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This special issue entitled “Applications and Methods for Spatial Economic Data” has the objective to show novel approaches and techniques for spatial or georeferenced data. Spatial data add important locational information offering the opportunity to estimate social interactions, spillover effects, spatial dependence and spatial heterogeneity in regression models. The main area that allows these estimations is the Spatial Econometrics, a branch of Econometrics, that gained relevance in recent years with the increasing availability of georeferenced databases at different levels, from individuals’ information to regional and macro-level. Before describing the contributions of this issue, I need to mention one of main Spanish scholars in Spatial Econometrics, Prof. Jesús Mur, that passed away on September 2020. His research, published in the world leading journals, was dedicated to Spatial Econometrics and Spatial Statistics, as is detailed in the memorial written by López Hernández (2021). Jesús was founding member of the Spatial Econometrics Association, the leading world association of this area, and the main responsible of Paelinck’s Seminar in Spain. Personally, Jesús was a very kind person, and an example of the right way to carry on an academic life: enthusiasm for science and collaborations, jointly with the modesty to listen to others and learn from each other. I would express my gratitude for his mentoring, and the friendship, that I will never forget. Jesús will be profoundly missed by us, by many colleagues and his friends from him all over the world.

This special issue contains eight papers with different techniques and applications on a wide range of phenomena. In the first paper, authored by A. Izaguirre (Universidad de San Andrés), the main goal is to propose estimators for the Spatial Lag Model (SLM) under missing data context. The paper shows three alternatives estimators for the SLM based on Two Stage Least Squares estimation methodology. The first estimator is an alternative version of the IBG2SLS estimator presented in Wang and Lee (2013), the second one is based on an approximation to the optimal instruments matrix and the third one is an alternative \sqrt{n} equivalent to the first one. Monte Carlo simulations show a good performance for all estimators under finite samples.

The second paper is co-authored by M. Camacho (University of Murcia), S. Ramallo (University of Murcia) and M. Ruiz Marín (Technical University of Cartagena). They evaluate the drivers of office rental prices in the municipality of Madrid with a sample of 4,721 offices in March,

2020. Using a decision tree approach, a technique which allows capturing the strong nonlinear component in the relation between price and its drivers, they find out that the willingness to pay high rent in the center of Madrid is a feature of particular relevance to medium-sized offices. They also find some office clusters located far from the city center with high rent for both large and small offices.

In the third place, we publish posthumously a paper written by J. Mur (University of Zaragoza). The paper presents a simple test of spatial autocorrelation based on the skedastic structure of the spatial series. The test is very simple to calculate in small samples, and its distribution function is known for all samples. This new test—a Goldfeld and Quandt test applied for spatial correlation—has higher power than any other existing test in the literature.

The fourth paper has been written by R. B. A. Campos and C. Azzoni (University of São Paulo). This paper presents a new empirical approach for identifying sub-centers within urban areas and applies it to the São Paulo metropolitan area (SPMA). Using geographically weighted regressions to overcome the limitations presented by previous research, the authors find three sub-centers in 2002 and only two in 2014, suggesting that SPMA is polycentric but presents only one business core that concentrates more than 90% of all employees working in sub-centers. This new method is more conservative than the well-known McMillen and Smith (2003) method in identifying areas as sub-centers and presents lower standard errors.

In the fifth place, F. A. López Hernández (Universidad Politécnica de Cartagena) and R. Mínguez Salido (Universidad Castilla La Mancha) present a Lagrange Multipliers test to identify spatial instability in the constant coefficient of regression models including substantive spatial dependence. Its main advantage is that it identifies areas with differential behavior without the need to provide information about their location, shape, or size. The paper reconsiders the results obtained by Mur et al. (2008) about instability in the distribution of per capita income in European regions.

In another interesting paper, J. Palomino and T. Sánchez (Pontifical Catholic University of Perú) examine the spatial heterogeneity of the factors that influence monetary poverty in Perú. They employ a Geographically Weighted Regression (GWR) approach to control the non-stationarity of the hidden data and to provide estimates at the district level. Using the Poverty Map and two National Population and Housing Census, they find that female headship, secondary education, electricity, and sanitation services are directly associated with poverty reduction at the local level. The authors also stress that the highest mean negative effect on poverty is generated by Secondary Education in the GWR estimates, while malnutrition represents the highest mean positive effect on poverty for the level and intercensal models.

In the seventh paper, C. Mendez (Nagoya University) and E. Gonzales (United Nations Agency for Disaster Risk Reduction) study the spatial distribution of human capital constraints across 339 municipalities in Bolivia. In particular, five human capital constraints are evaluated: chronic malnutrition in children, non-Spanish speaking population, secondary dropout rate of males, secondary dropout rates of females, and inequality in years of education. In this work, municipalities are endogenously classified according to their similarity in human capital constraints and geographical location. In this spatial dependence analysis, significant hot spots (high-value

clusters) and cold spots (low-value clusters) are located. Furthermore, a regionalization analysis of the constraints indicates that Bolivia can be regionalized into seven or eight geographical regions. The paper concludes highlighting the complementariness of these two analyses.

In the last paper, C. Chasco, M. Lacalle-Calderón and J. Alfonso-Gil (Universidad Autónoma de Madrid) study the existence of spatial diffusion of civil liberty among neighboring countries. As part of their methodological strategy, the first step is to find that this phenomenon is spatially clustered and that a convergence process is at work among the world countries from 1985 to 2010, with a structural change by the end of the Twentieth century mainly due to the appearance of the Internet. The second stage is to state a spatial autoregressive panel data model for a sample of 130 countries, for 1985–2000, and 172 countries, for 2000–2010. They find evidence of spatial diffusion of civil liberty, although it is not constant along the time span, being the spreading rate higher in the first sub-period. Moreover, religious culture, urban agglomeration, and GDP explain the levels of civil liberties in the world.

For further information, please visit <http://revistas.pucp.edu.pe/index.php/economia>.

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