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## Editorial

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**Biographical notes:** Lucio Morettini is a researcher at the National Research Council of Italy, Research Institute on Sustainable Economic Growth (IRCrES – CNR). His research focuses on higher education policy, research evaluation and impact assessment, high skilled workers' career dynamics, analysis of new emerging actors on higher education scenario, cooperation between research institutions and companies in the production of new knowledge and analysis of the innovation and growth strategies of small and medium-sized enterprises. He published and served as referee in several international journals and has participated in several European and Italian national projects.

Antonio Zinilli is a researcher at the National Research Council of Italy (CNR), Research Institute on Sustainable Economic Growth. He is coordinator of IRCrES School (Rome unit) in 'Data science: tools and methods for analysing complex Science, Technology and Innovation (STI) systems'. His research, based on an interdisciplinary approach, focuses on R&D funding, dynamic networks, dynamic processes on complex networks. He has a particular interest in the analysis and the modeling of knowledge spreading processes as well as the dynamics about R&D funding. He published and served as referee in several international journals and has participated in several European and Italian national projects.

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This special issue on 'Spatial analysis and interaction in economics and econometrics: data and modelling for sustainable spatial systems' arises from the works presented and discussed during the 2019 edition of the International Workshop on Computational Economics and Econometrics. The following papers dealt with the issue of the localisation of social agents and their interaction, developing also new analysis techniques useful for managing the multifaceted nature of space-time data, reducing data complexity to manageable information, generalising causal inference when spatial interactions are pervasive, creating tools for the creation of information-driven policies.

In 'Causal statistics of structural dependence space-based trend simulations for the coalition of rice exporters: the cases of India, Thailand, and Vietnam', Saosaovaphak, Chaiboonsri and Wannapan present an econometric solution for a cooperative game based on the analysis of data from the three world major rice exporters: India, Thailand, and Vietnam. They find a convenience in a formal recognition of the organisation of rice exporting countries on the base of three-branch analysis. Using a 'Bayesian Copula', they find that the three countries have deep structural dependences in the rice market. In the second branch they show that the trends of the variables are predicted by the Bayesian

structural time-series model. Finally, using the ‘Shapley value’, they prove that a cooperative behaviour doubles the profits from rice export.

In ‘Perspective of an exchange rate policy for global financial systems: evidence between China and ASEAN countries’, Chaiboonsri, Wannapan and Pantamit present a combination of analytical tools for international exchange rate analysis. The authors propose the combination of complex econometric and statistical models to analyse the link among the exchange rates of the main Asian countries and their macroeconomic effects. Copula models in econometric estimations are supremely helpful for deeply clarifying rare situations in financial economics. The authors emphasise the role of Copula Models to draw a clear causal path in rare situations in financial economics.

In ‘Transnational public research funding in Europe: exploring proximity dimensions in the ERA-NET programs’, Zinilli, Spinello and Reale test whether different levels of proximity are likely to influence the emergence of similar patterns across countries in terms of participating in transnational research programmes. They show that heterogeneity of socio-economic research objectives and closeness in domestic R&D funding, as well as scientific performance of a country, have an influence on the commitment of financial resources by European countries in joint research programs, such as ERA-NET programs.

In ‘A dose response evaluation of regional incentives to R&D’, Spallone and Cerulli investigate causal effects between public economic aids on R&D and economics outcome in Italian regions focusing on three measures of outcome: private investment in R&D, employees in R&D and patent submissions. The analysis is conducted at regional level, considering the amount of incentives of each region and presenting separate results for north and south Italy, in order to put in evidence difference of dynamics and efficiency between regions. The results are interesting from a policy perspective and could help to start a discussion about how differentiate R&D incentives among regions to make them more effective.

In ‘Simulating the effect of El Niño Southern Oscillation on the worldwide wheat prices’, Di Giuseppe, Giulioni and Pasqui use computer simulations to analyse the impact that the large scale atmospheric-oceanic phenomenon known as El Niño Southern Oscillation have on wheat production and its prices. Using an ANOVA regression, they estimate effects of the El Niño phases on the wheat production in each of 12 internationally relevant production areas previously identified and all data obtained are used to estimate variation on wheat prices. Results show how non-neutral phases imply an increase of average and dispersion of prices, with a more robust effect in the phase of temperature increase (El Nino) than the decrease in water temperature (La Nina).

In ‘Does spatial location affect business liquidations?’ Makropoulos, Weir and Zhang provide evidence for the potential existence of spatial effects in business liquidations. They shed some light on a very relevant issue and created some new questions important for social scientists. The results show the existence of spatial effects in liquidated businesses in a sample of European countries. These results confirm the existence of proximity effects in corporate liquidations, which implies that the spatial location should be considered for the purposes of modelling and policymaking in this specific economic sector. Until now, the literature did not pay too much attention to the spatial variable when a company is insolvent.

In ‘The effects of education and experience on youth employee wages: the case of Turkey’, Akay and Komuryakan contribute to a better understanding of young

employees' wage structure with robust-to-outliers econometric analysis and aim to start to develop techniques to reduce the disadvantages for young Turkish individuals in the labour market. Using the 2018 Household Budget Survey data and estimating an extended Mincer wage equation, authors analyse young Turkish employees wage structure. The main findings show that postgraduate and bachelor's degrees employee presents wide wage gaps between the degrees while young female employees earn less than male employees because of occupational segregation and gender norms.

Finally, in 'Exploring Brexit implications: the impact of longer journey times' Fingleton estimates the elasticity of trade flows with respect to journey time by goods vehicles. He uses a dynamic spatial panel data as statistical model to understand the employment responsiveness to increased journey times. The results show that a job reduction can be expected in the UK and in European area, with different outcomes by region. This paper is interesting from a policy perspective and can help to understand the Brexit effects in both the UK and EU regions. In particular, policy maker may provide additional support to the regions identified as most at risk for the job market.