimum future viability of the new budgetary and fiscal instruments achieved from the perspective of political science and political economy. The rationale behind such position consists of the theoretical framework of democratic deficit in the EU, and of the idea that it created a political over-hegemony of surplus economies over the deficit ones. Furthermore, the argument is laid down on an historical tracing of decisions in economic governance in the European integration, since the creation of the EMU. It's argued that the NGEU, although highly significant for EU economic governance, should be supported by political integration to allow politicisation of decision-making, to the detriment of nationally biased decision-making, which would shelter democracy in Europe and reinforce it the EU.

COVID-19 Crisis and the EU Response. Can the NextGeneration Fund be the key to a more integrated Eurozone?

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Unlike the financial and debt crisis that shattered the Eurozone at the beginning of the last decade, the social and economic meltdown generated by the pandemic outbreak of COVID-19 in early 2020 has been confronted by a united front of the European Institutions with aligned health, social, and economic policies. The NextGeneration Fund with the Recovery and Resilience Facility as its centrepiece, and an allocation of €723.8 billion to face the consequences of the crisis, represents not only a common instrument to repair the economic devastation of the pandemic, but can also pave the way to a better integrated Eurozone. Since the funds were raised by the Commission instead of the individual Member States, the continued demand for a mutualized debt instrument has been finally met. After almost 2 years of its inaugural issuance took place (June 2021), this ambitious programme starts to present results worth analysing. Under the European Commission, these funds can help to bypass the fragility of an incomplete Monetary Union beyond the "Maastricht Criteria", align national fiscal policies and become a powerful tool of a new chapter in the convergence process of the Eurozone economies.

The EU and the Pandemic Crisis: From 'Road to Nowhere' to 'I Still Haven't Found What I'm Looking For'

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The chapter assesses the role of the European Union (EU) in the context of the COVID-19 crisis management. It starts by addressing the pandemic crisis from a comparative perspective, notably to what extent the crisis was so different from previous crises that affected the EU (the Eurozone crisis, the refugee crisis, the Ukrainian crisis, and the diplomatic crisis that followed the rift triggered by the Trump administration). To that purpose, a three-dimensional analysis is required, looking at the nature of the crises (endogeneity vs. exogeneity), at the effects (symmetry vs. asymmetry) and at the players involved in controlling the negative impacts of the crisis (externalisation vs. internalisation). The focus is on an analysis across time, starting in the early pandemic days, where national governments' activism ruled out EU activity. We point out how incoherent this solution was, considering that the problem crossed national borders and, therefore, cooperation, if not a supranational approach, was the most reasonable response.

Possible explanations are put forward, directed towards national authorities in particular. After the early stage of the pandemic, theoretical normality was restored as national governments were gradually replaced by EU institutions. The EU took its place as crisis manager. The analysis focuses on the areas where EU institutions played an important role. The chapter concludes by looking into the rear-view mirror and trying to assess the role of EU institutions and to what extent the pandemic crisis had an impact on the EU as a policy.

The impacts of Covid-19 pandemic in some European Union countries: a forecast analysis

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The aim of this paper is to analyze the macroeconomic impacts of the Covid-19 pandemic in the European Union (27 countries) and, particularly, in four of its economies – Germany, Spain, Italy and Portugal. For this purpose, a counterfactual analysis was conducted based on an ARIMA (Autoregressive Integrated Moving Average) forecasting model through which the behavior of a set of macroeconomic variables is examined in the context of the Covid-19 pandemic against a hypothetical scenario without pandemic. In general, the results point to a significantly better performance of all variables in the four countries and in the European Union if the Covid-19 pandemic had not existed.

Session E1: Political Economy & Labor

Time-Related Underemployment: Why, when, and for whom?

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There is a growing number of time-related underemployed (TRU) workers worldwide. In this study, we examine the determinants of the TRU and its behavior over the economic cycle. We use quarterly data from the Brazilian Continuous National Household Sample Survey to deploy a logistic multinomial model, controlling for individual, workplace, and household characteristics. We found that in the absence of a formal employment contract, gender and age are key determinants of the TRU probability, while race and schooling level have a less prominent role. Gender-based differences, obtained by contrasting the probability of being in time-related underemployment across selected worker characteristics, show a significant difference both for women over and under the age of thirty. Women under thirty have at least 4.0 p.p. more probability of being in TRU than men, 3.0 p.p., at most, in the case of women over thirty. Across all the other observed characteristics, women also present a significantly higher TRU probability than men. In some industries, however, such as education and health care, transportation, and agriculture, there is no significant gender gap. In turn, year-based differences, obtained by contrasting 2019 with 2014, show that workers in the service sector, female and young are the most impacted in an economic downturn. On average, the TRU probability increased by 3.4 p.p. for women vis-à-vis 2.3 p.p. for men. For its part, workers in education and health care, and housekeeping industries increased their probability by 3.7 p.p. Workers who live without a spouse with children, or those classified as sons or daughters of the main responsible of the household, are also associated with a higher increment in TRU probability. These findings offer important clues regarding the need for an increased reduction in labor market informality and discrimination based on gender and age. Race/ethnicity issues seem to be less of a concern, at least in connection with the economic cycle, as the change in the corresponding TRU probability is smaller in magnitude, irrespective of the age group

Terrorism and Reporting on Immigration in the Media: Evidence from France

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In this article, we explore the impact of terrorism on mass media reporting regarding migration issues. We use for the first time natural language processing (NLP) methods to analyze French news articles about immigration before and after successive waves of terrorist attacks. We find that significant terrorist acts are causing a shift in both the intensity and the tone of reporting about migration up to 3 to 8 weeks after a significant attack. These effects happen to be robust across French media political orientations. Lastly, we show that people in municipalities more exposed to media adopting more negative tones, and the votes in favor of the anti-migrant party were higher in a Nationwide election that happened to take place three weeks after a major terrorist attack (Bataclan events).

Green Jobs in Portugal: Bottom-up Approaches

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In this paper we use three different bottom-up approaches to observe if any of them differ in quantification of green jobs. The first considered the list of green competences and knowledge concepts recently

published by the European Skills, Competences, Qualifications and Occupations (ESCO) classification. The second relies on the professions published by the Occupational Information Network (O*NET) which issued a list of green occupations, classifying them as directly and indirectly green. Third consist on O*NET list of green tasks, which were published jointly with green occupations. The last two classifications rely on US context, but it is possible to adapt to an international case using a proper crosswalk. Using a longitudinal linked employee-employer panel data – Quadros de Pessoal - we estimate that green jobs represented around 6%-8% of total employment in Portugal in 2019. When included indirectly green jobs the share rises to around 12%. Empirical results show that the relative importance of green employment differs according to the definition and methodology used. However, all three approaches indicate that green jobs are men dominated, demand more years of education, tend to pay higher wages when compared with non-green jobs and usually provide fixed term contracts. Also, we conclude that small firms with foreign investment are more likely to provide environmentally friendly job opportunities. Moreover, our results suggest that changing jobs to a greener one is compensated with higher salaries. For both O*NET approaches, Blinder-Oaxaca decomposition showed that worker, job and firm characteristics explain around 54% of those returns. While for ESCO, adjusting endowments to green position explain around 79%.

Immigrants and the Portuguese labor market: Threat or Advantage?

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This paper examines the role played by immigrants in the wages of natives. Using matched Employer-employee data from Quadros de Pessoal (2010-2021), and constructing occupation-experience groups based on the O*NET skill taxonomy in a major departure from the extant literature that uses standard education-experience skill groups, we investigate the presence of foreigners in the labor market. In particular, we try to figure out how the foreign workforce alters the natives' earnings. The econometric analysis that has been carried out using panel data techniques suggests that the existence of foreign-born labor force in the Portuguese labor market lowers the wage of the competing workers. Specifically, the effect is strongest for the least skilled workers, vis-à-vis the highly skilled. This result means, as expected, that high-skilled immigrant workers are complementary, while low-skilled foreign labor force is substitutable for native labor. The findings are robust to controlling for various occupational skill distributions and endogeneity issues.

Session E2: Marketing

The impact of supplier greenwashing on sustainability, mediated by information sharing and green trust: an analysis from the customer's perspective in a B-to-B context

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The environmental issues associated with climate change have sparked a sense of urgency and social responsibility with impacts on society as a whole and consequently on business practices. As a result, government and environmental protection agencies are pressuring companies to adopt environmentally sustainable practices in their operations. As such, in the last two decades, social responsibility practices have become increasingly accepted in the business world, and companies are changing their actions, operations, and marketing communication to something more sustainable, ecological, or "green". One of the main benefits for companies that adopt environmental sustainability practices is the fact that they are positively distinguished by consumers who are increasingly involved and dedicated to environmental protection issues. However, complaints about alleged greenwashing practices are quite common. Assuming the concept of greenwashing and its variations resulting from different business behaviors, it is important to understand and study the consequences of greenwashing practices on stakeholders. According to some authors, a perspective that is often overlooked but highly relevant is to involve employees, organizational clients or suppliers, and how they react to greenwashing. Therefore, given that most studies are based on the perspective of customers/consumers and that results are not always unanimous, there are still gaps in the literature on the subject of greenwashing and its consequences. The objective of this research is to use signaling theory to explain the impact of supplier greenwashing on the environmental, social, and economic sustainability of the customer, mediated by information sharing and green trust. Thus, based on a sample of 251 buying companies based in Portugal that recognize these practices in their suppliers, through CB-SEM techniques, a quantitative, descriptive, and conclusive study was conducted, concluding that greenwashing has a negative influence on customer sustainability, both directly and indirectly, through trust and information sharing. With these results, it is hoped to clarify some theoretical concepts and the relationships that exist between them in a business-to-business customer-supplier context, and to contribute to the adoption of marketing and organizational communication strategies that are more appropriate for the current reality, thus contributing to a better and more sustainable world.

Employee labour strategies and brand love

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Past research has shown that customers develop relationships with brands that entail feelings, emotions and specific brand-related behaviours. In this context, the literature refers that brand love is a relevant variable for building strong consumer-brand relationships (Batra et al., 2012, Bairrada et al., 2018). Several studies have looked at the antecedents of brand love. However, few have done so in a services context. Moreover, none has considered the influence of emotional labor strategies on brand love (Bairrada et al., 2018). This is an important gap, since the behavior of frontline employees helps to build the service consumption experience, as well as to establish a long-term relationship between consumers and companies (Groth et al., 2009, Beatty et al., 2015). In this context, our model studied the influence of frontline employees' behavior, specifically emotional labor strategies, on the development of brand love. The model considers that this relationship is mediated by brand trust and the customer's trust in the frontline employee. Through a self-administered questionnaire, data were collected from 291 customers of hairdressing establishments. The data was analysed through structural equation modelling, using the SMARTPLS v.3.2.8 software. The results show that the deep acting is positively related to brand love

indirectly, whereas surface acting is negatively related to it. Furthermore, this research highlights the mediating effect of brand trust on the relationship between emotional labor strategies and brand love. Specifically, employee deep acting is positively related to trust in the frontline employee, whereas surface acting is negatively related to trust in the frontline employee and in the brand. In summary, this study contributes to existing knowledge by being the first to relate emotional labour strategies and brand love towards a brand.

Understanding and managing the holistic patient experience to improve patient well-being and healthcare service delivery

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Understanding patient experience (PX) is emerging as an important focus area for research and a leading management objective across healthcare organizations. PX definitions predominantly take the healthcare service provider perspective, with services mainly elaborating on service quality dimensions and crafting an experience of care for the patient to receive. Such perspective neglects patients' interactions with care providers and through a myriad of touchpoints in multiple channels beyond the boundaries of the healthcare organization context. Experiences occur within a complex setting connecting multiple actors involved in the service delivery and with the patient playing an active role in the process. This study develops a deeper understanding of PX in the increasingly complex service context and establishes its outcomes. Building on existing PX definitions and conceptualizations and drawing on recent customer experience literature, we delineate the realm of PX. We propose the notion of PX as having a holistic scope and occurring throughout the patient journey, involving complex, social, and dynamic interfaces and natures. The "journey" encompasses multiple interactions and relationships between patients and touchpoints that occur over time inside and outside the healthcare organization context. Such touchpoints are understood as clusters of experiential elements that shape and foster patient experiences and some of which are outside the service provider control. The patient journey emphasizes the PX extending beyond the care provider-patient dyad to capture additional value networks and resources, such as friends, family, other patients, and communities. We further develop a conceptual framework representing the PX throughout the patient journey and the main outcomes. Creating a PX orientation and driving PX improvements may create valuable outcomes for the overall healthcare system. Such outcomes may include service improvement; patient loyalty; attaining a better reputation; and impacting patients' lives and well-being. From a managerial perspective, and given the high number of interdependencies that exist within patient journeys, addressing the PX from a more comprehensive and holistic way can be a challenge for healthcare organizations. Yet, a focus on the holistic PX is critical to craft effective care delivery approaches and providing positive patient experiences. To successfully manage the experiences of patients, healthcare organizations are required to identify a set of critical changes in terms of their structure, organization, channels, people, resources, and capabilities.

The importance of export commitment and distribution adaptation on export performance

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Exporting activity is crucial to both organizational and national prosperity. Therefore, identifying the key drivers of export performance is an area of interest not only to researchers, but also to public policy-makers and managers. In this study, we will focus on the moderation-mediation effects of export

commitment and distribution adaptation on export performance. To do so, we develop a conceptual model with two hypotheses. In the first hypothesis we propose that the export commitment – export performance relationship is mediated by distribution adaptation. The rationale to support this hypothesis is based on the argument that while export commitment is necessary in order for the firm to commit resources to their export activities, distribution adaptation is the strategy for the firm to reach the foreign customers with their products and offerings, this way leading to better results for export ventures. In this study, we also postulate that export commitment positively moderates the relationship between distribution adaptation and export performance. As the firm increases its commitment towards the export market (e.g. increase of assets allocation to the firm's foreign export operations, providing better support to foreign distributors) this should enhance the positive impact of distribution adaptation on export performance. Thus, in our second hypothesis we propose that Export commitment moderates the relationship between distribution adaptation and export performance; namely, when export commitment is higher, distribution adaptation has a greater positive effect on export performance than when export commitment is lower. In order to test our conceptual model, we used a governmental database of Spanish exporting firms as sampling frame. A multi-industry sample was used, in order to increase observed variance and reinforce the generalization of the results. We developed a structured questionnaire for data collection. A single-key informant was used in each firm to comment on a single export venture (main export product -or group- and main export country), which allowed us to reduce the potential for systematic and random sources of error. Questionnaires were sent to 1,222 exporting companies and, after eliminating non-valid questionnaires, 208 valid questionnaires were retained for analysis. The results indicated that non-response bias and common method bias were not a problem. Validated scales were used in this research and several control variables were included in the analysis. Discriminant validity, convergent validity, and scale reliability was assessed with confirmatory factor analysis. To test the hypotheses, on the one hand, a mediation analysis and a moderation analysis were conducted, to test individually theoretical hypotheses, and then, on the other hand, a moderated mediation analysis were carried out to test jointly both hypotheses, using the PROCESS macro for SPSS. The results also show that there is a mediation of distribution adaptation on the relationship between export commitment and export performance, thereby supporting H1. Finally, the results show that export commitment positively moderates the relationship distribution adaptation – export performance, providing support for H2. Considering that the main effect as well as the interaction effect of export commitment are significant, our results indicate that export commitment is not a pure moderator but a quasi-moderator.

Session E3: Finance

*ESG & Systematic Risk: The moderating effect of Financial Performance*Maria Roszkowska-Menkes¹, Laetitia Pozniak²¹*Szkoła Główna Handlowa w Warszawie*²*University of Mons*

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As global efforts towards sustainability transition intensify, companies are facing increased institutional pressure to integrate environmental, social and governance (ESG) considerations into their strategies. Growing number of jurisdictions introduce mandatory ESG disclosure consumers increasingly search for more sustainable products, while institutional investors turn to sustainable investment opportunities. The latter increasingly view ESG issues as a material source of risk, but also as a company value driver. Discussing benefits related with good ESG performance researchers point, among others, to decreased default risk (Atif & Ali, 2021; Jiraporn et al., 2014; Stellner et al., 2015). While there is consensus in the literature that corporate default can have a devastating consequence for a vast group of stakeholders, including shareholders, consumers and employees, empirical studies on the relationship between ESG issues and default risk deliver mixed results. One group of studies reveals that superior environmental performance (Schneider, 2011), employee relations (Bauer et al., 2009; Chen et al., 2012) and corporate governance (Switzer et al., 2018) practices are associated with lower default risk. Other authors show that good ESG performance is penalized with higher cost of debt (Goss & Roberts, 2011; Menz, 2010), lending support to the overinvestment hypothesis (Barnea & Rubin, 2010) stating that ESG spending is a wasteful activity and an illustration of agency cost (Renneboog et al., 2008). The aim of this research is to address the inconsistencies in prior research and explore the impact of ESG on systematic risk as moderated by financial performance. For ESG not to be perceived as over-investment (Barnea & Rubin, 2010) or agency cost (Friedman, 1970; Kamani, 2011) it needs to be strategic, that is focused on shared value creation (Porter & Kramer, 2011). Capability to integrated social and environmental considerations within core business strategy and simultaneously strive for competitive advantage and responsibility can be a sign of superior management skills or the “good management” (Waddock & Graves, 1997: 604). This, in turn may suggest that a company is more effective in business and financial planning and consequently and, as a result, should enjoy improved financial stability (Oikonomou et al., 2012). In light of this we predict the following: H1: ESG performance is positively associated with systematic risk H2: The positive relationship between ESG performance and systematic risk is negatively moderate by firm's financial performance. We test our hypotheses on a sample of 5754 firm-year observations (retrieved from Bloomberg and Refinitiv databases). We use panel analysis with fixed-effects and employ instrumental variable approach (two stage least squares regression) to control for the endogeneity of ESG performance. Our results indicate that ESG performance is significantly positively associated with systematic risk, providing support for H1. Further, the statistically significant coefficient of almost -0.01 on the interaction term suggests, in line with our hypothesis (H2), that financial performance negatively moderates the relationship between ESG score and Beta. This suggest that while high ESG performance in low profitable companies may result of overinvestment and is associated with increased systematic risk, the relationship is opposite for companies with sound financial performance.

*Portuguese's financial literacy: does the area of the course influence financial literacy?*Paula Sarabando^{1,2}, Pedro Vasconcelos³, Rogério Matias¹, Tiago Miguel¹¹*Polytechnic Institute of Viseu*²*INESC-Coimbra*³*PricewaterhouseCoopers*

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Financial literacy seems to be more important and focused than ever. Several recent studies have found that Portugal is at bottom of the table compared to the Eurozone countries regarding financial literacy. As it's a key factor to the development of a country, it appears to be crucial to understand what people know about financial matters when they complete the compulsory schooling. With a sample of 296 Portuguese

students who enrolled in polytechnic higher education system for the first time, we studied if they understand simple concepts related to financial issues (as loans), as well as whether they are aware of the risk of not recovering the money invested that is embedded in some of the most talked and common financial products that are available in the market. This last objective seems to be relevant, since a lot of fraudulent schemes involving teenagers, young adults and financial markets have emerged in recent years (Ministério Público Portugal, 2021). From the results, some disturbing conclusions can be drawn. For instance, more than two thirds of the sample do not know what Euribor is (similar result regarding Spread). About a third of the simple do not understand the inflation's consequences. Furthermore, 16,9% of respondents do not know what term deposits are. Derivative products and saving certificates are seen as very alike regarding the risk they represent. The same happens when it comes to Foreign Exchange Market (usually known as Forex) and stock funds. However, all things considered, students who chose a business-related course as their first choice when applying to the higher education system showed a higher level of financial literacy – in line with several authors as Nikonova et al. (2018) and Ergün (2018) – although it is still low compared to what one would expect. Surprisingly, Non-fungible Tokens (usually known as NFT) are more familiar to those who didn't choose a business-related course as first option.

International Portfolio Selection with Machine-Learning and Asymmetric Dynamic Conditional Correlations

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In this study, we use a Multivariate Machine Learning - Asymmetric Dynamic Conditional Correlation (DCC) model to dynamically forecast returns and covariances, which are then used in the portfolio optimization problem. We apply our model to daily returns of 77 national stock and bond indexes for the period from August 2001 to September 2020. We find that our methods lead to large economic gains. Most notably, we show that relative to the proposed Random Forest - Asymmetric DCC model considerably increases the portfolio performance and the certainty equivalent of a CRRA investor. We also show that international diversification is amply beneficial for investors from South America, Europe, the Middle East, Asia, and Oceania, between 2012-2020.

The impact of ESG practices on the cost of debt: evidence for the US, Europe and Brazil

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ESG ratings measure a company's environmental impact, social responsibility, and corporate governance performance. In recent years, several studies have examined the impact of ESG ratings on various financial outcomes, including the cost of debt, with mixed findings. Some have found a negative relationship, suggesting that lenders perceive companies with higher ESG ratings as less risky and can therefore secure debt at lower interest rates. Other studies have found no significant relationship between ESG ratings and the cost of debt. Several potential mechanisms have been proposed to explain the relationship between ESG ratings and the cost of debt. One is that lenders perceive companies with higher ESG ratings as less risky and can therefore secure debt at lower interest rates. ESG ratings provide lenders with information about a company's environmental impact, social responsibility, and corporate governance that may not be captured by traditional financial metrics such as earnings or cash flows. This information can help lenders to assess a company's risk profile better and make more informed lending decisions. This perception of lower risk can translate into lower borrowing costs for companies with higher ESG ratings. Another mechanism is that companies with higher ESG ratings are likelier to have better relationships with stakeholders, including lenders. Companies with better relationships with stakeholders are more likely to access cheaper financing, as lenders are more willing to lend to companies with a good reputation and strong stakeholder relationships. This can lead to improved access to credit and more favorable loan terms. Finally, companies with higher ESG ratings

may be better positioned to manage ESG risks, such as climate change or labor practices, which can lead to improved financial performance and lower risk of default. This can lead to lower borrowing costs and improved access to credit. From another perspective, investor preferences for ESG factors are not uniform across all investors. Some investors prioritize environmental factors, such as carbon emissions or water usage, while others prioritize social factors, such as labor practices or human rights. Still, others prioritize governance factors, such as board composition or executive compensation. Some investors prioritize all three factors equally. Research has shown that ESG preferences vary across investors depending on their investment style, geographic location, and industry focus. This paper will explore the impact of ESG ratings on the cost of debt, the potential mechanisms underlying this relationship in different institutional contexts, and the implications of this research for investors and companies. Using a dataset of American, Brazilian and European firms for the period from 2013 to 2021, and applying several risk measures, including the Merton Model distance to distress, we first assess the if ESG rating has information content for credit risk pricing and if such information is complementary or substitute of the traditional financial risk metrics. Additionally, we investigate the hypothesis that the impact of the ESG rating on the cost of credit is non-linear, given the market segmentation of investors. Finally, we analyse the hypothesis that the relationship between the ESG rating and the cost of debt varies across different institutional environments, given that these also imply the variability of risk management mechanisms.

Session E4: Industrial Organization & Innovation

Platform-based ecosystem for secondary construction materials toward Circular Economy: challenges and barriers

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Ecosystem in business allows organisations to be expanded their activities to optimal performance as part of a larger community, instead of limiting partnerships within their supply chain under the lens of win-win situation (Rong et al., 2013, Clarysse et al., 2014; Zahra & Nambisan, 2012). Thanks to the development of innovative technologies and the Internet, a digital platform has facilitated the connection for multiple organisations with a set of complementary products, technologies, or services to create an ecosystem, which it is defined as a platform-based ecosystem (Adner & Kapoor, 2010; Helfat & Raubitschek, 2018). The development of digital platform-based ecosystems has become one of the most important sources of innovation, transformed many industries, and well supported for risk management, sustainability and, in particular, Circular Economy (Autio et al., 2018; Gawer & Cusumano, 2014, Kovacic et al., 2020). The project-based characteristics of the construction industry are potentially able to cultivate most benefits from digital platform application, especially in Circular Economy transition. Since the secondary materials (reused, repurpose, recycled materials) is the key elements to switch from leaner to circular economy with closed-loop value chains, many organisations have adopted platforms in sharing information and resources for reversed logistics, for example, food wastes for composting or repair/resell damaged clothes. However, the implementation remains limited in the construction industry that provoke the research study on exploring the in-depth challenges and barriers in platform adoption as the first step of a solution for accelerating circularity in that sector. The findings unveiled the problematic issues in information flows across stakeholders, fragmented with a number of different organisational participants in one project and the lack of standard systems in digital certificates as well as the neglect from practitioners. The role of different stakeholders then needs to be evaluated detail in contribution to a platform-based ecosystem to promote Circular Economy with secondary construction materials in its value approach, evaluation and acceptance.

Measuring the societal impacts of university-industry R&D collaborations: A systematic literature review and future directions for research

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Measuring the impact of research has become a relevant issue since its results must be translated into broader impacts for society. This relevance is more evident when research is conducted with public funding, as there is a need to demonstrate the value of the research to investors and increase the chances of attracting future funding. In the context of university-industry collaborations (UIC), such measurement can become a complex task, given the heterogeneity of the institutions involved, the diversity of objectives, and the difference in perspectives, since what may be a high-value impact for one group may not be for another. The literature related to the field of UIC indicates that knowledge is quite fragmented due to the variety of aspects that emerge from organizational relationships. However, the consensus of scholars converges on the need to know how UIC impacts society. Over the last decade there has been an increasing number of articles addressing the socioeconomic impacts of UIC. Nevertheless, systematic evaluations of societal impacts tend to be scarce at the organizational level, which is explained in part by the lack of conceptual clarity. In addition, the multifaceted nature of the impact related to its tangibility or intangibility, whether it is of a direct or indirect nature, and its relationship with the time variable, make its measurement even more complex since the impact can appear at any moment of the collaborative cycle, whether in the short or the long term. All these aspects make the perspective of evaluating organizations key to understanding how such an impact should be assessed. Given the scarce number of works

focused on the measurement of societal impacts of UIC in research and development and the interest in understanding more broadly some intrinsic characteristics of impact, we developed a systematic literature review aimed at identifying three key elements: I) impact categories from the perspectives of society, university, and industry, II) measurement challenges, and III) strategies on how to overcome these challenges considering the empirical experiences present in the literature. Finally, all these elements are compiled into a framework that can contribute to the theoretical development of societal impacts within the university-industry collaborative context, while suggesting directions for future research.

Firm growth, age and the intensity of international trade

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Firm age is important for economic performance for many reasons: 1) young firms make the largest contribution to job creation (Haltiwanger, Jarmin, and Miranda 2013); 2) younger firms have faster growth on average than older firms (Nichter and Goldmark 2009); 3) young firms engage in more employment and sales growth (Huynh and Petrunia 2010; Jovanovic 1982), and are better able to convert employment growth into subsequent sales growth, productivity and profits (Coad, Segarra, and Teruel 2013); 4) young R&D firms are also more likely than old R&D firms to generate employment growth (Coad, Segarra, and Teruel 2016); however, 5) young firms are more likely to fail but for the young firms that do survive they usually grow quickly (Bartelsman, Haltiwanger, and Scarpetta 2009; Haltiwanger et al. 2013) because they have the ability to reallocate their inputs better than older firms, and their productivity gains from international trade may be higher (Alam 2018). In addition, there is evidence of positive links between the role of age in export performance, particularly, that younger firms are more likely to export (e.g. Berthou and Vicard 2015). More recently, Grazi and Moschella (2018) found that exporting firms grow more than non-exporting firms conditional on size; nevertheless, the positive effect associated with export status declines with age; in this line, Yang and Tsou (2019) found that young exporters and FOEs continue to exhibit higher growth rates than their older counterparts. In this paper we investigate the moderating role of age on the relationship between the intensity of international trade activities and firm growth by using the Generalized Quantile Regression (GQR) approach with instrumental variables, developed by Powell (2020). In this sense, we study how export intensity, import intensity and openness trade intensity influences four measures of firm growth: sales, employment, labor productivity and total factor productivity (TFP) across different ages in the whole growth distribution. Although, Coad et al. (2013); Haltiwanger et al. (2013) argue that the most obvious way of measuring age is by referring to the date of registration in the country's mercantile register; most of the previous empirical researches have lacked detailed data on firm age (Decker, Haltiwanger, Jarmin, and Miranda 2014) because in most of the data sets this information is not available. To address this issue, we analyze a novel, under-explored and rich data set of Ecuadorian manufacturing firms from 2007 to 2018, that contains detailed economic and corporate information but also includes the firm age according to the starting date of operations in the market, all this information is provided by the firms supervisory institution. We distinguish between young firms and older firms by using the age threshold at 10 years. Our three measures of intensity of international trade activities are give by: export intensity as exports per sales; import intensity as imports per sales, and openness trade intensity as exports and imports per sales. The results show that young firms that achieve higher growth rates are positively affected by international trade activities and young firms with low growth rates are less (positively) affected by international trade activities. In other words, international trade activities undertaken by young firms is riskier because it may result in either faster growth or faster decline.

The paradox of Schumpeterian competition: Competitive regime and productivity growth in Portugal over 1986-2018

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Increasing evidence shows that industrial concentration has increased in most developed countries during the new century. This phenomenon has concurrently occurred with declining business dynamism, a fall in labour shares, and a well-known productivity slowdown. Several scholars thus suggest that excessive market power has undermined growth and income distribution. From a Schumpeterian competition perspective, we contribute to this literature through a long-term analysis of market share instability, the entrenchment of dominant firms and, in particular, the relationship between innovation and market structure. To this end, we use a novel longitudinal dataset covering the population of Portuguese firms operating in the business sector from 1986 to 2018. Structural trends (HP) show that, after intense creative destruction, since 2000, market shares have stabilised while leaders have been able to reinforce their dominance and increase their market share through determinants other than productivity growth. This pattern fully characterises a non-Schumpeterian concentration. On the other hand, industry-level regressions indicate that leaders preserve their dominant positions more easily in higher concentrated industries and that the greater the leadership persistence, the lower the market share instability. Subsequently, estimates show that dominant firms have lower incentives to innovate in deteriorated competitive settings. Finally, firm-level fixed effects panel regressions indicate that the higher the industrial concentration, the smaller the effect of productivity growth on market share expansion. These findings entail, therefore, a vital dilemma we call 'the paradox of Schumpeterian competition,' since competition tends to (Schumpeterian) concentration, and then concentration results in weaker competition.

Plenary Session - Responding to the world water crisis

Quentin Grafton

The Australian National University

The earth has a water crisis and that is closely connected to water justice; how water is used, what it is valued for, and who has voice and decision-making authority. Many of the world's largest rivers in arid and semi-arid environments are suffering from a decline in stream flow and water quality, degradation of riparian habitats and diminution of cultural and aesthetic values. These trends will be exacerbated by climate change noting that, with a high degree of confidence, there are already irreversible losses globally in freshwater ecosystems. In this presentation responses will be outlined in terms of the 'What, Why and the How' of the water crisis at local to global scale.

Session Alumni: From Students to Academics: Research Highlights by Alumni

Human capital and productivity: the puzzle of the Portuguese economy

Fernando Alexandre¹

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Over the past few decades, the average number of years of schooling of the Portuguese workforce has increased rapidly. This increase in education was accompanied by a rise in GDP per capita until the year 2000. However, in the 21st century, there has been a disconnect between schooling and economic growth. We investigate the role of changes in structural composition on the stagnation of aggregate productivity growth of the Portuguese economy.

Rules for rewarding the development of AI applications: A market design approach

Joana Pais¹

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We investigate the division of surplus among contributors to a blockchain-based platform that certifies AI algorithms. Our analysis encompasses two distinct approaches. The first involves cooperative game solutions, which rely on objective information regarding the contributions of collaborators, specifically utilizing the innovative solution concept named X value. The second approach involves a peer-to-peer evaluation mechanism, which is used when only limited or no objective information on the contributions of collaborators can be retrieved by the platform. In this case, the fair division of surplus is based on the collaborators' personal estimates of how much each of their peers has contributed to the project's progress.

The Neoliberalism Strawman

Pedro Brinca¹

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Not a day goes by without a left-wing politician waving the Strawman of neoliberalism. There is no shortage of literature throwing neoliberalism into every economic problem. The problem with concepts is that they often mean different things to different people. I have no intention of analysing the applicability of the term to current political and sociological dynamics. However, I have no doubt that it is not applicable to economics. It is about this inapplicability to the current framework of economic theory that I will argue and discuss in this presentation.

From politics to econometrics; from econometrics to game theory; from theory to the laboratory; and back to the laboratory – the history of a research project on quorum rules in referenda.

Luís Aguiar-Conraria¹

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This study examines how quorum rules affect the legitimacy, representativeness, and protection of minorities in national referenda. It is the history of a research project that began with the 2007 referendum on abortion and went through several phases, starting with econometrics and ending in the laboratory, including game theory. The results show that either the approval or rejection quorum is the best depending on the preferred criterion.

Poster Competition

ICEBRS hosts a poster competition co-organized with the Regional Directorate of the Center and Alentejo (DRCA) – Portuguese Economic Association, which was directed at PhD and Master/undergraduate students. A total of 21 abstracts were considered - 12 from Master/undergraduate and nine from PhD students. An award will be granted to the best poster by a Master/undergraduate student and a PhD student

Abstracts of Posters submitted by PhD Students

Risk Management in Renewable Power Purchase Agreements: An Overview

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Corporate Renewable Power Purchase Agreements (PPAs) are long-term power contracts between a producer and a corporate buyer for the output from renewable generating assets. PPAs have seen significant growth in capacity additions (a 58% annual growth rate in Europe between 2018 and 2021) as organizations, particularly large ones, perceive it as an opportunity to decarbonize operations while contributing to climate change mitigation goals. However, because the output is weather-dependent and the market is volatile, the parties may face significant risks, albeit differently depending on the type of contract that the parties enter. This article outlines the various contracts, the risks that parties to these PPAs face, and how these risks can be assessed and managed.

Systematic and traditional procedures for selecting relevant literature were used, followed by careful reading and synthesis, and writing of the major findings with respect to the study's objectives. The study finds that the major risks to parties in PPA contracts are volume, shape or profile, balancing, basis, change in law or policy, and price risks. We find the value-at-risk and the more coherent conditional-value-at-risks measurements to be adequate for assessing these risks.

In Vino Veritas: building experiences through emotion, gender and wine experience

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Emotions play a key role in the formation of attitudes and judgments of experiences. In this sense, this paper proposes to interweave the themes encompassing emotion, wine and gender identity from the wine experience in Mendoza, Argentina. The choice of these themes is justified by the fact that they are in concomitance with the perspectives for a more sustainable and fair world in the framework of the UN Sustainable Development Goals (SDGs), as they contribute to: (a) nurture the gap in emotional literacy and equally (b) deepen in the debate of gender identity in the horizon of business management. To this

end, we then intend to develop the premises that constitute the epistemological basis for the analysis of the experience, demonstrating its importance and contribution to innovation within the framework of building a more humane and responsible future. Scientific literatures from various areas suggest the deepening of research on gender identity; more precisely with regard to Management, they urge that investigations detail the similarities and/or divergences of emotional responses from gender. Although it is not explicitly evidenced in the literature that there is a difference between the emotional response of female and male gender identity in terms of experiences in wine tasting, this article seeks to integrate the hypothesis raised from the research of Le Breton (2004) in *Les passions ordinaires: anthropologie des émotions* where he argues that the individual adds a particular note that is embroidered into a collective patchwork quilt susceptible of being recognised among his peers, according to his personal history, his psychology, his social status, his gender, his age, etc. From this premise, this study will integrate to the notion of gender identity the theme of emotions in the context of wine experience. This is because it is believed to be a topic of importance that contributes to innovate and improve the relationships between companies and their customers while collaborating to integrate the community in which the company is inserted, besides encouraging the improvement of the marketing strategies of a Vineyard. Therefore, *In Vino Veritas: building experiences through emotion, gender and wine experience* aims to analyse the emotions felt from the female gender identity in relation to wine experiences. To achieve the objective, we intend in the first moment (1) to analyse the perceptions of emotions and behaviours of wine consumers through participant observation and the creation of field notes during tasting experiences in wine bodegas in Mendoza, Argentina; in the second and last moment (2) to understand through interviews: a) which emotions remain in the post-consumption of the experience; b) what meaning these women attach to a wine experience; c) from the gender identity of the participants, what they intend to acquire in this type of activity and mainly what remains in the memory? With this we intend to answer the central question: are the emotions felt from the gender identity in relation to wine experiences different? In order to answer this question, we intend to explain the respective contributions that this study may contribute to the management field.

How does national culture impact companies' ESG practices?

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The correlation between companies' environmental, social, and governance (ESG) spheres and their financial performance has garnered attention from researchers and corporations alike (Shin, Moon and Kang, 2022). Today, governments and corporations are increasingly charged for their achievements in a range of sustainable factors, in addition to addressing the economic challenges inherent in their respective contexts (Roy and Goll, 2014).

This pressure exerted by stakeholders is not fortuitous. The environmental awareness of populations in industrialized countries has increased the pressure on organizations to respect the natural environment and the populations affected by their operations (Vachon, 2010), especially since environmental impacts do not respect geographical boundaries. An example of this is climate change; it affects societies on an unprecedented scale and is already considered one of the biggest challenges for humans, since it impacts food production and is responsible for environmental disasters (Ullah et al., 2022).

In this sense, understanding the antecedents of the environmental, social, and economic dimensions of sustainability will continue to be one of the greatest challenges of this century (Roy and Goll, 2014); additionally, the role of cultural dimensions has also received attention from researchers and has been studied as a relevant determinant for a number of issues within economics-related topics (Chaudhry and Shafiullah, 2021).

The understanding enshrined in the literature on sustainable development is one jointly supported by three pillars: social justice (or equity), environmental responsibility, and economic viability; however, cultural vitality is fundamental to building a healthy and sustainable society (Jon Hawkes, 2001).

Some research suggests that culture can play an important role in the effectiveness of environmental management practices, environmental innovation, Triple Bottom Line performance, and supply chain management (Roy and Goll, 2014; Song, Montabon and Xu, 2018; Elbaz et al., 2021; Shin, Moon and

Kang, 2022; Ullah et al., 2022). Therefore, it is necessary to incorporate business and culture as key elements in achieving sustainability.

This study aimed to answer the following research question: how does national culture impact companies' ESG practices? Thus, a literature review was conducted, seeking to understand the contemporary context on the role played by national culture in corporate ESG-related practices.

We identified three main paths taken by researchers when investigating national culture and ESG issues: the field of corporate social performance and corporate governance; the field of environmental performance, its practices and indicators; and, financial performance.

Despite the fact that literature reviews do not produce practical recommendations (Elbaz et al., 2021) this research may be relevant to organizations as it demonstrates the interest of scholars of ESG practices and sustainability in cultural dimensions. This understanding contributes to companies by demonstrating that the cultural approach paves the way for building greater flexibility, which is always needed to respond to the business environment. It is added that the constraints of this study are mainly linked to the database, methodology and research sources used.

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A SYSTEMATIC LITERATURE REVIEW ON SUSTAINABLE HRM AND ITS RELATIONS WITH EMPLOYEES' ATTITUDES: STATE OF ART AND FUTURE RESEARCH AGENDA

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The interest in sustainable human resource management has grown in the last decades. However, comprehensive, and systematic research concentrating on the evolution of this field, is still needed. The purpose of this study is to provide an overview and synthesis of the existing body of knowledge on human resource management (HRM) related to sustainability through a bibliometric study of articles published until 2022, identifying the most relevant research in this field. In the literature review, special attention is given to articles that link sustainable HRM to employees' attitudes, identifying gaps and future research opportunities. A bibliometric analysis and literature review was performed over 105 documents obtained from the WoS database, using VOSviewer software program, from which 27 were selected for full-text reading. The applied database filters were: document type (article and early access); index (SSCI and SCI-expanded) and year (2019 - 2022). The results show that: sustainable HRM literature is growing,

especially after 2019; “Sustainability” is the journal with more publications; and England is the leading country. The network of co-occurrence of keywords analysis unveiled that performance, job satisfaction, and behaviors are the most frequently studied topics in HRM. Additionally, through the Systematic Literature Review carried out on the articles published from 2019 to 2022, it was possible to identify opportunities for future research. These topics include employees' perceptions of the implementation of sustainable HRM practices in companies, as well as the impact of these practices on their attitudes and behaviors, taking into account the various HRM practices.

Prisons as an efficient multi-product function

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The research topic aims to develop a multi-production function for the Portuguese prison system and understand under what circumstances there is a rationale for operationalizing a public-private partnership.

Portugal has 49 prisons of different types: central penitentiaries, the larger ones, for inmates sentenced to more than 6 months, and regional penitentiaries, for those with a sentence less than 6 months. Two of them are female prisons. Almost all prison buildings are old, from the late 19th century and the first half of the 20th century (Caxias and Carregueira are the exceptions).

Portugal has changed dramatically in several fields, from infrastructure to health, education to social security, but the penitentiary system has remained almost the same. In Portugal, the Prison Fellowship International foresees a recidivism rate of 75%, even without official figures. Considering the current cost of a little less than 300 million euros (293.6 million in 2019) every year with the prison system, it is easy to conclude that the rate of profitability for such expense is very low. The prison system's noblest mission of functioning as a social elevator is not working. In short, this is the current situation of the Portuguese prisons.

If prisons provide protection services to society, a modern prison system must be viewed as a multi-product firm providing incarceration days and rehabilitation opportunities. But on top of that, there is also a question about resource scarcity that could translate into the traditional management problem regarding efficiency. The challenge of the research project is to minimize recidivism and costs in prisons while keeping the community safe.

What do I wish to explain? In our research problem, we firstly need to define the prison system as a multi-production function with output and input variables. To optimize its function, the output and input variables must be chosen and clearly defined. Recidivism, translating to successful social reintegration, is a critical variable that is also strongly correlated with overall safety. Quality confinement and co-creation are also decisive variables to find the optimal production function. The private-public partnership will be studied on top to find the environmental characteristics where this model is the most efficient solution, in the cost dimension. Moving from the concept of prisons as a "correction" benign warehouse to a rehabilitation school, subject to efficiency standards, will be the condition to be improved.

The prison system is an important part of justice and provides multiple products to society, including safety and rehabilitation. With an average time of incarceration of 32 months in 2019 (the second highest in Europe) and an annual expenditure of 293 million euros in 2019, the inmate's average cost for 32 months reaches 61.2 thousand euros. However, despite this huge investment in safety, there is about a 75% recidivism rate, which means a success rate of just 25%.

The minimization of output variables such as recidivism and investment will be the efficiency problem in the managed prison system that we aim to solve.

Workplace Experiences of LGBTQIA+ Employees in the Portuguese Hospitality Industry

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LGBTQIA+ related issues have been receiving much attention in the last few decades, with more incidence since the beginning of the 21st century. However, the LGBTQIA+ community still faces innumerable issues in their daily lives, including in their workplace. Such issues and adversities are represented by experiences of discrimination and harassment; by a lack of equal opportunities when compared to their heterosexual and cisgender counterparts; by the establishment of heteronormative workplace environments; and by the existing stigma and prejudice against them. In the hospitality and tourism industry such issues prevail, compromising the levels of job satisfaction and psychological well-being perceived by LGBTQIA+ employees. In this industry, most of the discriminatory behavior towards LGBTQIA+ individuals are homophobic comments and homophobic abuse. In the case of Portugal, and according to a Manpower Group study conducted in Europe, 29,3% of the Portuguese respondents have faced some type of discrimination in their workplace due to their sexual orientation or gender identity. Moreover, only 34% of those respondents felt comfortable expressing or disclosing their sexual orientation or gender identity in their workplace. Thus, LGBTQIA+ inclusion in the workplace is a topic of paramount importance that keeps its focus and goals on equal treatment towards LGBTQIA+ employees in organizations. Therefore, this study aims to fulfil a gap in literature by investigating on the workplace experiences of LGBTQIA+ individuals in the Portuguese hospitality industry. Also, it is intended to understand the effect that such experiences have on the levels of job satisfaction and psychological well-being perceived by LGBTQIA+ hospitality workers. By using a qualitative design, a conceptual model was developed to better understand such effects, and in-depth interviews were conducted with hospitality staff members that identify themselves as part of the LGBTQIA+ community. Preliminary findings have shown that most respondents conceal their sexual orientation or gender identity to protect themselves against discriminatory behaviors. Such discriminatory behaviors are experienced mainly in the form of microaggressions and covert discrimination. These findings indicate that discrimination based on sexual orientation and gender identity still occurs in Portuguese hospitality workplaces, and that inclusion strategies are necessary as well as more support from management.

Assessment of the Portuguese water supply sector - A multi-period ELECTRE TRI application

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The Sustainable Development Goals (SDGs) have been on the agenda of United Nations Member States since 2015, defining sustainable development priorities for 2030. SDG6 aims to “Ensure availability and sustainable management of water and sanitation for all” with indicator 6.4.1 addressing specifically the need to increase water-use efficiency over time.

In Portugal, since 2004, the Water and Waste Services Regulatory Entity (ERSAR) has been evaluating the performance of water utilities. Since 2015, the evaluation model has relied on a set of 14 indicators organised into three dimensions: protection of user interests, operational sustainability, and environmental sustainability. However, the adopted evaluation model lacks dynamic methodologies capable of accommodating the strategic plans of water sector and, thus, giving a clear signal to service providers about the sector priority areas of intervention. In this work, we propose an extension of the outranking method ELECTRE TRI, which allows for the integration of performance from multiple periods in order to incorporate the impact of time and accommodate the decision-makers' preferences based on the priorities of the sector.

Is the goal of this work to develop and implement a composite indicator to evaluate the global performance of the sector, criterion by criterion, and the global performance of providers, by intervention

area. This indicator is applied to the retail system from 2018 to 2021 and includes the parameters defined by the regulator.

Our findings allow a deeper understanding of the overall performance of the water providers in Portugal and the identification of some characteristics not observable through the evaluation model in force. The comparison of the global performance of utilities during the years shows a decrease in the number of entities with a “good service quality since 2019” and the consequent increase in the number of entities with an “acceptable service quality.” With regard to the assessment of the sector, indicator by indicator, over the period, the indicators “Safe water” and “Physical accessibility of the service” stand out positively. The indicators “Non-revenue water”, “Real water losses” and “Standardised energy consumption” stand out negatively.

A Multi-Dimensional Approach to Understanding Green Jobs: Insights from the Portuguese Labor Market

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As societies shift towards sustainable practices, green jobs have become increasingly important. To widely understand and measure green jobs, this study highlights the significance of adopting a combination of the Occupational Information Network (ONET) and the European multilingual classification of Skills, Competences, Qualifications and Occupations (ESCO) methodologies to analyze occupations, tasks, and skills. Although ONET and ESCO offer valuable insights into green job characteristics, they are not interchangeable and provide unique and independent perspectives. Applying a comprehensive approach to the case of Portugal revealed that green employment accounts for around 12% (direct and indirect), is male-dominated, and requires higher levels of education, offering higher wages and mostly fixed-term contracts. Green jobs were also found to have higher hourly wages, with a 15% increase resulting from switching from a non-green to a green job. These findings have significant implications for labor market policies aimed at promoting a sustainable economy, including the necessity for education and training programs to equip workers with green job skills, and ensuring fair wages and job security. In conclusion, taking a multidimensional approach to measuring green jobs is crucial in supporting the transition towards a sustainable future.

Smart Specialization: opportunities and challenges for its implementation in Brazil

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This article addresses the concept and recent practice of Smart Specialization with a focus on Brazil. It pays special attention to the challenges and opportunities encountered in the implementation of Smart Specialization in the country, using as study cases projects carried out in three different States: Brasília, Paraná and Pernambuco. The objective is to extract recommendations from the practices already carried out for future ones.

More widely used at the European Union context (RIS3), the Smart Specialization refers to the selection and prioritization of areas of scientific, technological and innovation domain, where a certain region manages to stand out in relation to others. In other words, it analyses the socioeconomic structure of a region, identifying strategic domains for regional development, aiming to propitiate deliberated changes in the local economic production.

The structure of Smart Specialization advocates for a strong level of cooperation. Its quadruple helix model has provided opportunities for increased public involvement, using four actors – science, politics, industry, and society – measuring their impact on the specified region and its insertion in global value chains. Therefore, it works as an attempt to combine the local knowledge base with market opportunities aiming to boost regional development. Notwithstanding these possible gains, there are several

challenges in putting this approach to practice. Smart Specialization encompasses an extremely complex implementation and policy makers must expect and avoid certain obstacles.

Main findings of the study suggest that Smart Specialization has provided strong cooperation from different actors in the design of policies for regional development in Brazil. Its use has brought relevant reflections on the future of regional policy and research and development initiatives. Therefore, an increased use of this approach can be viewed as an opportunity because of its strong potential in adopting consistent policies, as well as the formation of partnerships not only between regions, states and the federation, but also between neighbour countries.

However, the experiences carried out so far can be considered as pilot activities, which have tested the adaptation of the Smart Specialization approach within the socioeconomic contexts of the Brazilian regions and institutions. There are still several characteristics that may hinder the implementation of a Smart Specialization strategy in Brazil: the technological gap in many productive sectors and companies; the low specialization of labor, resulting from strong income inequality; and the need to ensure the sustainability of natural resources. Such aspects differ profoundly from the European Union experiences. Moreover, it is still necessary to make efforts to adopt more advanced stages of RIS3 implementation, which consider a more robust participatory governance and the role of the State as a promoter of projects, with enhanced coordination at national and subnational levels. Therefore, the success of the strategy in the Brazilian context must consider these issues with caution, improving practices and mitigating problems whenever possible.

Abstracts of Posters submitted by Undergraduate and Master Students

Are family firms more risk averse?

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Family firms constitute a large percentage of all businesses, which makes them indispensable to economic development. They are considered as entities with unique characteristics.

One of the most debated issues involves defining the concept of family firm. Although it is a topic under constant analysis, there is still no established definition of family firm. Therefore, a family firm is one in which the family has great managerial influence and consequently owns a large percentage of the company's assets. Family firms are also considered to be those whose family members hold positions as owners or managers, either for one or more generations.

Protecting family interests can affect the risk preferences of family firms. Thus, this study is a literature review that aims to analyze whether ownership structure influences the risk incurred by firms, in order to answer the question "Are family firms more risk averse?". Hence, it is important to analyze the relationship between ownership and risk aversion, since this is a determining factor in the development and growth of a company.

Due to the fact that family firms represent a large percentage of all firms and are generally considered to be more risk averse, we considered relevant to conduct a study in order to analyze the veracity of the last statement. We also analyzed internal factors such as the owner's mandate and service as CEO, ownership and family involvement as well as external factors such as innovation, market dynamism, environmental hostility and belonging to developed countries. These factors can influence the risk incurred by companies, as well as change their policies.

A company takes risks when it gets out of its comfort zone, when it operates in the unknown and allocates resources to uncertain opportunities. The risk incurred by family firms has been a very debated topic for researchers. Many scientific articles conclude that family firms are indeed more risk averse than non-family firms. However, there are authors who have different opinions. With the analysis of several scientific articles, we conclude that there is no consensus in the literature to answer the question raised. According to Naldi et al. (2007), family firms are more risk averse – "family firms tend to take less risk than do non-family firms" - since most of the capital invested belongs to the family and if the investment is not profitable, it will affect the financial well-being and image of future generations because family firms have a long-term time horizon. Meanwhile according to Gonzalez' L et al. (2021), there is a U-shaped (non-linear) relationship between risk orientation of family firms and financial performance.

The risk incurred by companies directly and indirectly affects their business policies. Thus, it is essential to understand how family firms change their policies in order to protect themselves from risk. So this study also aims to analyze how policies are changed depending on the risk aversion of family firms versus non-family firms. For example, the level of debt decreases with ownership. Regarding dividend policy, a U-shaped relationship is found between family ownership and dividend distribution.

The impact of financial development on renewable energy sector growth in EU countries: a panel data approach

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This paper offers preliminary results on financial development's role in deploying renewable energy capacity, using data from the 27 EU member states from 2000 to 2019. It also provides additional results regarding whether financial instability and regulatory measures hamper the financial system's capacity to

support the green energy sector. This research is based on a model with renewable energy capacity (contrary to most of the literature on this matter, which tends to concentrate on consumption) as a function of the banking sector, equity and bond markets development indicators. Our empirical results highlight that if the banking sector and the stock market development are inferior to a certain threshold, they facilitate the growth of renewable industries and encourage the implementation of green technologies in the electricity production systems. These non-linear relationships have profound implications regarding the damaging effects of an oversized financial system on clean energy sources. Also, we find evidence that liquidity is an essential feature of the stock market that facilitates investment in the renewable energy sector. Conversely, the bond market development has shown no significant influence.

Regarding the impact of financial instability on the renewable energy sector, the results suggest that the adverse effects of crises limit the banking system and equity market's ability to foster the adoption of renewable energy sources. Additionally, we did not find evidence that capital and liquidity requirements faced by banks by dint of the third version of the Basel accord constrain their ability to provide the external capital required to enhance the adoption of renewable energy technologies. This ongoing research contributes to the existing literature focusing on how financial development supports and promotes the adoption of renewable energy sources in a European Union member state.

FOOD TRADE AND PUBLIC HEALTH: Challenges for a virtuous partnership

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Over the last few years, poor eating habits have been growing, which leads to the loss of healthy life years and to an increased risk of developing non-communicable diseases. Food trade has an important role in promoting healthy eating, since consumer habits are largely influenced by food and consumption environments. Moreover, food safety and food quality should be considered global priorities. Nevertheless, the complexity of such challenges requires a comprehensive approach (farm to fork).

On the other hand, during the Coronavirus Disease 2019 (COVID-19) pandemic there was an everlasting search for balance between the defense of public health and the promotion of the economy. Despite the efforts, the pandemic left no country indifferent.

Our central aim is to study the relationship between food trade and public health, specifically, how food stores can influence consumer health. It is also our intention to identify the main risks associated with food (in)security and the organizations with responsibilities in the matter. Lastly, we aim at understanding the impact of COVID-19 in this hopefully virtuous partnership (food trade – public health).

A literature search was carried out in July 2022 using the digital libraries Medline-PubMed, ScienceDirect and Cochrane Library. The keywords used were “public health AND food trade” and “food trade AND COVID-19”. The following filters were applied: published in the last 10 years, 1st and 2nd quartiles and written in Portuguese or in English. We also considered institutional publications.

Consumer habits and food choices are currently subject to a wide range of environmental and personal factors. Despite so many stimuli, 95% of all food purchases are made out of habit. Regarding the influence of food stores on public health, they can make food consumption patterns healthier by implementing positive interventions in the food environment, but there are also barriers to health promotion. Both barriers and facilitators were identified in five domains: external, internal, actors, interventions, processes. On the other hand, ensuring food quality and safety is increasingly perceived as a global priority. According to the World Health Organization, over 600 million people get sick every year due to food insecurity. Hazards (biological, chemical, physical, nutritional) can arise anywhere geographically and at any stage of the supply chain.

Although the full impact of COVID-19 is still unknown, it had a severe impact on the food sector. The pandemic caused significant changes in supply and demand, pricing, purchasing power, consumption patterns and in food security.

Retail food stores are prime locations for the implementation of interventions capable of improving consumer health. Alongside with such interventions, it is essential to address the challenge of food security, which affects daily life.

Black swan events (low probability and high impact) such as the COVID-19 pandemic will be increasingly common, so it is important to learn from them and to turn them into development opportunities. In light of this, challenges such as population growth, climate change, technological development, antimicrobial resistance, food processing and labelling are going to influence the future of food production and trade. Therefore, they should be promptly addressed.

Sustainability Reporting in the Global Energy Sector: a literature review

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This paper conducts a literature review on the topic of sustainability reporting (SR) in the global energy sector. Through the literature review, it has been confirmed that there is very little research on SR in the energy sector. This paper uses the SCOPUS database and VOSviewer to conduct a bibliometric analysis. This paper finds that stakeholder theory and legitimacy theory are the most commonly used theoretical frameworks in this field. This finding agrees with previous research on SR. The literature review also finds that there is confusion over which operational functions make up the energy sector within the SR landscape, as different research papers separate the energy sector into different subsectors. This paper finds that the energy sector can be separated into multiple subsectors that include: the electricity sector (electricity generation companies and electric utilities companies) and the oil and gas sector. The research papers were grouped into the following three SR strategy groups: i) subsector approach, ii) broad approach and iii) broad comparative approach. None of the identified papers could be grouped into a subsector comparative approach group; thus identifying a research gap. As SR is becoming a more important aspect of disclosure in both the public and private sectors, there needs to be further research done on SR in the energy sector. This paper finds that there is a large and significant research gap across SR in the energy sector. More specifically, no research has been found that compares sustainability reporting across public and private sector solely in the energy sector subsectors.

Analysis of Factors That Influence Financial Inclusion: The Case of OECD Countries

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This research studies the relationships between financial literacy and inclusion, and in particular the imbalance between them, by studying the short-run impacts and long-run computed elasticities that macroeconomic and institutional factors and the key financial literacy determinants have on the three main financial inclusion dimensions and on financial illiteracy consequences, specifically on over-indebtedness. ARDL models were used to estimate the short-run impacts and to calculate the long-run computed elasticities, using panel data from 2004 to 2019, with a sample composed of 24 OECD countries. Due to the presence of first-order autocorrelation, group heteroscedasticity, and contemporaneous correlation in the models, Driscoll and Kraay estimations were carried out, as they were expected to be robust enough to deal with such conditions. Subsequently, the variables that did not present statistical significance were excluded from the equations to obtain the parsimonious sets of each model. Regarding macroeconomic and institutional factors, it was observed that emigration, banking concentration, and housing prices positively, and bureaucracy negatively, influence financial inclusion, with more noticeable effects in the long run. Furthermore, positive impacts on inclusion were also detected concerning income, education, and age, the key determinants of financial literacy. However, when analyzing the effects of these same factors and determinants on over-indebtedness, the signs become the opposite of those previously described. That is, the effects that the explanatory and control variables have on financial inclusion are the opposite on the consequences of financial illiteracy, making

it possible to conclude that the factors considered, capturing the effects of financial literacy, can explain some discrepancies found in certain countries between the levels of financial literacy and inclusion, and the consequences that arise from these imbalances, such as over-indebtedness.

Market sentiment analysis using Hermite polynomials: An empirical approach

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This paper aims to ascertain the robustness of Hermite polynomials in estimating risk-neutral densities (RND) with simulated data from the Black-Scholes-Merton (BSM) model and market data from S&P 500 (SPX) index, Arch (ARCH) Resources and Cassava (SAVA) companies. Hermite polynomials are an expansion method, within the family of semi-nonparametric approaches for the estimation of risk-neutral densities, introduced by Madan and Milne (1994). Through comparative analysis we were able to analyse the deviation of estimated risk-neutral densities from the theoretical ones.

Furthermore, in order to extract important information regarding market sentiment, we retrieved skewness and kurtosis for the estimated risk-neutral density functions obtained from the Black-Scholes-Merton simulated data and market data. With this information we concluded that as skewness increases, kurtosis decreases; and, since we obtained leptokurtic distributions we may expect higher risk.

We observed that for simulated data from the BSM model the obtained estimates, when a noise condition is introduced, only deviates from the theoretical densities for longer maturities. Also, when maturity increases, apparently the quality of the estimation decreases, as expected. In addition, when the number of strikes is small, the estimation process is more difficult. Higher open interest, associated with more relevant option contracts, is a possible criteria for strike selection.

Finally, Hermite polynomials seem to be effective in obtaining proper RND estimates. Investor seem to be more pessimist regarding the S&P 500 index, and more confident about SAVA and ARCH companies.

Portuguese Corporate Power Purchase Agreements Market: Demand Side Characterization

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The energy transition can be accelerated by liberalizing the renewable energy market to attract private investment and utilizing renewable technology at competitive prices. In addition, the energy crisis has made it more crucial than ever to expand the volume of power traded on the forward market to strengthen the wholesale electricity market's stability. Power Purchase Agreements (PPA) are a vital tool in this regard. First and foremost, they serve as a reliable source of long-term guaranteed income for developers, making the project bankable from the perspective of investors. Secondly, they serve as a hedging mechanism for consumers who may obtain renewable energy at competitive costs with lower volatility. The purpose of this article is to characterize the demand side of this market in Portugal, assessing the propensity of companies in contracting a PPA as well as evaluate the variables that are most important for corporate decision-makers when contracting a PPA. This is due to the recent growth in demand by businesses for this type of contract, the so-called Corporate Power Purchase Agreements (CPPA). A questionnaire was created and distributed to Portuguese enterprises who use electricity intensively for this reason. With the data obtained, it was possible to see that the inclination of Portuguese enterprises to contract a CPPA is lowered by numerous factors, highlighting company illiteracy about

these contracts and a lack of long-term energy planning. Most businesses consider contracting power from a retailer and investing in self-consumption when contracting electricity. However, using a likert scale to determine the variables that most influence the decision of company decision-makers in contracting a CPPA, it was feasible to conclude that the price of electricity and trust in the producer of renewable energy are the aspects most valued by decision-makers. The second plan includes variables relating to the sustainability of the electricity consumed by businesses. In summary, demand for CPPAs among Portuguese firms is low; yet, there is a definite demand for reduced electricity prices with less unpredictability. As a result, raising organizations' knowledge of this type of contract is a critical step toward increasing demand for CPPAs in Portugal.

Merger: SUMOL+COMPAL case study

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According to Gupta (2012), companies are faced an increasingly globalized and a competitive world, so the current situation requires more developed strategies to face these changes.

In this way, companies resort to mergers and acquisitions to achieve certain goals such as increasing turnover, market share and gaining synergies. However, for its primary objective to be achieved, the company resulting from the merger process must present efficiency increases in its economic and financial structure.

Raquib et al. (2003) refer that the merger involves a great effort between two companies in order that the resulting company gathers the set of visions, missions and objectives of both, with the final purpose of strengthening strategies and synergies, so that it prevails in the market.

It is in this context that SUMOL+COMPAL emerges. The company was created in 2009, being the result of the merger between two successful Portuguese companies in the soft drinks and non-alcoholic drinks sector. The merger process began in 2006, with the acquisition of 20% of Compal by the Sumolis Group and the remaining 80% in 2008. Thus, this study aims to evaluate the impact of this merger, in order to understand if it was beneficial for both companies.

In this sense, a research methodology based on the analysis of the Financial Statements (FSs) of the companies under analysis was selected. The FSs were consulted in the Sabi and Thomson Reuters Eikon databases.

Through the analysis of the indicators of profitability, liquidity, financial structure, and indebtedness, it is possible to conclude that the merger process was beneficial for both Sumol, S.A. and Compal, S.A. Thus, it is considered crucial to highlight the operating profitability ratios of sales and the effect of interest incurred.

As regard the operating profitability of sales, it can be seen that, after the merger, the profit margin had a positive development, although it was slow in the first few years. Between 2010 and 2012, SUMOL+COMPAL achieved quite positive results compared to those achieved before the merger, for both companies separately.

Regarding the effect of the interest incurred, it is noticeable that the values related to this indicator tend to change annually. The value of the indicator reached its minimum in 2008, the year in which the repercussion of the merger began to be felt. In 2009, despite the value of the ratio remained below 0, it increased radically. From 2010, the values began to be always positive, which suggests that the merger was beneficial for both companies, since interest began to have a lower weight in the financing of the company's results.

Having said that, the present work intends to answer four questions: "Is the profitability of the company, resulting from the merger process, higher than the profitability of Sumol, S.A. and Compal, S.A. separately?"; "Is the level of indebtedness of the company resulting from the merger process higher than the profitability of Sumol, S. A. and Compal, S.A.?"; "Were better liquidity ratios recorded in SUMOL+COMPAL, as a result of the merger process?"; and "What were the motivations of the managers of Sumol, S.A. and Compal, S.A. for realization of the SUMOL+COMPAL merger?".

Accounting History Laboratory: exploring a Portuguese farm records (from 18th to 19th centuries)

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Agricultural accounting currently has a great importance in the history of accounting, especially since agriculture was the main economic activity of Humanity until the 19th and 20th centuries. It is verified that in Portugal, until the mid-20th century, agricultural activities were the main contributor to the Gross Domestic Product, being the sector with the highest employability in the country, as well as the main social and economic driver in rural areas. Exploring the accounting of a farm located in Minho between the 18th and 19th centuries, this study aims to analyse the nature of the information available in historical documents, inserting it in the accounting practices used at the time in Portugal and in other regions of Europe.

Considering the scarcity of literature on these issues, this study is crucial to fill some gaps in the knowledge about the Portuguese accounting system, while also contributing to the ongoing international scientific debates. This research is oriented to clarify five main questions: How was accounting organised in farms in the 18th and 19th centuries? How many and what types of records were used in the accounting of the farm studied? How did accounting evolve during the 18th and 19th centuries? How and to whom were the accounts rendered? Which financial component was accounted for in the formal economy and in the informal economy?

The clarification of these questions requires the construction of a methodology based on quantitative methods and interpretative research. Thus, the empirical component is based on the analysis of several accounting records of a Portuguese farm. Therefore, historical handwritten sources between the 18th and 19th centuries are mainly explored, as well as the analysis of the historical context using secondary sources. According to Carmona et al. (2004), primary sources are crucial for the investigation of the history of accounting. In this case, these sources are the accounting books and other relevant documents produced in the context of the activities of the farm under study.

The current research shows that the data being collected are directly related to the transactions that the farm carried out, namely payments and receipts in cash and/or in kind, as well as the cash method. The collection and systematization of the data was elaborated through small books of payments of the farm keepers, books of receipts, inventories and receipts of payment. The diversity of documents and information available allows us to understand how farms in Portugal were organised in terms of accounting in the 18th and 19th centuries, constituting itself as a laboratory to observe various relevant aspects to the History of Accounting.

This study will allow us to understand different dimensions of the institutional, political, social and economic changes that occurred in Portugal and Europe in the 18th and 19th centuries. After the French invasions, the Liberal Revolution of 1820 promoted profound transformations in the institutional framework in which agrarian activities took place and in the dynamics of food production and supply. Among these changes were the consolidation of the Modern State and the expansion of market relations, which helped to promote the formalisation of the accounting of farms. Although it is considered that these changes influenced management and the economy, entities such as the large farms operated by members of the Portuguese elites were crucial to economic development.

Sustainable Development Goals (SDGs) in European countries: an analytical and econometric approach

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Sustainable development (SD) concept allows the needs of present generations to be met without compromising the needs of future generations [1]. Currently, society is based on a high consumption of

natural resources, which compromises the ability to generate new natural resources, since nature does not keep up with society's consumption levels. The achievement of SD implies the existence of environmental policies or incentives, changes in consumption habits and the improvement of the population's quality of life. To this end, there must be a joint effort of all countries so that this objective is achieved in an easier and more effective way.

United Nations States adopted the Sustainable Development Goals (SDGs), where the plan of action focuses on the commitment of all countries and organizations to achieve these goals, serving the world's poorest and most disadvantaged people by 2030 [2]. It is relevant to show the progress achieved as well as the disparities between countries in these sustainable paths.

For Europe, there are no studies linking economic growth with SD indicators. Given the multi-dimension of sustainable growth that is not just the environment, but also social and economic dimensions, it is important to include other variables.

The present study tries to explain the relationship between economic growth and the SDGs in 25 European countries. It begins with a descriptive analysis of the situation of the countries, by groups, identifying common patterns. Then, a composite indicator, for the year 2020, the SDG Compliance Index, is constructed, following the study of Dhaoui [3], using the Principal Component Analysis method. This composite indicator is shaped on six dimensions: Education, Health, Services, Employment, Equality and Environment. Finally, the indicator is linked with the economic growth of each country, to access the relationship between economic and sustainable growth, through an econometric analysis.

It can be concluded that there is a positive relationship between the indicator and GDP per capita. Moreover, results can show which countries have the best and worst performances in the sustainable path. Other conclusions can be taken concerning dimension on which each country have better or worst performance.

The measurement and monitoring of the SDGs through the use of a composite indicator, is of great importance insofar as it allows comparing the performance of each country and understanding on which dimensions a given country can bet more towards greater SD and achievement of the SDGs. The results obtained will be able to give a perspective of the situation of each country in the fulfillment of the SDGs and, possibly, find solutions in terms of policies or incentives to promote greater sustainability in the countries.

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Robust Optimization in Portfolio Selection

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Our work intends to contribute to understanding investment decisions in an environment of uncertainty. It presents a set of different optimization techniques and statistical analyses that may contribute to defining the most robust decision rules associated with portfolio selection. First, we study under which assumptions the mean-variance criterion is a reliable approximation to maximize expected utility. For the mean-variance criterion, the sensitivity of the problem to inputs is analyzed, concluding that the chosen portfolios reveal a greater sensitivity to the returns mean vector compared with the matrix of covariances. Robust optimization procedures and statistical analysis are implemented to overcome the sensitivity problem. Robust statistics refers to using estimators less sensitive to input changes; the M- and S-estimators are considered. Robust optimization consists of reformulating the initial problem based on the assumption that inputs are uncertain. Finally, the out-of-sample performance of portfolios constructed based on different criteria (1/N, mean-variance, minimum-variance, and robust optimization with ellipsoidal uncertainty set) is compared with a market portfolio.

The influence of virtuality on members' satisfaction with the team: The mediating role of subgroup perceptions and the moderating effect of affective trust

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The purpose of this study is to examine the impact of virtuality on team member satisfaction, either directly or indirectly through its impact on subgroups perception. Simultaneously, the nature of these relationships is elucidated by an examination of the moderating role of affective trust.

Virtuality is becoming more prevalent in organizations, presenting both benefits and challenges for team members that communicate through technology. The majority of studies on the effectiveness of teams with some level of virtuality have focused mostly on task outcomes, ignoring individuals' feelings regarding their work. As a result, the purpose of this study is to investigate the impact of virtuality on the affective component of team effectiveness. Specifically, we consider the role of virtuality on team member satisfaction, considering the mediating role of subgroups perception. Moreover, we also explore the buffering role of affective trust on the relationships considered.

To test the research hypotheses, a survey study was conducted among members of work teams in Portuguese organizations. The companies were initially contacted personally or electronically to explain the purpose and requirements of participation in the study.

The final sample consists of 825 members from 179 work teams (108 organizations). Respondents are on average 35 years old ($M = 34.90$, $DP = 11.02$), have worked in the organization for about 8 years ($M = 8.20$, $DP = 9.40$), the majority are female (58.3%), and have a higher education degree or above (65.6%). All variables in the study were examined using previously validated measures.

The hypotheses were tested through PLS-SEM (Partial Least Squares - Structural Equation Modeling) using SmartPLS 4.0 software. The measurement model analysis revealed adequate results regarding internal consistency, composite reliability, and average variance extracted, as well as in terms of discriminant validity.

The bootstrapping technique was used to test the significance of the structural model using 5000 iterations. The findings demonstrated that there was no statistically significant link between virtuality and satisfaction ($\beta = 0.042$, ns). The association between virtuality and subgroup perception was found to be positive and significant ($\beta = 0.154$, $p < 0.01$). Although virtuality did

not have a direct influence on team member satisfaction, the indirect effect via subgroup perceptions was significant ($\beta = -0.015$, $p < 0.01$). Finally, affective trust had a significant moderating influence in the association between subgroups perception and satisfaction ($\beta = 0.096$, $p < 0.01$). Indeed, trust, as expected, mitigates the negative impact of subgroup perception on team members' satisfaction.

The findings show that virtuality has a detrimental impact on team members' satisfaction by increasing their perception of the existence of subgroups. This negative effect can, however, be mitigated through the development of strong trust relationships. In terms of practical implications, these findings show that developing trusting relationships among team members is extremely important in virtual teams.

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Sustainability Key-Indicators for Higher Education Institutions in Portugal - Common Framework for Performance Assessment

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Higher Education Institutions (HEIs) play an important role in the education, research and policy formulation needed to achieve sustainable development goals. Different tools have been developed to assess the sustainability implementation at HEI, which demonstrates the importance of the topic.

The purpose of this study is to offer Portuguese HEIs a straightforward collection of important indicators that may be answered with a simple scale from 1 to 3 to make it easier to gauge the progress toward sustainability.

Additionally, it aims to determine the HEIs' stance on the opportunities and challenges of the sustainability assessment and report process.

For this study, 34 Portuguese public HEIs, including polytechnics and universities, were contacted, and two data collection techniques were used: document analysis and a questionnaire.

This study made it possible to present a common framework for evaluating the performance of HEIs, comprising 36 indicators, divided into 5 dimensions - environmental, economic, social, academic, and institutional.

The findings also allowed for the identification of the information dispersion as the HEIs' main point of frustration in the assessment and reporting process, highlighting the requirement for a system that compiles all the data.

The HEIs believe that a unified model of sustainability reporting would be beneficial, but with the option for each HEI to include more specific indicators to reflect the various organizational contexts, and there is a unanimous need to develop a practical guide on how to assess sustainability at HEIs in Portugal.

The majority of HEIs also believe that reporting and evaluating sustainability in HEIs should occur annually, and that having standards in place would be advantageous and may even assist to advance the issue.

This study fills a gap in the literature by proposing a common framework of key indicators that allows for the easy and comparable evaluation and reporting of sustainability implementation in Portuguese HEIs, serving as a guiding instrument for a first internal diagnosis and compiling relevant information for future government policies in this area.

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