

# **POLISS Summer School** Valencia, Spain 19 June - 30 June 2023 **WP2 D2.6**





















Bocconi







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# Fifth Training School POLISS 19 June – 30 June 2023 Valencia, Spain

POLISS had its final summer school in Valencia, Spain, between the 19<sup>th</sup> and the 30<sup>th</sup> of June 2023. It was an opportunity for the ESRs to do a final presentation to the cohort and get feedback on their work before the next stage in their careers. Also thinking ahead of this next stage, the summer school had a wide range of activities designed to help them prepare for the post PhD part, with a number of external invited guests that came to talk to them about the multiple facets of careers in academia, in the private sector and in policy. Finally, the summer school also offered a range of activities that encouraged the ESRs to learn more about the Valencian economy. In particular, there were two field trips to the port of Valencia and to research centres linked to the agrifood industry. These helped to demonstrate the close links between so called traditional economic activities and economic development, but also the fact that even these types of activities are increasingly reliant upon advanced technologies and scientific advances. These field trips also discussed the social and environmental impacts of activities that are deeply embedded in their territories.







#### **ESR Presentations**

The first day of the summer school took place at the Ciudad Politecnica de la Innovacion (Polytechnic City of Innovation), at the campus of the Universitat Politècnica de València. It started with presentations by the ESRs. For this final summer school, the ESRs had flexibility in terms of content and they could decide whether to present an overview of their thesis, a specific paper, or even a particular methodological issue that they have encountered and for which they would like to receive feedback.

Table 1 – Schedule for ESR presentations

	Monday – Sala Innova**		Tuesday – Sala Innova	Wednesday – Sala Innova
9:00 – 11:00	Charles Abbott: Europeanising the third paradigm: emerging challenges and dichotomies for smart specialisation  Alessio Giustolisi	9:00 - 11:00	Yifan Tian: Technological Exploration and Exploitation in Multi-Location Companies  Benjamin Cornejo Costas: Migrants, social capital and green breakthrough innovations	Innova  Dongmiao Zhang: An early look into Al complementarities in the labour market  Jay Prakash Nagar: Timing is key: navigating venture capital funding for deep tech startups
11:00 - 11:30	Coffee break	11:00 - 11:30	Coffee break	Coffee break
11:30 - 13:30	Eristian Wibisono: Economic Impact of Smart Specialisation Policies in Less Developed Regions of the European Union Ghinwa Moujaes Lunch	11:30 - 13:30	Eduardo Hernández Rodríguez: Functional upgrading in GVCs: The role of complementary interregional linkages in EU regions  Carolin Nast: Governmental contributions to innovation  Lunch	Martina Pardy: Brexit and Digital Technology Adoption of UK SMEs + final reflection
14:30 14:30 - 15:30	Stefan Apostol: The regional diffusion of web technologies in Europe: Is there a digital diffusion divide?	14:30 14:30 - 16:30	Dima Yankova	



The first day started with a presentation by Charles Abbott (see table 1 for the presentation schedule), from the University of Stavanger, with a presentation titled: Europeanising the third paradigm: emerging challenges and dichotomies for smart specialization. This was an overview of his work on smart specialization using an overarching perspective on the evolution of the European Union.

The second presentation was by Alessio Giustolisi, from the University of Vienna, who presented the three papers that have resulted from his PhD thesis. The first paper, already published in European Planning Studies, is called: *Smart specialisation strategies: towards an outward-looking approach*. His second paper, still under writing at the time of this presentation, draws on his empirical work and reflecting on the importance and value of extra regional relationships for knowledge exchange. Finally he presented the outlie for his third and final paper, on policy ideas that derive from his work.

The third presentation of the day was by Eristian Wibisono, from the University of Pecs, who presented a summary of the 9 papers that he has published as part of his PhD work. This was followed by a presentation of the outline for this final paper, including his research design and aims, currently titled: Economic Impact of Smart Specialisation Policies in Less Developed Regions of the European Union.

The fourth presentation was by Ghinwa Moujaes, PhD student at INGENIO, who introduced her first two papers briefly and then discussed her third paper, currently still at research stage, on the impact of the gender of the inventor on green patents.

The final presentation of the day was by Stefan Apostol, PhD student at the University of Pecs, who

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presented his paper entitled: The regional diffusion of web technologies in Europe: Is there a digital diffusion divide? This will be Stefan's final PhD paper and he was, at the time of his presentation, doing the empirical research.

### Activities for the day were disseminated on X (formally Twitter):

https://twitter.com/PedroEconGeog/status/1670697047995940865?s=20





At the end of the first day we had a very interesting presentation by Professor Julia Melkers, from Arizona State University, on the future of academic competitiveness. Prof Melkers, an expert on areas such as careers, research capacity and outcomes of academic scientific and other knowledge-based professions, discussed science policy in the USA and its attempts to create centres of scientific excellence away from the top 10 research universities in this country. This presentation highlighted the importance of multi-year, large scale investments to create research capacity and encourage a wider dispersion of science funds.



### **Speaker**



Julia Melkers is the ASU Foundation Professor of Public Policy and Management in the School of Public Affairs and Director of the Center for Organization Research and Design (CORD) at Arizona State University. Her research focuses on the careers, research capacity, and outcomes of academic scientific and other knowledge-based professions. She has extensive experience in advising and evaluating large interdisciplinary scientific teams, and her work has been funded by organizations such as the U.S. NSF and NIH. Dr. Melkers is also the U.S. co-editor of the Journal of Research Evaluation (Oxford University Publishers). Prior to joining ASU, she was Professor of Public Policy and Director of the Research on Careers in Science lab, at Georgia Institute of Technology.

The second day and the morning of the third day of the summer school were dedicated to eight more ESR presentations. Yifan Tian, from Bocconi University, presented her most recent research that examines how technological exploration and exploitation happen in Multi-Location Companies. She draws on a wide range of literature on foreign direct investment, organizational dynamics and others, combined with econometric analysis, to explore this fundamental issue.

Next Benjamin Cornejo Costas from Utrecht University built on his previous work on the impact of migration on invention in the USA in the early 20<sup>th</sup> century to explore the links between migrants, social capital and green breakthrough innovations in the Netherlands.

Eduardo Hernandez Rodriguez, also from Utrecht University followed with a presentation entitled: Functional upgrading in GVCs: The role of complementary interregional linkages in EU regions. Building on an extensive review of the literature on functional upgrading and econometric analysis, Eduardo was able to analyse the important of interregional connections for the capacity of firms to capture a greater share value in value chains.

The final presentation of the second day was by Dima Yankova, from INGENIO. She presented a summary of the first two papers that emerged out of her PhD research and an outline of the research strategy for her third article, which will use text mining techniques and network analysis to study the evolution of research networks.





### The presentations that took place this day were also disseminated on X (formally Twitter):

### https://twitter.com/PedroEconGeog/status/1671062049034584065?s=20

The third day of the summer school started with a presentation by Dongmiao Zhang, from the University of Utrecht, entitled: *An early look into AI complementarities in the labour market*. Dongmiao's research measures how skills complementarities in fields related to AI are distributed across US regions and what this may mean for future developments in this area.

She was followed by Jay Prakash Nagar, from Bocconi University, who presented his paper: *Timing is key:* navigating venture capital funding for deep tech startups. Jay used a database of deep tech startups to measure the impact of venture capital on their growth and ability to survive, making an important contribution to our understand of this subset of startup activities.

The final ESR presentation on the third day was by Martina Pardy, from the London School of Economics, who presented a paper entitled: *Brexit and Digital Technology Adoption of UK SMEs*. Martina examined the impact of the Brexit shock on the adoption of digital technologies by SMEs and found important territorial differences.

### Proceedings from this day were also disseminated on X (formally Twitter):

### https://twitter.com/PedroEconGeog/status/1671422095564185600?s=20

The final ESR presentation took place on Monday the 26<sup>th</sup> and it was given by Pedro Llanos Paredes, from the London School of Economics. Pedro used a database of state aid to firms in Germany to measure the impact of this type of support on their growth and innovation activities. The final ESR presentation by Carolin Nast, from the University of Stavanger, had to be cancelled due to illness.

### Careers in academia, policy and the private sector

The ESR presentations were followed by various sessions over one and a half days on career advice. The first panel, on the afternoon of the third day, was dedicated to careers in academia and it included Ron Boschma and Andrea Morrison, from Utrecht University and both senior academics in POLISS. This panel also included Mabel Sánchez Barrioluengo. All three panellists did a brief presentation on what they consider to be the most important skills and activities to have a successful career in this area, which was followed by a group discussion with the ESRs.

### **Speaker**



Mabel Sánchez Barrioluengo is a Senior Lecturer in Science Policy and Innovation at the Alliance Manchester Business School, University of Manchester since December 2018. She is the Deputy Director of the Manchester Institute of Innovation Research. Previously, she worked as a Research Fellow at the Joint Research Centre of the European Commission as part of the Unit of Human Capital and Employment. She has a degree in Statistics and holds a PhD from the Technical University of Valencia and INGENIO (CSIC-UPV) with a particular focus on higher education studies. Her main research interests are in economics of education (specifically higher education), employment, and human capital.





Day 4 of the Summer School started with a panel on careers in policy or on organisations that work closely with policy makers. This panel had three speakers: Maria Varinia, Head of Unit for Governance and Strategic Planning at the OECD; Cristian Matti, Policy Analyst at the Joint Research Centre; and Gerwin Evers, Senior Consultant at Technopolis. The three panellists offered insightful comments about their own professional experiences, and how the ESRs could approach entering a career in their own organisations. The panellists also reflected on which skills and competencies learned during a PhD are most useful in their own contexts, but also on what other areas would need to be developed in the future. After the panel, there was time for Q&A with plenty of discussion.

### **Speakers**



Maria Varinia is the Head of Unit for Governance and Strategic Planning at the OECD. She specialises in multi-level governance of regional development. She contributes to policy dialogue on national, regional and local governance, providing recommendations for building integrated governance practices, implementing decentralisation reform, establishing territorial governance structures, improving public service delivery, and enhancing citizen well-being. She has worked with national and subnational governments in a variety of countries, including Argentina, Chile, Estonia, Finland, Italy, Panama, Poland, Sweden, Ukraine, the United Kingdom, and Uruguay. Varinia holds a Master degree in Public Affairs from Sciences-Po Paris, with a concentration in welfare systems complemented by extensive work in regional economic development. She received her undergraduate degree in international economics from Georgetown University, School of Foreign Service, in Washington, DC.



Cristian Matti is currently working at the Competence Centre on Foresight at the Joint Research Centre of the European Commission. He has a background in economics (Argentina) and in Science and Technology for Sustainability at SPRU, University of Sussex (UK). He did his PhD at the Institute of Innovation and Knowledge Management INGENIO (CSIC-UPV) under an EU-sponsored project. He has also done research stays at the Twente Centre for Studies in Technology and Sustainable Development — University of Twente Enschede (Netherlands) and the Manchester Institute of Innovation Research (MIOIR) — University of Manchester (UK) and has worked as a researcher at the Copernicus Institute for Sustainable Development — Utrecht University.



Gerwin Evers is as senior consultant of the Amsterdam office of TechnopolisGroup specialised in evaluations and studies at the intersection of science andinnovation policy. Over the past few years Gerwin has worked in various roles on a broad range of projects at both the national and international level. Prior to joining Technopolis Group, Gerwin worked as a Marie Curie PhD Fellow at Aalborg University and researched how universities, through their teaching activities and research collaborations can foster regional industrial development. Before his PhD Gerwin worked as a junior researcher at the Copernicus Institute of Utrecht University on the innovation system around rare diseases. Gerwin holds both a bachelor in Science and Innovation Management and a master in Innovation Sciences from Utrecht University.





This session was followed by a presentation from Yohan Iddawela, founder of various start-ups, including Economics 505, and currently working for the World Bank on a project that uses geospatial data to help make decisions for urban planners and other policymakers. Yohan presented this project as an example of an opportunity that emerged out of his work as an entrepreneur. This was followed by a panel session with Yohan and Ross Abi Rafeh, an economist at Deliveroo. Both delivered interesting and insightful presentations about their experience of working in the private sector after their PhDs. They reflected on which skills learned in academic were useful for their posterior careers and other areas where they needed further training. The presentations were followed by a lively Q&A with the ESRs.





### **Speakers**



Yohan is an economist and geospatial data scientist with over ten years of expertise in international development, geographical information systems (GIS), and economic policy. He has had experience in founding and running two data science startups, working in economic policy for the World Bank, and the Australian Department of the Prime Minister and Cabinet, as well as in academia, where he is currently a Visiting Fellow at the London School of Economics.

He has international work experience in Australia, the United Kingdom, the United States, Afghanistan, Puerto Rico, Uganda and Vietnam. His company, 505 Economics, has worked with large multinational clients in sectors ranging from management consulting, to governments, and international financial institutions. Yohan holds a PhD in Economic Geography from the London School of Economics, and has published peer reviewed academic articles using remote sensing data to measure and evaluate international development.



Ross Abi Rafeh is a senior economist at Deliveroo. He completed his PhD in Economics the Toulouse School of Economics and is also a Research Associate at the Institute for Fiscal Studies. His research interests lie in the area of Industrial Organization and Applied Econometrics, with a focus on the regulation of digital marketplaces, advertising and information in the healthcare sector.





To finish the one and a half days dedicated to careers, Richard Woolley, senior research at INGENIO and an expert on academic careers, offered an overarching and stimulating presentation on the different facets and dimensions of careers at University. Richard presented and discussed the academic research on this area and offered practical advice on how to take this knowledge into consideration. This session was once again followed by a Q&A and proved to be an excellent way to finish the debate on these matters.

#### Transferable skills

The second week of the Summer school started with a day dedicated to general skills necessary for the post PhD career stage. In the morning we had Nicolas Robinson Garcia, a researcher at the University of Granada with a significant international research experience and an expert on bibliometrics: <a href="https://elrobin.github.io/">https://elrobin.github.io/</a>. Nicolas did a three hour session on CV and social media profiles. This session covered both practical aspects of how to design a CV or how to build social media presence, and more substantial and fundamental matters such as the meaning(s) of open access publications and the use of repositories.

The contents of his talk are publicly available at his website:

https://sites.google.com/go.ugr.es/nrobinsongarcia-docencia/cv-and-social-media-profiles

### CV and social media profiles

### **Datos básicos**

Programme: POLISS Summer School in Valencia

Lecturer: Nicolás Robinson-García

Parte I: Managing your CV

Parte II: Digital identity and Open Access





### **Agenda**

Part I - Managing your CV

Introduction

Visibility vs. authorship

Researcher Identifiers

Part II - Digital Identity and Open Access

Making your publications open

The Academic website

Social media and outreach





In the afternoon, the ESR Ghinwa Moujaes, from INGENIO, did a session on public speaking. Building on her previous training in this area, and her own experience, Ghinwa prepared an engaging and stimulating talk to prepare her colleagues for future presentations, job talks, teaching or any other activities that involve presenting themselves in public.

The training on transferable skills was complemented with two sessions on Thursday the 29<sup>th</sup> in the afternoon. The first session was led by Davide Consoli, senior researcher at INGENIO, and Sándor Juhász, Marie Curie postdoctoral fellow at the Complexity Science Hub Vienna. This session was dedicated to advice on writing research grants, with a particular focus on grants from the European Research Council and Marie Curie Individual Fellowships. It started with a presentation by both researchers based on their previous experiences with these types of application, followed by Q&A with the ESRs.

The second session was led by John Edwards, the Secretary-General of EURASHE, the European association of applied higher education institutions. John has a PhD from Newcastle University and previously worked at a researcher at the Joint Research Centre in Seville. He discussed the challenges and opportunities of navigating job opportunities in different areas of activity and provided practical advice for people who aim to have hybrid careers (e.g. academia and policy).













### Methodology training

The 20<sup>th</sup> of June was dedicated to a full day of methodology training, with two parallel sessions on advanced qualitative methodologies and machine learning for the social sciences. The session on qualitative methods was led by Pedro Marques, researcher at INGENIO, and included an introduction to the motivations and uses of qualitative research followed by epistemological and ontological debates about its uses. In this session, several local researchers and PhD students from INGENIO also participated, and contributed with their reflections. The full day of discussion allowed each of the ESRs and researchers to share their own experiences and advice on how to best design and implement a qualitative research project.

The session on machine learning was led by Joan Crespo, a professor at the University of Valencia. The programme for these sessions was the following:

### S1: Data science and economics: some concepts

The aim is to present and clarify concepts from data science. The concepts were presented in an intuitive way rather than in a technical one (following surveys like Varian 2014, Einav and Levin 2013, Athey 2019).

- What is big data?
- What is Machine learning?
- Review of some Machine learning techniques
  - Regularized regression (LASSO)
  - Random forest
  - o Regression trees

### S2: Data science and economics: some applications

In this session 3-4 published papers of economics/geography that have used big data were reviewed, to give some inspiration about what can be done with these technics with concrete examples. For instance: Guerzoni et al 2020, Arribas-bell et al 2021.

#### S3 and S4: Hands on in machine learning: my first steps

Use a data set in R to start using machine learning tools. The idea would be to give some instructions for students to do. The guide for this exercise was the following document (in Spanish): https://www.cienciadedatos.net/documentos/41\_machine\_learning\_con\_r\_y\_caret#Dataset\_Titanic

#### Research seminar

On Thursday the 29<sup>th</sup> of June in the morning, there was research seminar with two prominent speakers. First we had Rosina Moreno, a professor at the University of Barcelona and a leading exponent of Economic Geography in Europe. Rosina presented her latest paper, published in *Economic Geography* in 2023, entitled: *The role of relatedness and unrelatedness for the geography of technological breakthroughs in Europe*. This topic is highly relevant to the research of several ESRs and led to an engaging debate on theoretical and methodological issues.

It was followed with a remote presentation by Dominique Foray, one of the creators of the concept of smart specialisation and a leading exponent of innovation studies in Europe. Dominique presented his latest research on innovation capabilities in Europe, which also led to lively debate with the ESRs.





### **Field trips**

Aside from the various activities that happened indoors, there were two field trips to the port of Valencia and to research centres in agrifood, on the 23<sup>rd</sup> and the 30<sup>th</sup> of June, respectively. The first visit started with a presentation by the port authority on the size and activities of the port of Valencia, the biggest in Spain for container traffic and fourth largest in Europe. There was also an introduction to the plan to build a new terminal, fully automated and managed with Al tools, that would lead to an almost doubling of capacity. This is seen by the port authorities as a strategic investment for the city and the country, due to its contribution to the local, regional and national economies. In the afternoon, we met with a representative from a local association that has been trying to prevent this expansion on environmental, social and economic grounds. This association argues that the environmental damage would be too great to justify this expansion, and also argues that the economic benefits have been greatly exaggerated. They also justify their opposition with the social impact of the port expansion, in terms of noise and pollution to the populations that love close the port and that are primarily poorer and socially excluded.

The second field trip started with a visit to an innovation centre owned by Mercadona, Spain's largest retailer. Here it was explained how Mercadona has an approach to product development that is based on identifying key clients, that are considered to be experts on specific products from a user perspective and engaging them in the development of branded products. This provided a fresh take on how products are developed, because it demonstrated the value accrued to qualitative, deep engagement with key costumers, alongside the market and price analysis that the retailer also conducts. This visit was followed by a tour of AINIA, a technological centre dedicated to agrifood that employs around 200 researchers involved in applied innovation and technological development. This visit allowed the ESRs to learn about the science and technology behind agrifood activities, but also the opportunities for diversification in research, since AINIA now works for other industries such as pharmaceuticals and the chemical industry.

Overall these fieldtrips represented a way to understand how innovation and regional economic development is often anchored in so called traditional industries, with a lot of potential for technological progress. They also demonstrate how these activities that are deeply embedded in their territories have important social, economic and environmental dimensions that cannot be overlooked by policymakers.



### Gala dinners and social activities

There were also ample opportunities for socialising and getting to know the local culture. The summer school included two gala dinners, attended by several of the invited guests. On Friday the 23<sup>rd</sup> of June, several of the ESRs organised a party at the local beach to celebrate the well-known night of San Juan, with bonfires and midnight sea swimming. Plus on Sunday the 25<sup>th</sup>, the ESRs organised a boa trip in the Mediterranean, followed by dinner in the marina.









### **ANNEX 1:**

### PROGAMME TRAINING SCHOOL VALENCIA





## POLISS PhD Summer School Valencia, Spain 19 June – 30 June 2023

First week: 19<sup>th</sup> – 23<sup>rd</sup> June

	Monday – Sala Innova**		Tuesday – Sala Innova	Wednesday – Sala Innova		Thursday – Salon de actos, cubo rojo	Friday
9:00 – 11:00	Charles Abbott Alessio Giustolisi	9:00 - 11:00	Yifan Tian  Benjamin Cornejo Costas	Dongmiao Zhang Jay Prakash Nagar	9:00 – 10:30	Policy Panel  Maria Varinia, Head of Unit, Governance and Strategic Planning, OECD  Cristian Matti, Policy Analyst, Joint Research Centre  Gerwin Evers, Senior Consultant, Technopolis	
11:00 – 11:30	Coffee break	11:00 - 11:30	Coffee break	Coffee break	10:30 - 11:00	Coffee break	Visit to the Port of Valencia
11:30 – 13:30	Eristian Wibisono Ghinwa Moujaes	11:30 - 13:30	Eduardo Hernández Rodríguez Carolin Nast	Martina Pardy + final reflection	11:30 - 13:00	Yohan Iddawela, Economics 505  Ross Abi Rafeh, Deliveroo	11:30 – 13:00 Talk on port expansion
13:30 – 14:30	Lunch	13:30 - 14:30	Lunch	Lunch	13:00 - 14:00	Lunch	13:30 to 15:00 Lunch
14:30 – 15:30	Stefan Apostol	14:30 - 16:30	Dima Yankova	Ron Boschma  Mabel Sánchez Barrioluengo  Andrea Morrison	14:00 - 15:00	<b>Yohan Iddawela,</b> World Bank	
15:30 – 16:00	Coffee break		1	7aroa momoon	15:00 - 16:30	Richard Woolley – Research skills	



	Julia Melkers		
16:00 – 17:30	"Theorizing Academic Research Competitiveness"	16:30  - Brief presentation about field trips 17:00	

Wednesday 20:00 Gala dinner



<sup>\*</sup> Students with an interest in policy or private careers can present their ideas on how to purse this to the whole group and then discuss

<sup>\*\*</sup> In the first week all activities will take place at the Ciudad Politécnica de Innovación, located here: https://goo.gl/maps/vDHXNgmzPXCrm93V7?coh=178571&entry=tt



Second week: 26<sup>th</sup> - 30<sup>th</sup> June

	Monday – CCC Octubre*	Tuesday – CCC Octo		Wednesday – CCC Octubre	Thursday – Casa de la Ciencia, Valencia** (TBC)	Friday
9:30 - 11:00	Nicolas Garcia Robinson - CV and social media profiles	Joan Crespo – Machine learning and social science research	Qualitative methods	Group discussion moderated by Dima and Ghinwa		9:00 – 11:00 Visit to centro de
11:00 – 11:30	Coffee break	Coffee break		Coffee break		CoInnovacion de
11:30 – 13:00	Nicolas Garcia Robinson - CV and social media profiles	Joan Crespo - Machine learning and social science research	Qualitative methods	Group discussion moderated by Dima and Ghinwa	Moderator: Pedro Marques  11:00 – 12:00 Rosina Moreno  12:00 – 13:00 Dominique Foray	Mercadona  11:30 - 13:00 -  Visit to AINIA  13:30 - 15:00  Lunch at El Famos
13:00- 14:00	Lunch	Lunch		Lunch	Lunch	15:00 to 17:00
14:00 - 15:30	Ghinwa Moujaes – Public speaking	Joan Crespo - Machine learning and social science research	Qualitative methods		Marie Curie/ERC bids – Sandor, Consoli	Discussion at Agromoseo about cooperativism, and alternative
15:30 – 16:00	Coffee break	Coffee break		Free afternoon	Coffee break	agrofood
16:00 – 17:30	Pedro LLanos Paredes	Joan Crespo - Machine learning and social science research	Qualitative methods		John Edwards – Hybrid careers	approaches





\* In the second week, the first three days will take place at the Centro de Cultura Contemporánea "Octubre", located here: <a href="https://goo.gl/maps/L5b8beUUr95A79XT6?coh=178571&entry=tt">https://goo.gl/maps/L5b8beUUr95A79XT6?coh=178571&entry=tt</a>

\*\* In the second week, events on Thursday will take place at Casa de la Ciencia, located here: https://goo.gl/maps/E43j3xvtAVuwe6bg8?coh=178571&entry=tt

