

ABSTRACTS

13th WORLD CONGRESS OF THE RSAI



SMART REGIONS
– Opportunities for
sustainable development
in the digital era





Welcome to the 13th RSAI Congress 25-28 May 2021

RSAI wish you a pleasant and inspiring participation!

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| <u>353</u> | <u>174</u> | <u>413</u> | <u>206</u> | <u>472</u> | <u>236</u> | <u>533</u> | <u>263</u> | | |
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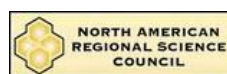
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Abstracts

Ordered by ID number

2

Impacts of the built environment and travel behaviour on attitudes: theories underpinning the reverse causality hypothesis

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Abstract

The importance of attitudes in the relationship between travel behaviour (TB) and the built environment (BE) has been the subject of debate in the literature for about two decades. In line with the Theory of Planned Behaviour, attitudes – which affect behaviour – are generally assumed to be constant. However, it is plausible that attitudes can change, both directly, and indirectly, through the impact of the built environment on travel behaviour, a process which is referred to as reverse causality (RC). Based on literature from social psychology, this paper provides a conceptual model for the explanation of attitude changes. It also reviews the literature in the area of BE and TB concluding that two explanations dominate: a change in attitudes due to new experiences which can be underpinned by learning theories and a change in attitudes due to mismatches between attitudes and behaviour which can be explained by cognitive dissonance theories. The literature also suggests a few additional explanations, while we also suggest explanations not provided in travel behaviour literature. Finally, we present an agenda for future research.

3

Regional inequalities and decentralization in the Central and Eastern European countries

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Abstract

The purpose of the study is to determine the relationship between decentralization and regional inequalities in the Central and Eastern European countries. Results of the research presented in many papers, mainly done since the beginning of the 21st century, do not lead to clear conclusions. Depending on the approaches used by researchers, the number of countries, the level of their socio-economic development, we can observe that decentralization leads to an increase in regional inequalities, as well as to their reduction in some situations. Studies also emphasized that this relationship may take the form of an inverted U. In the case of the Central and Eastern European countries, results of previous research are usually very general, ignoring the diversity of these countries and treating them as one homogenous group. However, the political and socio-economic transformations in these countries followed different models. As a consequence of this fact, decentralization reforms were different among CEE countries, economic growth was different, and it resulted in various size of regional inequalities. In this research, we try to verify the hypothesis that the relationship between decentralization and inequality will be best explained by the Kuznets curve in Central and Eastern European countries. To do this, we have created a panel database covering the countries of Central and Eastern Europe in the years 1990-2016. According to many previous studies, this database contains four groups of measures. The first of these groups has only one measure for assessing regional inequalities. It is calculated in a classic way based on regional GDP per capita. The second group of measures refers to fiscal decentralization and includes, for example, the share of regional authorities' expenditures in total state expenditure and, the measure of degree of tax decentralization. Political decentralization is measured by variables such as: the number of levels of regional authorities and the place of local government in state constitutional law. The measure of administrative decentralization is calculated as the degree of freedom in decision making at the regional level. We have run a model describing the impact of decentralization on the level of regional inequalities on this database. Due to the presence of spatial effects, the model has been estimated in several variants. For this purpose, classical and spatial econometrics methods were employed. The model approach was also used to verify the hypotheses about the change in inequality over time according to the Kuzniec curve and, the impact of economic growth on these changes.

4

Do regional entrepreneurial ecosystems always contribute to regional economic performance?

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Abstract

In a recent body of the entrepreneurship literature, an attention is paid to the role of entrepreneurial ecosystems (EEs) and their contribution to relevant economic outcomes (Stenholm et al., 2013; Lafuente et al., 2018; Szerb et al., 2019; Lafuente et al., 2020). Rather than using standard entrepreneurship metrics, these studies point to the need to analyse the entrepreneurial context. The premises of these works can be found in the paper of Gnyawali and Fogel, who defined the dimensions of the entrepreneurial context as early as 1994. It includes socio-economic factors, the entrepreneurial and commercial skills of the project promoters, the level of financial assistance, and institutional and governmental policies and procedures (Bonnet et al., 2005).

However, research at national level appears insufficient at present, and the benefits of entrepreneurship can be better captured at sub-national level (Acs and Armington, 2004). Several researchers, such as Audretsch and Keilbach (2005) analysing the German regions or Sterlacchini (2006) for European regions, showed that differences in growth trajectories can be explained by different levels of business creation. We go further than previous research, however, as instead of directly using "new business creation" as an explanatory variable to explain spatially differentiated regional levels of economic performance, we use EEs. Thus, our research questions seek to understand the links between EEs and regional economic performance. We also examine whether there is spatial heterogeneity in these links since recent work suggests that the optimal level of entrepreneurship is heterogeneous across territories and that entrepreneurship rates are not always linked to economic performance (Prieger et al., 2016; Lafuente et al., 2018 and 2020). We measure EE quality using the REDI developed by Ács et al. (2017), which, from this standpoint, is a crucial indicator of regional economies in the sense that opportunity entrepreneurship stimulates regional economic performance (Shane, 2012, Szerb et al., 2019).

We therefore consider the REDI from an econometric approach that links regional economic outcome with EEs. We propose a local variation of the 'classic' spatial econometric models by adopting a 'local' one, in other words, a geographically weighted regression (GWR) in order to examine the issue of non-stationarity of regional development. This is particularly relevant as EEs are defined as unique (Acs et al., 2017; Szerb et al., 2019) and are thus likely to have different effects on regional economic performance.

The originality of our contribution is threefold. It consists of (i) analysing to what extent there is heterogeneity in the influence of entrepreneurship on economic performance at a regional level, (ii) assessing the spatial dimension of this non-linearity of effects, and (iii) taking EEs – rather than the traditional new start-up rate – into consideration as an explanatory factor for regional economic performance. It is also original in that it is conducted across all regions of the EU and examines whether the choices made by the European Commission via *The Entrepreneurship 2020 Action Plan* are likely to generate the effects expected by the Cohesion Policy guidelines for 2014-2020 and after.

5

Smart Cities and the urban digital divide

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Abstract

The debate on urban smartness as an instrument for planning and managing more efficient cities has been recently positing that smart cities could be raising inequalities. Several theoretical arguments have been presented in support of this claim, most revolving around the idea that the smart city movement would be driven by MNCs, which would persuade city managers of the need of investing in their devices, at the expense of segments of the population not ready to reap their benefits (Vanolo, 2014; Shelton et al., 2013). Following up on

our own research carried out on the impacts of urban smartness (Caragliu et al., 2011; Caragliu and Del Bo, 2012) and Smart City policies (Caragliu and Del Bo, 2018 and 2019a), in Caragliu and Del Bo (2019b) we found that a negative relationship exists between urban smartness and the intensity of urban income inequalities, suggesting that Smart City features, if anything, help reduce income inequalities. In this work we instead empirically verify whether smart urban characteristics are associated to an increase in urban inequalities along the digital divide dimension among urban dwellers. In order to provide an empirical test of this hypothesis we exploit a large data base of 309 European cities, with data on smart urban characteristics, along with the measures of digital divide obtained with the use of survey data carried out at the EU level.

6

Energy efficiency-enhancing policies and firm performance: Evidence from the paper and glass industries in Italy

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Abstract

This paper presents an empirical analysis of the impact of adopting energy efficiency measures on the economic performance of companies active in the paper and glass sector in Italy. The paper exploits financial statements of Italian companies contained in the AIDA (Computerized Analysis of Italian Companies) database with the aim to (i.) assess the distribution of expenditure in energy efficiency measures along features of the firms active in the two sectors analysed, and (ii.) quantify the impact of these measures on the performance of companies in the two industries. Results of the first analysis suggest a rather different behaviour of firms belonging to the two industries. While evidence is found of a catching up process for companies of the glass sector, whereby medium-profit and productivity firms invest more in these measures, the paper industry seems to behave in a strongly hierarchical way, whereby firms invest more and more in energy efficiency as their profitability and productivity levels increase. Moreover, industry-specific analyses suggest the possible existence of decreasing returns to the effectiveness of spending on energy efficiency. Lastly, our results hint at possible territorial effects and in particular a different receptivity of the different areas of the country to policies fostering the adoption of energy efficiency measures.

7

European metropolises and its demographic problems: a spatial approach

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Abstract

European metropolises are centers of life and socio-economic development of regions and countries. Despite of their privileged position in urban and economic system, they also try to overcome demographic challenges as other centers. Among them, the most important are aging processes that may strengthen or weaken metropolitan development. As a consequence, current activities in the field of the spatial planning and the spatial policy, as well as strategic plans, should take into account demographic processes taking place. The aim of the paper is to determine the demographic problems of European metropolises, such as disparities between the number of women and men, inadequate reproduction, shortage of people of working age, the growing share of older people, as well as to identify the spatial development of demographic processes and the role of metropolises in this respect. Another problem solved in the paper is classification of metropolises based on their population and age pyramids using symbolic data analysis methods and cluster analysis. It is a part of the larger study of demography in 1397 NUTS-3 units from 37 European countries in 2015., and these results will be also delivered as a background for the main problem of the study.

8

Smart sustainable Satellite Cities: The Daisy Flower Concept

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Abstract

This paper provides an overview of the alarming urban traffic congestions, which is an international phenomenon. It studies the effects of urban congestion on travel delay, air pollution, energy consumption, and general cost for government agencies and the individual traveler. In addition, to the effect of urban congestion on city development and general quality of life. The paper addresses various urban planning and transportation options to reduce motorized traffic congestion, particularly, reduction of the number and duration of vehicular trips in order to achieve a sustainable urban transport system. The paper analyses the various environmental concerns that result from the various modes of transportation, especially during traffic congestion. It stresses the positive significance of walking, bicycling, and increasing the reliance on public transport, and making it more affordable and attractive for commuters. Smart cities are not particularly renowned for technological advancement. Viable technological advancement moves rapidly to all cities; however, a smart city is a sustainable, environmentally friendly and provides an overall good quality of life. Smart cities are mainly achieved through appropriate land use mixtures and appropriate transportation facilities that encourage walking and bicycling and limit usage of the private auto. An urban planning concept of a new satellite city is introduced using the "Daisy concept". In this concept, an urban satellite city is inspired from a daisy flower, where a flower's petals represent the mix land uses that provide for most daily activities of a household. The center of a daisy flower represents the satellite's city central business district, which is connected to the major urban center and major airport via commuter rail. The Daisy concept outlines conceptual plans for mixed land use clusters (petals) connected to the satellite city center. The residences within the clusters are within walking distance to employment offices, schools, light shopping, and recreation. The daisy concept emphasizes walking bicycling facilities particular sufficient width sidewalks, which include designed areas for walking and for bicycles. While the center of each residential 'petal' has employment offices and light commercial areas with wide sidewalks that also include street furniture, such as café seating areas. In addition, at the daisy city center, it is pedestrian only streets with provisions for off-street parking along the circumferential road surrounding the core of the satellite city. Environmentally friendly trams that do not have overhead cable (having ground protected power lines) to avoid visual pollution are envisioned. Public transit policy and pricing would highly encourage usage, especially when coupled with providing sufficient parking spaces and drop-off and pick-up locations for employees coming from outside satellite city; in addition to parking regulations for residents that encourage auto sharing and renting and limit usage of private auto within the daisy city. Planning is a key issue in introducing smart cities, but policy, citizen awareness campaigns, regulations and enforcement are all essential in making smart cities functional and sustainable.

13

Market Potential with Regional Price Deflators

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Abstract

Does market potential decrease or increase, if regional price differences are taken into account? This paper applies regional price deflators to calculate regional market potential and compares its values with the ones obtained without taking into account the existence of regional price differentials. Furthermore, we assess the impact of newly estimated market potential on regional wages. Additionally, we verify the relative adequacy of the market potential approach and the wage curve approach in terms of explaining regional wage differentials. Applying data for the US and Poland, we find that market potential changes significantly if regional price indices are included. We also prove that the impact of market potential on regional wages is weaker than previously assumed. Moreover, we show that it has less explanatory power in explaining regional wage differentials as compared to the wage curve.

14

Do mobile devices renew urban tourism practices? The case of the Champs Elysees in Paris

Leila Kebir¹, Marie Delaplace²

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Abstract

The digital revolution and what are called E-tourism modify urban tourist behaviours. With a computer and an internet connection, booking a room or building a tourism circuit is now easy to do by internet before the departure. But mobile devices can also be used in tourism during the tourism trip and inside the destination. What is called M-tourism is different from e-tourism. Indeed, mobile devices might allow changing behaviour in-situ, i.e. in the destination. The changes induced by the increasing and widespread use of mobile device for tourism purpose affect these behaviours in a more important manner during their stay. M-tourism allows for last-minute booking for accommodation but also for different activities (museum, restauration, etc.). It can allow to changing instantly access, itinerary in the destination. It can also change the experience of the destination when tourism stakeholders are developing some new applications that are providing for instance geo-localization, augmented reality, etc. They also allow tourists for sharing experiences through social media (Munar and Jacobsen, 2014). The growing use of digital technologies offers many opportunities for innovation to build the destination of tomorrow, a smart destination (Gretzel et al., 2015), that is a destination in which the tourism experience will be central, and where the actors of the offer will be many, some of them even new to the tourism activity. The aim is to investigate, how mobile devices are used and how they eventually change urban tourism practices, taking into account a French case, the Champs Elysees in Paris. We have identified if the tourists own a smartphone, for what purpose M-tourism is used in-situ (transportation, hotel booking, restauration, meteo, activities, etc.). What other tools are used to prepare the trip (TV, mouth of word, touristic guide, etc.), what kind of mobile applications have been downloaded for what type of services (geolocation, trip, practical information, user reviews, etc.), if they are using augmented reality. The aim of the survey is also to identify if tourists but also inhabitants share photography or other information via mobile applications and what kind of information. For that purpose, a survey was conducted during May and June 2018 on the Champs Elysées in Paris. This paper starts by presenting the main digital technologies used in tourism and the way they may modify tourist's behaviour and practices. It then presents the case of the Champs Elysées.

15

Common goods and territorial development: reflections on governance issues

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Abstract

Today is an upsurge in initiatives based on the concept of 'commons' in regional and urban planning, and territorial development. The use of this concept crystallizes several contemporary cross-cutting issues that mobilize local collectives, such as the energy transition, sustainable urban development, management of natural resources or public places, emergence of a circular economy, urban ecosystems, biodiversity, etc. Moreover, we observe a multitude of commons in contemporary society: more or less inclusive / excluding devices involve forms of pooling and shared management of resources (land, urban infrastructure, knowledge, etc.) that lie beyond the market and public management. They also refer in a more or less pronounced way of ethics and collective interest (cf. Thomas Aquinas) that exceed or add to the individual interest. In a context of shrinking public finances, these devices imply a redistribution of responsibilities structured largely around the user and the producer of the property for managing territorial resources. These emerging phenomena questions the way in which the development of territories is conceived today. The economic and competitiveness dimensions (creation of knowledge, productive resources, etc.) now also combine societal and non-economic aspects (improvement of well-being and quality of life). It tends to become increasingly explicit in development strategies. These

phenomena are also signs of an evolution of our society towards more collective and participative modes of exploitation and management of territorial resources in which stakeholders and in particular users are involved. These approaches seem today to reflect an aspiration towards a more localized, inclusive, sustainable and equitable development model, without ignoring the tensions and conflicting dimensions of development. The objective of this paper is to identify what the notion of commons translates in terms of territorial development issues. In particular, it will identify the opportunities and importunities that it reveals in terms of governance. The first part proposes to return to the notion of common good in order to grasp the related conceptual issues. Then we present an analysis of the contributions of this notion to territorial development approaches. More specifically, we grasp the differences and similarities between commons and territorial resources, thus highlighting what the mobilization of this concept indicates in terms of issues. The third part addresses the challenges of territorial governance posed by contemporary forms of management in commons.

16

Managing Multiple Airport Regions via Perimeter Rules: An Empirical Analysis

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Abstract

Perimeter rules set upper limits on the distances of nonstop flights at airports in Multiple Airport Regions (MARs). This research empirically assesses the welfare effects of perimeter rules.

The operational interactions and allocation of air traffic between airports are major challenges for airport management, especially in MARs. To control congestion and optimize the use of airports in the given MARs, some airports have set limits on nonstop flights.

Despite the well-intended motives, the perimeter rules have been criticized. Previous studies suggest that the perimeter rules lead to fewer flights, reduced competition, and higher fares. However, these studies do not assess whether the perimeter rules have contributed to controlling airport congestion.

This paper examines the effects of perimeter rules not only on air traffic and airfares but also on airport congestion. We use a difference-in-differences strategy with propensity score matching and weighting methods by taking advantage of the repeal of the Wright Amendment at Dallas Love Field in October 2014. The treatment group comprises routes from airports in the Dallas and Washington DC MARs where airports are owned and operated by the same authority and one of its airports has/had perimeter restrictions. The control group consists of routes from airports in the Chicago and Houston MARs because the airports in these MARs are owned and operated by the same authority and have never been under the restrictions of perimeter rule.

The estimation results for the Dallas MAR seem to support the criticism expressed by previous studies: the repeal of the perimeter rule at the Dallas MAR resulted in the increase of flights and passengers (more than 100%) and the decrease of airfares (about 6 to 7%) on routes from Dallas Love Field Airport. However, at the same time, the results suggest that the average departure delay minutes on routes from Dallas MAR's two airports became longer about 4 to 7 minutes compared with the control group.

The estimation results for the Washington MAR suggest that the perimeter rule at National did neither lead to the passenger shift from National to Dulles nor the increase of passengers using the airports. Interestingly, however, the results suggest that the perimeter rule has a positive effect on controlling airport congestion: although the average departure delay minutes on routes from the Washington MAR's two airports increased, the estimated increase in the delay minutes is about 2 to 5 minutes, which are 20 to 50% smaller compared to the routes from the Dallas MAR. Besides, the results suggest that even under the perimeter rule, competition at the Washington MAR is effective in reducing airfares on routes from Dulles (about 10 to 11%) and potentially from National (about 5%).

Overall, our analysis suggests that the repeal of the perimeter rules does not necessarily lead to increases in economic welfare. Rather, the results of our analysis suggest that the perimeter rules can serve as tools to manage airport congestion without incurring negative effects on airfare competition. Future studies should explore improved designs of the perimeter rules.

17

Does global value chain engagement affect pollution: Evidence from Chinese firms

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³Shanghai University of International Business and Economics, China

Abstract

Formation and evolution of the global value chain (GVC) mark the transition of export-oriented production process towards international collaboration. Countries involved in international trade are constantly participating in GVC over the past decades. Albeit the existence of ample studies on the productivity and technological outcomes of GVC engagement, the externality issues raised by firm's operation in GVC has not received sufficient discussion. Division of labour inside GVC disproportionately favors developed countries that undertake high value-added tasks, while developing economies are more inclined to opt into energy-consuming and pollution-intensive sections. In this paper we investigate the impact of firm's engagement in global value chain on environmental pollution. We construct a unique dataset covering over 90,000 firms from 2000 - 2007 by combining several large and representative databases in China, including the Annual Survey of Chinese Industrial Firm (ASIF), China Customs Database (CCD) and Chinese Environmental Statistical Database (CESD). Traditional measurements of GVC embedment based on input-output tables are only available at sector level. To accurately measure firm's degree of participation within GVC, we propose a novel GVC embedment index based on Ke & Tang (2016) and Upward et al. (2013). Our index properly copes with Chinese firm's "indirect importing" embedded within the international share of domestic inputs. On identification strategies, besides the baseline OLS estimation that link the GVC embedment degree to pollution level, we perform a difference-in-difference analysis with China joining WTO in December 2001 being an exogenous source of variation. Results show that firm's engagement in GVC leads to increased pollution emission measured by chemical oxygen demand (COD) and SO₂. The finding remains consistent when we control for an array of firm-level confounders including productivity, share of state-owned capital and degree of trade liberalization, along with entity and time fixed-effects. The identified effects are comparably stronger within eastern area, foreign-funded enterprises, private enterprises and sectors clustered by pollution-intensive firms. Finally, we show that the pollution consequences from firm's GVC engagement are realized jointly via the scale effect, technique effect and composition effect. For the scale effect, the expansion of overall production scale is found to be accompanied by higher level of pollution. For the composition effect, GVC participation tends to raise the share of dirtier production activities relative to the share of cleaner production activities. For the technique effect, the technological improvement at sector or firm level leads to decreased pollution with limited magnitude, partially offsetting the negative environmental impacts.

19

Assessment of visitors' perception of solid waste pollution and their willingness to pay in the Al Hoceima National Park beaches

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Abstract

Al Hoceima National Park is the most important protected area on the Mediterranean coast of Morocco. Although this protected area is important from an ecological and economic point of view, it is increasingly under pressure from human activities (productive fishing, pollution, etc.). One of the main causes of the degradation that this park is undergoing is pollution from solid waste. This solid waste has considerable negative impacts on the environment. They constitute a threat to human and animal health and the degradation of the natural landscape. This study aims to find out the perception of visitors to the beaches of Al Hoceima National Park, the suggestions of visitors for an improvement in the landscape quality of these beaches, and their willingness to pay for this improvement. Questionnaire and face-to-face surveys were conducted during the month of August 2019 on five

important beaches of the park (Bades, Torres, Cala iris, Tala Youssef and Boumechdi). It emerges from the results of the study that 57.8% of the visitors consider that these beaches are clean. The statements of 79.6% of the visitors interviewed show that the most common waste found on the five beaches are bottles and their caps, while 61.2% of visitors cite cigarette butts as the dominant waste. In order to avoid the nuisance produced by waste, 76% of the interviewees agreed to participate financially in an improvement action of solid waste management in the beaches. The majority of the visitors interviewed (83.2%) proposed the organization of awareness programs in schools or through websites to inform people about the problem of waste and its impact on the natural environment and on the population.

20

Analysis of droughts and their impacts on the natural and socio-economic environments of the rural community of El Faïd

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Abstract

The rural commune of El Faïd, which is part of the Souss region, has experienced alternating wet and dry periods. This evolution will certainly have negative impacts on the natural resources of the commune (Forests, water resources, soil,...), as well as on the socio-economic activities (Agriculture, breeding, ...). These climate trends are an important element for the assessment of the impact of climate change. The objective of the present work is to analyse precipitation data in order to characterize dry periods in the municipality and their succession over time. The analysis of rainfall data covers a period of 38 years (1981-2018) by calculating the values of the Standardized Precipitation Index (SPI) on an annual basis. The precipitation data used are taken from CHRIPS (Climate Hazards Group Infra Red Precipitation With Station Data). The results obtained show rainfall variability with a succession of dry periods and wet periods with a dominance of dry years. Indeed, there were several successive years of significant and moderate droughts during the periods 1981-1986, and during the period 1990-2008, with a severe drought year in 2001. Diachronic vegetation index analysis showed a variation on vegetation density and a survey among farmers has provided substantial vulnerability of the agriculture sector.

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Assessment and mapping of the vulnerability to erosion and gullying in the rural commune of El Faïd

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Abstract

Erosion is the main threat to sustainable water and soil management in Morocco. It has a negative impact from an environmental, social and economic point of view. Located in the Souss-Massa hydrographic basin, the rural commune of El Faïd remains an area where gully erosion is strong, causing devastating floods for agricultural land and infrastructure. This study aims to map the areas with high susceptibility to erosion in order to propose gully correction interventions to reduce the risk of flooding. First, we analysed the vulnerability to erosion at the scale of the commune's territory and then we diagnosed the gully process based on a gully inventory already established and validated in the field. The RUSLE model was used to map erosion vulnerability. Second the dynamics of the evolution of the beds of the main wadis crossing the territory of the commune were analysed to illustrate the extent of the erosion/flooding phenomenon. We determined the main predisposing factors for soil erosion and gully, and then, for each factor we drew the corresponding map by determining the interaction of each factor with its corresponding phenomenon.

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Predictive modelling of gully erosion in arid environment: case of the rural commune of El Faïd located in the south-Morocco

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Abstract

Land degradation is major threat to food security and to the sustainable provision of ecosystems goods and services. In arid environment characterized by reduced vegetation cover, erosion process is the main threat to soil capital leading to its degradation. Gullies are one of the main expressions of soil erosion in such environment. Soil and water conservation interventions must then be implemented in order to curb soil erosion. However, there is need to precisely verify gullies location and distribution within remote and inaccessible lands. This study aims to develop model predicting the occurrence of gully in order to propose correction interventions that reduces erosion and flooding risks. The study concerned arid lands located in the rural commune of El Faïd located in south of Morocco which is an arid region. Gullies within the watershed have been identified using Google Earth and GIS. Eight hundred ninety-four (894) gullies have been mapped verified through field visits. Maps of predisposing factors have been digitized and include physical factors and anthropic factors (including Lithofacies, Land use, Slope, Slope Length, Aspect, Curvature, Topographic wetness Index, stream power index). The gullies database has been randomly split into two sets, training dataset (715) and testing dataset (179). Several predictive models have been trained including information values and machine learning based approaches (Artificial Neural Network and Random Forest) using R language. The model's quality was assessed using the area under the curve to choose the model with a best predictive capacity. Further, our results stressed out the main predisposing factors to gullies prediction. The fitted model has been used to predict, for all the watershed, even in inaccessible lands, the gullying susceptibility. Such maps are very important for managers in order to contribute to land degradation neutrality and to prevent flood events on the flat lands. Key words: Water erosion, gully, vulnerability, prediction models, Machine learning, El Faïd.

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Machine Learning for Forest Stand Delineation using Yearly Landsat Time Series

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Abstract

Forests as natural capital provide goods and services contributing to human wellbeing. As their contributions to sustainable development goals are widely recognized, it has been globally agreed that forests need to be sustainably managed. Forest management rely on accurate information concerning forest resources, their dynamics and the social and market needs. Such information needs to be accurate and periodically updated. Forest stand maps remain a major tool for characterizing forest resources and for prescribing interventions to be undertaken within each stand and at the required timestamp. Nowadays, within Moroccan forestry context, forest stand maps are mainly produced using conventional approaches based on aerial photo-interpretation, and then ground truth verification using field mission. This process is time and resources consumptive. Within our study, we focus on the use of satellite imagery time series in addition to machine learning techniques in order to update forest stands map. The study focused on Cedar Forests located in the Middle Atlas region which has been recognized as national heritage. The used data consist on "Landsat" images time series, circular random plots randomly chosen from national forest inventory database, in addition to limited number of inventory plots measured within small scale forest management studies and at various timeframe. Data have been organized and preprocessed, then supervised classification of forest stands have been performed using either truth plots and the corresponding imagery or the whole imagery database while focusing on the sites on which the most important stands types changes have been undergone. Classification algorithms where based on various commonly used machine learning algorithms, whose effectiveness has been proven in several research studies. Supervised images

classification, using different algorithms, gave satisfactory results with a high variability. Furthermore, temporal segmentation of the archive appears to be a feasible and seems promising.

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Modeling Forest type transition of middle Atlas-Morocco associated to human activities

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Abstract

Due to climate change scenarios projections, predicting higher probability of extreme/adverse climatic events, to the context of socio-economical changes of the population and the production systems, forest resources are ongoing/experiencing steady degradation process threatening the future of forest as natural capital. The higher anthropogenic pressure in addition to ecological fragilities leads to deep transformation of forest cover and then to the land use systems in mountainous area; such transformation is scale dependent. In order to sustainably manage forest resources, there is a need to understand the mechanisms underlying changes in forest cover either at the occurrence of the process or at the intensity of its manifestation. Then, the objective of our work is to develop models explaining the impact of various biotic and abiotic factors on cedar ecosystems and to predict the future state of such forest. The study was carried out on Ain Leuh Cedar Forest (Sidi M'Guild) located on the middle Atlas-Morocco. This forest is part of the UNESCO heritage Man and Biosphere Cedar Reserve. The used data consist on time series of "Landsat" satellite images covering a 14 years period from 1990 to 2004, maps of 19 bioclimatic factors, digital elevation model and socio-economic criteria including human settlement location, demographic data and human development criteria. The approach consisted on classification of the images then calculating transition probability using Markov chain for respective forest cover types and then modeling, the transition probabilities as function of the various bioclimatic, physical and socio-economic factors. On the other hand, ground truth data at different time laps was provided by forest management studies, national forest inventory and field visits. The most common transitions concern mainly species cover, species transformation remain very rare. In this work, factors that contribute to explain the transition between Cedar cover state and the other spaces in the same space of Ain Leuh Cedar Forest are six important parameters in which social parameters affect those transitions. The predicted forest cover map provide guidance to forest scientists, managers and decision-makers on the prospects for preserving and rehabilitating this natural capital.

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Identikit of PROPTECH Players from Italy to Finland: Understanding the Real Estate Evolution

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Abstract

In the past five to ten years the real estate sector has been facing the beginning of an evolution, mainly due to the introduction of digital technologies. These are embedded into a variety of products, are modifying traditional processes, and are shaping new cultural approaches to managing buildings and the built environment. This phenomenon is commonly defined as 'PropTech', because it merges property and technology. However, this term still lacks a proper definition. It includes a wide range of companies, from start-ups to major real estate players. It embraces a vast array of building types, from residential to commercial and industrial. Furthermore, it comprehends a broad selection of industries, from legal to construction. Due to the newness of PropTech, theoretical studies are still scant. Especially, a quantification and qualification of the different companies that work in the PropTech sector does not exist yet. Many PropTech maps are available for different countries, but the criteria to include or exclude companies from these maps remain fuzzy and unclear. Methods for PropTech scouting are mainly based on a roll-your-snowball approach. A better understanding of the nature and main

activities of these companies could support: (i) more precise definition of PropTech; (ii) analysis of trends; and (iii) development of policies and measures to support this new-born sector. The goal of this paper is to provide an exploratory study on PropTech players. This will compare players in two different European countries: Italy and Finland. Extensive lists of Italian and Finnish PropTech companies will be searched on multiple databases (e.g. UNISSUU, Orbis, CBInsights), in order to build a comprehensive picture of the sector in the two countries. Data elaboration will attempt to explain the differences in categorization/terminology between the countries. This can enable to identify inclusion and exclusion criteria in existing PropTech maps. The Italian and Finnish PropTech players will be compared, to shed light on country-specifics including business characteristics and ecosystems around PropTech. In conclusion, the paper proposes an identikit of PropTech players that can support the elaboration of a taxonomy and proper definition of this promising sector.

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Location Analysis: New Perspectives for Real Estate Players

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Abstract

The real estate market relies on traditional business models that are driven by building types and functions (e.g. housing, retail, offices, etc.). Social and economic changes have been requiring an evolution of these models. Location becomes one of the most important factors to attract demand. How can real estate players find the best location for their investments? This choice can be grounded on solid data, not only about the physical asset in itself, but also about the urban context (e.g. consumption models, demographic trends, purchasing power, safety & security, etc.). Despite massive data being available today, an appropriate tool is still missing to combine all useful information on cities and territories into an integrated platform to support decision-making. The objective of this work is to propose a categorization of useful data and a first exploration of integration opportunities into a unified system that real estate actors can use for their investment decisions. In this paper, the following research questions are addressed: 1) What kind of tools exist to guide operators and investors in the location analysis process? 2) What data categories are available to different actors? 3) How could these data be organized and integrated in order to support various actors? In the first part, the paper reviews the state of the art of existing tools to check what data is already available and can be considered for merge. In the second part, the paper proposes a demo version of an integration tool. The instrument is composed of six sections that can be filled with data extracted from public sources and/or search engines. Through a weights system, a data ranking is created, based on the supposed interest of future investors and operators. Finally, this tool is tested in the hospitality market. A trial application is built on an electronic datasheet. Nine case studies located in Milan (Italy) are compared and ranked through the tool to determine which investment option is more desirable. The main advantages and limits of the proposed tool are discussed. Especially, the tool shows to be useful for simplifying and supporting selection of new investment opportunities on the Italian territory, where the combination of key information for real estate players is still challenging. Digital implementation and extension to the other real estate sectors and countries are considered as possible developments of the proposed tool. In conclusion, solutions to support data elaboration should take into account that analyses must be dynamic and constantly updated. New expertise is necessary besides the traditional real estate competences. New jobs might emerge in the near future, hybridizing proficiency in economics, programming/analytics and territorial planning.

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Physiology of *Merluccius merluccius* in the North Atlantic of Morocco

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Abstract

The common hake (*Merluccius merluccius*) is a unique specie. With various positive aspects such as a high Business value in term of monetary growth as well as representing a considerable part of the Moroccan fisheries.

Even though bibliography about the specie is rich, yet few disparities persist. In particular on some of its biological, and ecological aspects. This lack of data has retrograding repercussion upon the quality and accuracy of the stock evaluation and falconry management. This study is targeting a more effective and rigorous bio specification that will assist us surveying and evaluating the local common hake stock as well as the administration of fisheries all along the north Atlantic Moroccan coasts. In this project, we chose the *Merluccius merluccius* hake, because it is the most important of the high-value demersal fish species exploited in Morocco from the point of view of landings; the maximum production of hake in Morocco according to the ONP (National Fisheries Office) was around 7000 tonnes in 2005 then dropped to 1538 tonnes in 2013. The *Merluccius merluccius* suffer from the lack of development plans which ensure a rational exploitation. This study then will contribute to improve the management of the common hake in the Moroccan fisheries, through a complete study of the biological aspects based on three axes: reproduction, growth, and diet of the *Merluccius merluccius*. The study of growth to determine body size as a function of age, this is why all stock assessment methods rely on age composition data, which form the basis of calculations growth rates and growth in the production of stocks (INRH 2013) Reproduction It is for the protection of the stock of hake which is constituted of 85% of juveniles at the level of the zone and the reconstitution of the areas of concentration of the common hake (INRH etat des stocks et des pêcheries au Maroc [Rapport]. - 2013). Sexual maturity and laying are always linked to a change in diet (Parz et al, 1993). Thus, the increase in energy requirements related to sexual maturity may be the critical factor explaining the change in eating habits of hake. Also, we will study the indicators of exploitation in order to show the economic value of this species and to show the current state of the stock of common hake in the North Atlantic of Morocco. This full review on all different biological facets of *Merluccius merluccius* (reproduction. growth conditions, nutritional restriction) could help to reduce the pressure of fishing on the common hake and to ensure sustainable production for the future generation.

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Exploitation of European hake at the Port of Larache of Morocco

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Abstract

The Atlantic region of Morocco is rich in marine resources. Its marine ecosystem is characterized by exceptional biodiversity. For thousands of years, its marine species have been a source of human livelihood, on the one hand, and the engine of the region's national economies, on the other hand. However, population growth and increased demand for marine resources raise concerns about the decline of species and the loss of local marine diversity as a whole. Besides the potential overexploitation of marine resources. For a long time, demersal species occupy a major place in the fresh fishing of the Moroccan North Atlantic region. Among these species, we have chosen, as part of this project of this research; the European hake (*Merluccius merluccius*) which represents the most important of the demersal fish species with high commercial value exploited at the port of Larache from the point of view of landings, which reveals the economic importance attributed to this port. European hake are targeted by both inshore and artisanal fishing, however, European hake catches come mainly from trawl fishing. These last ten years, a drop in landings has been observed reducing the catches by half. This is likely due to the combined effects of fishing and the environment conditions. In this context, appropriate management measures are necessary to be able to rectify the state of this stock. In fact, the *Merluccius merluccius* has been exploited, especially in the northern part of Morocco, by the Moroccan, Spanish and Portuguese fleets until the end of the fishing agreement with the European Union in 1999. After this year, only the Moroccan fleets made up essentially of small longline trawlers with short range and the boats continued to fish this resource. This work took up a diagnosis of the state of exploitation of the stock of this species (*Merluccius merluccius*) by monitoring the state of the resource which is ensured by examining the exploitation indicators which are: catches of hake common in level of the port of Larache, the fishing effort of the trawlers exerted on the stock at the level of the port of Larache and the catch per unit of effort (CPUE) also called index of abundance is used to estimate the level of exploitation of the resource, in order to follow the exploitation status of the hake and show the interest of the species landed at the port of Larache during the period 2005-20014 by the trawl fleet.

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Subjective well-being, inequalities and the geography of discontent in European regions

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Abstract

The rise of a geography of discontent in the European Union (EU) documented in recent studies highlights a strong spatial association between discontent, regional economic decline and poor occupational opportunities, suggesting that economic disparities within the EU are at the origin of some of the most recent and shocking political events as Brexit. This paper re-examines this statement by disentangling the effect on discontent of different socioeconomic disadvantage conditions at the interregional, intraregional and individual levels. Making use of a large dataset on the discontent perceived by more than 760,000 EU citizens between 2013 and 2018, our analysis confirms that a geography of discontent exists across EU regions. Nevertheless, our findings also highlight that intraregional disparities matter more for discontent and individual socioeconomic disadvantage conditions amplify further this negative effect.

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Identity and place: how do territorial characteristics affect pro-group behaviours?

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Abstract

A broad literature focused on the effects of group identity on individual behaviour. Among other things, these studies pointed out that when identity is made salient, group members tend to cooperate more among them. Moreover, they systematically tend to favour in-group members over out-group individuals. Few recent works suggested that territory matters in understanding the mechanisms through which identity leads to cooperation. This study focuses on this issue, presenting the results of a natural experiment.

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Machine learning application to predict forest fires ignition risk in the Mediterranean region (North-West Morocco)

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Abstract

This scientific paper explores the spatial predictability of forest fire ignitions in the mediterranean region (North-west of Morocco). The geographic information system was used to locate 704 forest fires recorded between 2002 and 2018. Using 20 human and biophysical variables, the building of dichotomous prediction model (Fire or No Fire) was developed using 3 classification models namely: the binary logistic regression, the random forest and XG-Boost. Data analysis provide relevant information to understand the human factors, climate, topography and vegetation type, affecting forest fire ignitions processes in the study area. A random sample of observations (60%) was used to build the model and external observations (40%) have been reserved for testing the ability of the model to predict forest fire ignitions. The explanatory variables included in the model, report on the impact of factors related to (1) human action represented by localities with high frequency of fires and accessibility (roads and trails), (2) topoclimatic, including, temperature, relative air humidity and slopes and (3) biological, namely the type of fuel, (pine and cork oak trees, Matorral, ...). The 3 types of machine learning models (binary logistic regression, random forest and XG Boost) have shown very interesting results in terms of forest fire predictability

by correctly classifying an average of 85% of the sample reserved for the model training and data validation. The forest fire ignitions probability maps produced could operationally improve the alerts processes, the lookout posts positioning and the early intervention against fires by the units in charge of initial attacks.

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Big Remotely Sensed Data application for fire severity and post-fire monitoring

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Abstract

The importance of wildfires as a natural or a human-induced phenomenon has gained importance at regional and global levels in the last years. Improved remote sensing and computational capabilities enable the fast processing of large image datasets in real time. Resulting in an increased need to evaluate fire impacts at a landscape scale, burn severity has become an important indicator of fire impact on the ecosystem. The main aim of this study is to propose a model to assess burn severity and post-fire recovery in the north of Morocco. A sample of 50 fires that occurred in the Morocco from 1997 until 2016 was selected, and then fire severity for each sample fire has been estimated using the pre- and post-fire Landsat imagery on the Google Earth Engine (GEE) platform to estimate the degree of fire-induced ecological change. The rate of post fire regeneration has been estimated using the Normalized Regeneration Index (NRI).

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Contribution of a New-design Multifunctional Artificial Reefs to the Sustainable Management of Coastal Areas

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Abstract

Coastal territories are the focus of constant antagonism and conflict. The lack of integrated management of maritime and terrestrial resources causes serious tension among various sectors of activity (fisheries, agriculture and services). Consequently, the sustainable development of the coastal areas is put on hold. So, how to find a sustainable solution that balances the need to preserve the shoreline and economic development (local or regional)? Scientific knowledge about climatic changes, theoretical background in shorelines infrastructures construction, coastal engineers' awareness, controlling, monitoring and managing of coastal related operations could not avoid a relevant impact on coastal sustainability. Coastal resources are under increasing pressure and specific management programs strive to protect coastal resources for future generations while balancing today's competing economic, cultural and environmental interests. These management programs are determined to balance all the dimensions of the coastline importance (Tourism, Resource Extraction, Wildlife Habitat, Settlements and Industry). These interventions are socially important: they are concerned with the fair allocation/use of coastal resources while sustainably managing these areas so that they can be used by future generations. Sustainable coastal management should involve all parties in the decision-making process so that resources are used fairly without permanent damage. Without sustainable coastal management, there could be a loss in a country's economy and, even, no economic growth. The problem of coastal erosion has been sharpening in Europe. Several publications discuss pressure situations and erosion processes across the entire coastline, pointing to critical situations together with the densification of coastal urban areas partly due to successive waves of human migration towards coastal areas and estuaries. Portugal owns 2830 km of coast, islands included, and is one of the European countries where the growth of coastal urban areas was faster, the growth of population along the shoreline was higher, the most agricultural area along the coast was lost to other uses, and evident loss of dunes is due to construction/exploitation. So, how to find a sustainable solution that balances the need to preserve the shoreline and economic development, either local or regional? Rock walls, breakwaters or groynes

usually serve the purpose of protecting land from erosion and/or enabling safe navigation into harbours and marinas, but other commercial value and multi-purpose recreational and amenity enhancement objectives can also be incorporated into coastal protection and coastal development projects. Submerged breakwaters (also called multifunctional artificial reefs (MFARs)), made partially from sludge muds resulting from dimensional stone cutting process, could be an interesting and efficient strategy, not only to protect a coastal system but because recycling and incorporating such wastes into building materials is a practical solution for pollution problems from stone industry. Moreover, MFARs will improve the bathing conditions of some coastal zones and cope to enlarge sea biodiversity. This research main objective is to find a sustainable solution that balances the need to preserve the shoreline in a sustainable way by enhancing the use of stone cutting sludge waste in the production of MFARs, reducing both the environmental impact and the production costs.

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The importance of Design as a creative process in Business Schools: How to fill the Design/Business knowledge and communication gap?

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Abstract

In most Business Schools (BS), Design in business education plays a minimal role. It is neither part of the core basic learning courses nor part of the electives. No courses in design, corporate identity, graphic design, communication design, environmental design, or product design were found in this study. When business students are enrolled in design principles, they learn it loosely, as part of new product development or entrepreneurship classes. Business teachers simply assume that when corporate design decision-making is needed, the managers will simply ask a designer. However, designers are not educated in business and business managers are not educated in design. Without design in the curriculum, BS is far away from the real business world. Therefore, why BS does not change the curriculum to meet the real business-world needs? The current study addresses the (i) perceptions of business education and training experts; (ii) accreditation and curriculum requirements; and (iii) scientific journal articles, books on current standards and processes in business education. The curriculum specifications for business programs are generally established by the International Association for Management Education (AACSB). Our results reveal that the AACSB demanding: the business curriculum should include "accounting, economics, mathematics, statistics and behavioural science" alongside "basic written and oral communication skills and quantitative analysis". No mention of design or quality analysis is done. Moreover, the specific content of the course does not matter for the accreditation process. Instead, the business programs evaluation is performed following their goals. Design and design management were not mentioned when comparing goals and curricula from several Portuguese business schools. In our research, when business teachers were questioned about the hypothesis of curriculum changing, one of the most cited answers was that 'Someone should have a vision. If there is no leader, nothing will happen' However, to develop non-traditional curricula, it requires efforts from all, and several faculty members, particularly the teachers, are overstretched. Likewise, it is much easier to teach the same subject multiple times. We conclude that the teacher's passion for design must be sufficiently robust to drive change. But, in another hand, the business students must demonstrate curiosity and willingness to engage. When a new course is introduced in a traditional curriculum it will be appreciated, and the first criterion is the extent of demand for it. An average of 30 students must enrol. The second is concerning the professor and the new course must be well taught. If both conditions are met, they can continue. But the new and real-world-touching courses are always introduced as electives, and students put a lower priority on electives than on core needs - the compulsory courses. As a result, what needs to be done to overcome the curriculum stalemate, the priority of the students, and the burnout of the faculty members? What could cause business schools to change? What would make possible the inclusion of design in Business curricula, despite the above- mentioned obstacles? The present work is a search for adequate answers.

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Young high-tech firms and market introduction of sustainable energy solutions

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Abstract

The paper deals with a specific type of young high-tech firms, namely spin-offs from universities. Universities act as cradles of invention, and their spin-off firms attempt to bring (part of) these inventions to market. Increasingly, the new products, processes and services deal with sustainable energy solutions. However, the extent in which such solutions reach the market and the kind of risk-related factors young firms encounter and influence survival, are hardly known and understood. The paper aims to clarify market introduction by focusing on empirics of firms' risk-taking behaviour related to strategic choices, competences and interaction with (national) ecosystem conditions. We use a unique dataset of almost 110 university spin-off firms in Northwest Europe and a small selected sample from this set. 60 per cent of the spin-offs are able to reach the market with their invention, most of them in the first five years of their lives. Wind-energy provides the best chances, as compared to e.g. solar PV and advanced biomass. In-depth results suggest high probability of quick market introduction in 'Innovation Leader' countries, like Sweden and Denmark, if combined with employing rich collaborative networks. A second set of favourable influences includes a practical mind-set of the entrepreneurs and accessing substantial investment capital. In contrast, strong risks tend to be connected to activity in fundamental inventions, highly specialized technology, weakly developed (sub) markets, poorly built networks and short refunding time of substantial investment. In the paper, such risks are connected to survival rates. The study contributes to literature on market introduction of sustainable energy solutions, risk-taking in rigid socio-technical systems, and firm survival.

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Citizens co-production in urban innovation: critical performance factors

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Abstract

Urban places that facilitate experimentation and innovation in urban sustainability solutions, are quickly increasing in number in Europe today. Such places are strongly needed given rigidity of the socio-technical systems involved and complexity in multi-stakeholder situations. Which factors are critical in their performance, however, are hardly known. First, we address transitions in socio-technical systems and potentials of experimentation in so-called protected places or 'niches'. Secondly, to improve understanding of these places, the core concept of 'citizens co- production' in innovation is discussed, as it has developed on the basis of various societal trends, for example, emphasizing that users are important sources of innovation (user-centered innovation) and emphasizing the larger societal role of universities and democratization of science. Next, derived from literature and case study analysis, a set of critical performance factors of these initiatives, is designed and discussed. We divide them into factors concerning stakeholders involved and factors concerning the solution. This is followed by an illustration with three types of urban projects, namely, citizen science, living labs and technology incubation. The sectors involved in our analysis are sustainable energy and sustainable (inclusive) healthcare. All in all, experimentation is needed to identify whether the solution works (solves problems) on a larger scale and real-life setting/time, matches with different urban context, matches with specific user needs and viable business models, can deal with restrictions from regulation, standards etc., and contributes to a wider transition in cities.

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Cloud computing solution for monitoring protected area in Morocco

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Abstract

Morocco is qualified as a major contributor to the Mediterranean Basin biodiversity hotspots. Network of protected area has been established to protect its natural capital and to promote local population development. In spite of the protection efforts made by government, there is a need for an evidence-based approach to measure the conservation effectiveness, not only in management, governance and equity, but also in terms of ecosystem functioning and its ability to sustain the provision of ecosystems services. With the lack of data related to natural resources monitoring, the wide availability of open access earth observation data, acquired primarily by free access satellite such as Landsat, MODIS and Sentinel has triggered new development perspectives. Moreover, and in addition to this crowd sourced satellite data, the parallel cloud-based computational platforms such as Google Earth Engine (GEE) that becomes increasingly accessible, allowed to overcome data lack issues and to scale analysis across space and time. This work tries to assess the effectiveness of protection strategies on a Moroccan protected area case and aims to develop an automated solution for monitoring rehabilitation dynamics or degradation trends within a protected area located in arid region through harnessing the use of satellite data products with parallel cloud spatial big data processing. The study area concerned the Argane Biosphere Reserve which is recognized by Unesco MAB as natural Heritage since 1997. Data-driven modelling (DDM) based approach allowing the combination of Big Data, artificial intelligence algorithms were adopted. Ecosystem restoration trends was assessed through spectral indices analysis and continuous cover change detection based on temporal segmentation of satellite time series. The process was implemented using GEE API for java script. As results, a graphical user interface and an application prototype was released. It is exploitable using standard web browser and is accessible even to people without any background regarding programming languages or remote sensing skills. Such graphical user interface facilitates the process of analysing temporal trajectories (time series) of different spectral indices derived from satellite images (Landsat or Sentinel) at the required spatial analysis scale. Further, the analysis of forest cover trends, using temporal segmentation, has been promising. It permitted to identify the occurrence and the intensity of abrupt forest cover changes underlying forest harvesting or land use changes through its rehabilitation.

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Assessing watershed environmental vulnerability in climate change context: case of arid watershed from Moroccan Anti-Atlas

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Abstract

Climate change is global concern. Within Mediterranean region, it will highly affect Morocco with a perspective of higher temperature and variable rainfall patterns. As consequence, it will lead to high extreme events and to environmental hazards affecting food security and social stability. In arid mountainous lands, the scarcity of land resources, the expansion of human consumptive needs, in addition to the high pressure on natural resources and the emerging climate risks, natural capital will be highly threatened. This study focusses on Mountainous watershed located on Atlas Mountains. It aims to assess environmental vulnerability within climate change context. Vulnerability was assessed using Environmental Vulnerability Index (EVI). The index calculation of the EVI is based on the aggregation of indicators related to vulnerability components that includes risk, exposition and adaptation capacities. The indicators, providing information on the magnitudes and trends of several environmental vulnerability components, are then standardized on common scale according to EVI calculation methodology. Our results stress out that the studied area is highly vulnerable with higher EVI values. According to vulnerability components ranking, vulnerable sectors within study area could be classified, according to their priorities, as follow: i- human health, ii- water, iii- biodiversity, iv- agriculture, v- exposure to natural disasters, vi- climate change, and vii- desertification. The results of this work could be shown as a prerequisite for assisting decision- makers to establish an adapted management plan of the watershed and to enhance the contribution of landscape ecosystems to the hydrological functioning of the watershed in the context of climate change. Moreover, if the needs of promoting human capital development seems to be major priority, the degradation of natural resources requires restoration actions in order to maintain the ecological services provided by forest ecosystems. The conclusions obtained will be helpful for public action to strengthen the resilience of the natural environment.

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Watermelons in winter? Assessing the carbon footprints of off-season produce

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Abstract

This study aims to fill a gap in literature on carbon costs associated with supply of non-local and non-seasonal fresh produce across global value chains irrespective of season or local climactic conditions. Proponents of low carbon food sustainability advocate local and seasonal consumption for several reasons: (i) reduction in “food miles” or carbon costs associated with shipping food over long distances - either nationally or internationally; (ii) support to producers and farmers in the local economy; (iii) health benefits of eating fresher, indigenous foods. Meeting the global demand for non-local, non-seasonal fresh produce potentially has second degree impacts beyond transportation costs including carbon-intensive shifts in agriculture towards produce that preserves for longer, cold storage facilities etc. Quantifying carbon costs of such consumption is essential to developing policies for (commodity and non-commodity specific) carbon taxation, food import regulations, and food transport depending on the carbon expense of various links in the carbon chain. The study is conducted using commodity import data from the US International Trade Commission categorized by quantity, time period and country of origin to create a consolidated dataset restricted to a local, interior geography and a few fresh produce commodities of interest. Commodity production cost and spatial distances (transportation costs) are used as proxies for off-season and non-local carbon costs respectively. A Computable General Equilibrium (CGE) model (Input-Output) is used to estimate the overall carbon impacts of such off-season consumption. Resulting carbon measures are benchmarked against a baseline of local, seasonal consumption to estimate the additional carbon cost. Preliminary results suggest that transportation costs are the single largest determinant of carbon emissions in the value chain. Policy implications might include taxation proportional to the carbon costs of the value chain segment, fostering local consumption or identifying alternative avenues for technological and economic intervention.

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Determinants of new firm formation in Japan: New methods for the analysis of entrepreneurship

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Abstract

There have been many studies conducted on the factors of the new firm formation because it is an economic activity that revitalizes the regional economy and is also one of the important factors for regional economic development. However, new analysis methods are required since the factors of new firm formation are generally divided into entrepreneurship and entrepreneurial environment, and entrepreneurship itself is difficult to be grasped directly. The purpose of this study is to capture the entrepreneurship in the new firm formation rate in Japan and clarify its components through factor analysis. The analysis methods used in this research are as follows. First, we perform a factor analysis of the fixed-effect model using two-point panel data of the Economic Census to explain the new firm formation rate of each prefecture in the country. Secondly, the entrepreneurship in each prefecture is indirectly grasped by the measured the fixed effect, and an index of entrepreneurship at the prefectural level is created based on the analysis results. Thirdly, we create indexes of attitudes for new firm formation, social capital, diversity, tolerance, and business network at the regional level based on economic and social statistics. Fourthly, the components of entrepreneurship at the regional level are clarified by analysing the relationship between entrepreneurship and the above indexes. Finally, we derive policy implications that contribute to the promotion of new firm formation based on the analytical results.

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Public Pensions and Regional Distribution of Income

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Abstract

The reduction of income inequalities among regions may be the result of implementing political measures oriented to promote economic growth or developing social policies oriented to the redistribution of income. Pension systems are clearly the main social expenditure in the vast majority of developed countries. In 2016, the average for the countries in the Monetary Union represented 12.3 per cent of GDP (EC, 2018). Moreover, this ratio is expected to increase due to the ageing process of the population. Therefore, the relative weight of retired population income will increase together with its relevance for the economic behaviour of the geographic regions inhabited. Empirical evidence, however, little attention has focused on the impact that this social expenditure may imply on the regional redistribution of income. The aim of the present contribution is to use the Spanish pension system as a study case. The Spanish pension system is of particular relevance for two main reasons. First, for it being one of the OECD countries with highest regional differences. Second, because public pension system is the main source of income for retired population. Additionally, Spanish ageing process is one of the most intense in the European Union. In order to reach the objective, we consider the two main pillars of the Spanish pension system. On the one hand, the main PAYG component in which the pension benefit is the result of averaging and weighting different features of the labour career of the individuals. On the other hand, there is the minimum complement design to increase pension benefit to those pensioners drawing a benefit consider lower than a defined "minimum pension". This instrument responds to the nature of the first pillar of pension systems. The analysis is implemented in two steps. In a first step, we account for the regional income differences stemming from the main PAYG component. Less developed countries show lower pensions than more developed ones. In sum, this first result points at the inexistence of income redistribution among regions different from those mentioned above. The second step allows estimating the effect of including the complement to minimum in the final pension benefit. Comparing the results from the estimates, we conclude that there is a regional redistribution of income. The discretionary instrument, in the case of the Spanish pension system is, then, associated to the existence of a minimum pension. Additionally, we show that these effects are asymmetric. The improvement for the average retiree in more developed regions is found to exceed that on the less developed countries. This result is due to the method used to define the minimum pension, which does not include any regional singularity as prices or income. Defining different thresholds or minimum pensions attending to regional dimension could be an adequate policy intervention to guarantee individual income equity together with regional redistribution of income. This advice is in line with that made by some authors defending the establishment of regional thresholds to better serve the social necessities of retirees.

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High Speed Rail and Spatial Equity in Developing Countries: The Case of Turkish High-Speed Railways

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Abstract

The twenty first century is characterized by the current and future extension of the high-speed rail (HSR) network in developing countries. According to the UIC (International Union of Railways) data there are 47,560 km of high-speed lines (HSL) in the world, 12,892 km were under construction as the date of 1st October 2019. More than 40,000 km were planned worldwide for completion by 2050. The twenty first century is characterized by the network extension in developing or emerging countries (China, Turkey, and Morocco) and by projects in many others (India, Brasilia, Malaysia, Egypt, etc.). If lines are already in operation in China, Turkey, Morocco and others are built (Iran) and projects exist in numerous countries (Brasilia, Malaysia, Egypt, etc.) that is, in very different socio- economical contexts. High Speed Railway systems (HSRs) are an alternative way to the aviation sector and

road transportations from the point of time reduce, cost and accessibility over distance of 250-1000 km. As it commonly known that HSR improves intra/inter-regional accessibility, enhance the mobility and can induce different travel purposes. When a new High-speed line (HSL) line is constructed, the cities which are located and have stations on the line are therefore gained advantages from these opportunities, because of accessibility improvements. However, can the issue of the potential increase in accessibility and in mobility be addressed in the same way in developing countries which are characterized by larger inequalities than in developed ones? The issue is to know for whom and for what use they are built. Has everybody access to high-speed rail in developing countries? Who can use HSR? Do low income and greater inequalities which characterize the developing countries influence the use of the transport infrastructure? The main issue is linked to the price policy, to the income level and also to the alternative mode of transportation. The aim of this communication is to analyse the link between high-speed line and spatial and social inequalities. After presenting the Turkish' case, we will analyse the HSR from the point of passengers' income, trip purpose and regional accessibility. We will show that the price policy in Turkey and the willingness to serve numerous cities all over the country makes High Speed rail a tool for a better equity.

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Study on the Issues of Innovation in Japan's Rice Industry: Focusing on the strategy of market-creating innovation

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Abstract

Von Hippel et al. (2011) proposed a new innovation paradigm that emphasizes the role of consumers as innovators. In this paradigm, innovation consists of three phases: consumers develop new products for themselves, other consumers evaluate and improve them, and producers enter when market potential is clear. Moreover, Christensen et al. (2019) categorized innovations into three types: sustaining innovations, efficiency innovations and market-creating innovations. They pointed out that while all innovations are important to keeping an economy vibrant, one type in particular 'market-creating innovation' plays a significant role, providing a strong foundation for sustained economic prosperity, because innovation is also a process of organizational learning with dynamic changes in collective cognition.

The purpose of this study is to examine the direction of innovation in Japan's rice policy and rice industry from a long-term perspective based on the consideration of 'backcasting' (Robinson 1982). To this end, we introduce the methods of SEM (structural equation modeling) and cognitive map based on questionnaire survey targeting the Japanese consumers for hypotheses verification in the research. The following results were obtained from the analytical results.

First, the demand conditions for market-creating innovation in the Japan's rice industry are in place and rice consumption will increase if innovation that meets the potential needs of consumers occurs. Secondly, innovation-oriented policies or market-creating innovation strategies to change the cultural beliefs including the perception of producers and consumers about rice cultivation, rice products and the way of rice eating are required. Specifically, Japanese rice market should be transformed from a short tail to a long tail (Anderson 2006). In the long tail part, consumers who are oriented toward innovation will play a central role in discovering new types of rice products, inheriting the food culture related to rice, and creating shared value through communicating and organizational learning with producers and stakeholders.

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Developing a Zone Design Tool for Determining Home Delivery Service Areas in the Groceries Sector

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Abstract

The UK grocery e-commerce industry is amongst the most developed in the world with an estimated value of £11.6 Billion in 2019. It has developed into a highly competitive omni-channel marketplace with consumers shopping interchangeably across a number of channels, including home delivery and click and collect. The rapid rate of growth poses challenges for retailers in developing a store-based home delivery network that is cost efficient whilst also being responsive to consumer demand. This 'last mile problem' in which the retailer assumes the costs associated with delivering to the consumer is most acute in the groceries sector given the relatively high costs of running store-based delivery operations. In particular, retailers must determine the spatial extent over which they are willing to offer costly home deliveries and how best to resource these deliveries using their existing store network. This presents considerable challenges as retailers must balance the need for delivery efficiency and cost minimisation alongside the need to offer a comprehensive home delivery service in order to win and maintain market share. Our research supports retailers in determining and evaluating their store-based home delivery networks. Specifically, we build upon zone design methodology to develop a new approach to determine home delivery areas (HDAs) which meet efficiency and effectiveness requirements. HDAs denote areas served by a single store e-commerce operation. The composition of these areas is influenced by predicted levels of e-commerce demand, the store's capacity to offer home delivery services and further constrained by accounting for the distance to other stores in the network. Current methods of delivery area delineation require manual design and maintenance and due to the rapid growth witnessed in the industry are often not fit for purpose. We build upon automated zone design methodologies (such as those developed for census output zone design) and adapt these into a tool suitable for this retail application. Zone design methods have their basis in population geography such as the creation and maintenance of statistical reporting boundaries (such as output areas in England and Wales (OA)). This project benefits from close industrial collaboration with a major grocery retail chain in the UK. Through this collaboration commercial consumer data is provided to support the data analysis and underlying zone design criteria employed for this project. Outcomes from this project will underpin an improved methodological approach to the design and implementation of service areas for home delivery operations in the grocery sector. This process will automatically generate service areas for home delivery operations with minimal manual intervention. Results will be presented to the retailer to highlight improvements to existing approaches and how the method can be used to model and address a number of scenarios relating to the implementation of home delivery networks, including iterative adaption to competitor activity. The improved methodological approach will have wide ranging business applications has the potential to support interdisciplinary research addressing location analysis problems.

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Effects of Inter-organizational Network on Social Enterprises: Analysis at Organizational Level in Japan

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Abstract

According to the Cabinet Office (2015), the number of social enterprises in Japan is 205,000, the added value is 16.0 trillion yen (3.3% of the total economy), and the number of paid employees is 5,776,000 (13.2%). Generally, social enterprises are facing with a trade-off between economic efficiency and sociality so called "duality" or "dual mission" problem. One of the management strategies to solve duality problems is considered to enlarge the effectiveness of the business, while complementing management resources through the formation of cooperative networks with external organizations.

The purpose of this study is to clarify the mechanism of social innovation induced by inter-organizational network of social enterprises in Japan. First, the analytical framework and hypotheses are set based on the selective literature review of existing studies on social enterprise theory and organizational network theory. Second, structural equation model (SEM) is applied to the piece vote data at organizational level in two prefectures of the "Social Business Network Survey (2010 METI Regional Revitalization Countermeasure Survey)". Third, case studies are applied for the advanced intermediate organizations in the two prefectures to verify the hypotheses.

Based on the analytical results, the following three hypotheses are verified: the organizational attributes and business areas of social enterprises influence the formation of inter-organizational networks (hypothesis 1), diversity and collaborative network formation promotes empathy with related entities and cooperation with social enterprises (hypothesis 2), and intermediate organizations affect the structure and function of network and promote the induction of social innovation (hypothesis 3). In other words, the formation of inter-organizational networks of social enterprises promotes the induction of social innovation through changes in the collective cognition of the region. Therefore, policy implication drawn from this research suggests enhancing the diversity and collaboration of social enterprise networks in order to promote sustainable regional development through the resolution of regional social issues.

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Contribution of Urban Facilities for Regional Sustainability through Museum-like Functions

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Abstract

Regional sustainability is an urgent issue in Japan, where population decline is rapidly progressing. An area cannot be maintained without urban facilities that support various activities. It is very difficult for an area with a population decline to maintain urban facilities because of the insufficient budget. However, needless to say, a budget is required to maintain urban facilities, but citizens' understanding and cooperation are also important. For example, in order to maintain a waste disposal system, it is necessary for people to properly separate garbage and make efforts to reduce waste. Furthermore, it is necessary to provide a budget for maintaining the system from waste collection to the final disposal. These are maintained by the understanding and cooperation of citizens who are the waste generators, taxpayers, voters involved in decision-making, and finally as residents accepting facility locations that are often regarded as so-called nuisance facilities. Urban facilities have multi-functions. They have not only their original functions but also wider functions, which are significantly important for the community, such as symbolizing the wisdom and hardship of the ancestors, cultural assets and local characteristic features. They make up the local landscape and convey the local memories. We think that urban facilities have museum-like functions. And we have been working on grasping the current situation through questionnaire surveys of water treatment facilities and waste treatment facilities. As a result, it was shown that many urban facilities have museum-like functions centering on exhibition education and they play an educational role in the area. There is a significant correlation between these functions and the amount of effort and the number of collaborations. The sustainability of the region, including population migration, population composition, and socio-economic activities, depends on "people". Urban facilities contribute to the sustainability of the community through efforts to work on "people" in addition to their original functions. Urban facilities serve as a base for raising interest in the region. And can nurture human resources which can deal with regional issues and contribute to improving the sustainability of the region. The significance of the museum-like functions of city facilities is as follows. The first is the role of disaster prevention education and environmental education for a wide range of citizens. The second is to convey local memories and lessons learned from ancestors and history. The third role is to provide a place for communication between citizens and city facility managers. For sustainability assessment, indicators such as the SDGs are presented. Education is emphasized in the SDGs, but the evaluation index is based only on school education. The contribution of urban facilities to local sustainability should be appropriately assessed by sustainability indicators. We need to consider assessing the contribution of urban facilities to local sustainability through museum-like functions.

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A note on the empirical identification of sub centralities within cities

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Abstract

Although the traditional Central Business District (CBD) still has the largest single concentration of jobs in most cities, employment has sprawled over space, creating subcenters (SDB). Theoretical models have dealt with this phenomenon, highlighting its effects on wages, land prices, etc. Researchers have proposed empirical procedures to identify the SBD within cities, but no one has become standard in this empirical field. In this paper, we propose a new methodological procedure, based on nonparametric estimators. Our approach does not rely on previous knowledge of the employment distribution and does not use arbitrary threshold values and band sizes. For each cell, we calculate spatial employment averages using kernel functions and distance bands defined by the AIC optimization criteria. We use the quantiles of the distribution of the estimated spatial averages as cut-off values. As a means of validation, we identify SDB for the São Paulo metropolitan area (Brazil) using our method and the method proposed by McMillen and Smith (2003). Our model is more conservative in identifying areas pertaining to SBDs, and presents lower error terms and standard errors relative to those estimated by their methodology.

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Bedforms Characterization of the Bouregreg Estuary Using Remote Acoustic Technique

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Abstract

Bouregreg estuary is located on the Atlantic side of Morocco at the junction between Rabat and Salé. Both present large populations and new infrastructure development. During the last years, remote acoustic technique has revolutionized the way we are able to image, map and understand the riverbed environment. An integrated approach, combining side scan sonar (SSS), echo sounder (ES) and seabed sediment sampling collected with a Van Veen bottom grabber, was performed to characterize subtidal and intertidal dune morphology on the Bouregreg estuary. In addition, morphometric parameters and temporal variability, to estimate migration rate according to the dune type, were analysed. The aim of this work is to improve knowledge about the formation, evolution and present-day dynamics of these bedforms on a mesotidal estuary receiving little sediment input. The results led to the identification of different groups of bedforms. The main groups of bedforms in the area are ripples, 2D dunes, 3D dunes, flat bottom. The dunes are exhibiting different morphological configurations differentiated into straight, sinuous and barchan dunes. The largest dunes of the estuary reach 6 m of heights and 100m of wavelengths. The dunes, mostly asymmetrical in cross-section with a downstream direction, shows an NNW-SSE orientation. The estuarine channel is filled by sandy to muddy sediments. From geometrical analysis of the morphometric parameters, the dunes show no clear correlation between dune height and wavelength as too between dune height and water depth.

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Central-Local Territoriality — But in Moderation: Are Boundary Commissions a Mechanism for Preserving and Minimizing Spatial Inequality?

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Abstract

Does the socioeconomic status and ethnicity of local government authorities and communities influence the potential for preserving or minimizing spatial inequality? The purpose of this study is to develop the concept of central-local territoriality that influence changes in the outlines of municipal boundaries. The study is positioned at the intersection between politics, sociology and geography and is based on mapping and empirical-quantitative analysis of 94 boundary commission resolutions adopted from High Court of Justice (HCJ) land decisions (hereinafter: Land HCJ) from 2003 to 2016, as well as on mapping structural and political affiliations of the municipalities to which the lands were transferred. The main findings point to a mixture policy of minimization

and preservation of spatial inequality. The amount of land transferred to low Socio-Economic Status municipalities has increased, provided these municipalities are located in the center of the country, or have a Jewish ethnic majority, or are politically affiliated with the Minister of the Interior and the ultra-Orthodox right. Municipalities located in the geographic and social periphery that are populated by the Arab ethnic minority and are not politically affiliated benefited to a lesser extent from the right to plan and develop the land's potential. Hence, the theoretical contribution focuses on the central-local territoriality and the potential for preserving or minimizing spatial inequality.

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Nature of Poverty and Inequality in Selected Asian and West African Countries

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Abstract

There has been marked progress on reducing poverty over the past decades. Despite the progress made in reducing poverty, the number of people living in extreme poverty globally remains high. Some West African and South East Asian countries house most of the poor people in the regions. Thus, the following questions have been raised: Has poverty increased or decreased in the South East Asian countries of Cambodia and Laos and the West African countries of Guinea Bissau and Liberia? Has the growth been "Pro-poor"? In order to answer the first research question, the Watts index of poverty has been calculated by assuming the International poverty line at US \$1.9 per day. The proportion of population living under the international poverty line and the mean income of the people below the poverty line has also been calculated. Using these figures, the Watts index was calculated. To answer the second research question, the Growth Incidence Curve (GIC) has been used. It measures whether the inequality of income between the poor and the rich has been decreasing or not i.e. has economic growth benefitted the poor more than the rich or vice-versa. Apart from this, the results of Multidimensional Poverty Index (MPI) have been applied for the countries in order to analyse the impact of poverty on basic facilities. Measures like Gini coefficient is used to look into the nature of distribution of national income.

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International collaboration in green energy technologies: Empirical evidence on OECD and BRIICs countries

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Abstract

The development of environmental innovations has the potential to reduce the environmental impacts of economic activities, by addressing different environmental challenges referring to energy production and distribution, transport, buildings, and waste management among others (Haščič and Migotto, 2015; Fabrizi et al., 2018). Cross- country cooperation in environmental innovations generates sizeable benefits (Haščič et al., 2012; Shapiro, 2014; Haščič and Migotto, 2015), as confirmed by the tendency of countries to collaborate more in climate change mitigation technologies than in other technological domains (Haščič et al., 2012; Kahrobaie et al., 2012; Shapiro et al., 2014). The issue is particularly relevant for the energy sector: developing countries have to engage heavily in emission reduction, but most innovations occur in the developed countries (Bosetti and Verdolini, 2017). Thus, the development of international collaborations is important to stimulate the exchange of knowledge and technology across countries, allowing latecomers to embrace a process of sustainable growth. This paper investigates the determinants of the intensity of international collaborations in energy-related technologies across OECD and BRIIC countries through a gravity model. It focuses not only on the geographical and cultural distance between countries but also on the distance in the stringency of environmental regulation, as well as on the economic relevance of the energy sector and on the revealed technological advantage in energy-related technologies. The gravity model has been used to analyse the patterns of bilateral trade in (Anderson,

1979; Baldwin and Taglioni, 2006; Ceglowski, 2006; Disdier and Head, 2008) and the internationalization of and cooperation in inventive activity across countries (e.g., Maruseth and Verspagen, 2002; Montobbio et al., 2010; Picci, 2010; Scherngell and Barber, 2011; Cecere and Corrocher, 2013). To our knowledge, however, no research exists that has applied such a model to the international patent collaborations in green energy-related technologies. The analysis relies upon an original dataset, which merges time-series data between 1995 and 2014 on green patents and co-patenting activity, indicators of environmental policy stringency, and economic, geographical and cultural variables. Preliminary results show that the distance in market-based policy measures is a positive determinant of cross-country collaboration in green energy innovation in BRIICS, but not in OECD countries. Furthermore, the distance in non-market-based measures also shows a positive effect on collaboration involving BRIICS, however, it acts in the opposite direction for collaborations among OECD countries. Interestingly, technological specialization does not play a role in BRIICS. The paper contributes to the existing literature on green technological development in two ways. First, while scholars have already provided some descriptive evidence on the co-patenting activity in green technologies (Shapiro, 2014; Haščič et al., 2012; Haščič and Migotto, 2015; Walz et al., 2017), we provide an in- depth analysis of the determinants of collaboration in green energy-related sectors across different sets of countries. Second, we put emphasis on the role of environmental policy stringency, assessing the role of the distance in environmental regulation between countries in affecting co-patenting activities in green energy-related technologies (Dechezlepretre et al., 2015; Bosetti and Verdolini, 2017).

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The practices of the management control system at the level of local authorities in the era of advanced regionalization

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Abstract

All over the world, whether in developed or developing countries, decentralization occupies the same space of interest and arouses the same enthusiasms as a social project in order to consolidate local development. Decentralization understood as a technique of administrative organization corresponds, according to Dupuis and Guédon (1991) to "the attribution of a certain autonomy to communities which are administered freely by elected councils, under the control of the government". It therefore implies a transfer of skills from the central level to local authorities. Like businesses, the quest for performance concern also local authorities. For several years, performance has been at the center of modernization and restructuring projects for public organisations, in particular local authorities, with the aim of achieving solid local development. In Morocco, the decentralization process has been initiated since independence, the reform began in a significant way in the local authorities by the adoption in 1976 of the municipal charter until 2011 with the entry into force of the new constitution, then in 2015 with the adoption of advanced regionalization which leads to an administrative division and the adoption of organic laws; Law 111-14 relating to regions, Law 112-14 relating to prefectures and Law 113-14 relating to municipalities. The implementation of these reforms is accompanied by the emergence of new management control practices in local and regional authorities which will be forced to set up an effective management control system to monitor their performance. To implement modern management tools and methods that are used in private organizations and adapted to the specificities of local authorities in order to contribute to local development (new public management). In this research work we will clarify the practices of the management control system at the level of local authorities, its evolution and its impact on their performance. Because of the new strategy adopted on the national level which aims at the implementation and the success of the site of the advanced regionalization. This research project seems interesting to us to deal with, in order to describe the different aspects of the concept of the performance of local authorities and to sketch the different performance tools used in them and see what purpose and mission they meet.

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A grand transport infrastructure for Grand Casablanca

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Abstract

We develop a new, simple but comprehensive social welfare optimization method that maximizes social welfare and finds the optimal mix of demand side pricing instruments and multimodal capacity expansions for a personal transport system. The method also determines the optimal amount of borrowing by the public sector. The optimal solution is compared to the existing configuration of metropolitan Grand Casablanca, Morocco. It is found that the welfare gains of supply side expansion are much greater than those from the optimal demand side instruments.

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The System of Seaports in the Southern African Cone: Hinterlands and Shippers Choices

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Abstract

Ports have historically been critical points articulating shipping and commercial activities between countries and regions. Their importance today is no less than it was centuries ago, but it may have morphed to some extent. Today, ports should not be regarded as isolated assets, but as nodes on shipping networks that may stretch over long distances, across oceans and supporting the global trade activities of territories. Africa, and Southern Africa in particular, has attracted the attention of the international business community as a frontier with great opportunities. Infrastructure is known to be rather deficient and widely believed to hold back the economic potential of the region. Transportation infrastructure has been a particularly weak in this respect. In this paper, we study the port system of the Southern African Cone. We aim to identify the hinterland of ports of the region for the purpose of export to another world region. Focus is on the capacity to handle containerized freight in particular. The analysis includes the econometric modelling of port choices by shippers seeking to export from the region. The model is estimated on data reflecting current logistical operations and trade realities. Factors include ports infrastructure elements, landside transportation systems, oceanside connectivities, and barriers associated with the crossing of national borders. A disaggregated choice model is used to this effect. Results underscore the core drivers of port choice in the region and are intended to serve as a decision-support tool to evaluate the possible responses of the freight transportation systems of the region to alternative future investment scenarios and enhancements of the level of service on a geographically disaggregated basis.

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Sketches versus the new technology's innovation in the creative process

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Abstract

This paper stems from a current post-doc research project motivated for the need to produce more knowledge on design thinking after previous researches developed during my Master and PhD degrees about the relevance of drawing in the conceptual process in Architecture and in Design. The conceptual processes of most designers are based on the development of ideas through its expression in sketches. There is a deep relationship between design and sketching. The fact of nowadays wide use of new technologies doesn't invalidate the important role played by hand drawing within design several areas, as a stimulating instrument when sketching the first ideas, as a catalyst for its development and then as a checker in the critical verification of the several hypotheses. The essential question of determining whether the drawings will be the key of the design process, constitutes the starting point for a postdoctoral research project about the use of hand drawing in the design practice. As the designer has to conceive and develop solutions for specific problems which may be of different nature, sketches

may present themselves as an operative support for conceptual reflection, problem solving and critical analyses within the several phases of the design process. We also can see that despite the innovation that new technologies introduced sketches are universally used as a tool for thinking, planning, and exploring. It is applied by a wide range of people including scientists, mathematicians, engineers, economists, and coaches to help explain, provide instruction, or to register the evolution of ideas. One of the main questions we would like to find answers is if the nowadays wide use of new technologies doesn't invalidate the important role played by hand drawing as a stimulating instrument when sketching the first ideas and as a critical verification of the hypotheses. Through the study of several statements from various authors we intend to investigate not only the permanence of the sketching important role since mid-last century to present, but also its possible use in the future. From this theoretical approach we also intend to verify the relevance of hand drawing teaching in the formation of the future designers, despite the paradigm changes that emerge from time changes. We also want to discuss if sketching may serve as mind stimulus during the creative process phase, using for that a quasi-experience methodology, in laboratory, trying to compare and analyse the brain activity. Based on a survey methodology with two different moments, being the first an inquiry based on a questionnaire applied to undergraduate students, and the second a group of semi-structured interviews applied to designers, to verify the permanence and the importance of sketching in their daily design work, although the constant use and the progress of the new technologies. We aim to obtain answers that could help us to define in a more accurate way the future adjustments on drawing teaching methods for Design courses, underlining sketching survival and relevance facing nowadays artificial intelligence growing importance and innovation.

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Incorporating e-commerce into retail location models

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Abstract

The use of location models in the retail business sector is now well-established. Many alternative methods are in use today (analogue, regression, GIS etc.) but the spatial interaction model (SIM), widely used in regional science, has a proven record of success for a wide variety of product categories (Birkin et al 2017). To date, that success relates purely to face to face activities, modelling and predicting traditional visits by consumers to retail outlets. However, generally retailers are cutting back on store investments, especially large superstores or hypermarkets in the grocery sector. In the UK for example, growing concerns over market saturation coupled with new stricter planning legislation (PPG6) making it more difficult to open large, out-of-town stores, retailers are looking to alternative growth models. These include a concentration on the convenience market for many of the large chains as well as a focus on e-commerce. The latter has now reached 8% market share across the grocery market as a whole. Whilst models may still be useful for helping to locate new convenience stores so far e-commerce has not been built into existing face to face retail location techniques. Yet e-commerce seems to be a spatial activity. First, there are variations in demand which are shaped by geodemographic. Thus, e-commerce is greatest in affluent areas (income is an important discriminator of e-commerce business), but it is also strong in areas of young professionals (so age is an important discriminator too). Second, e-commerce is greatest in more suburban and rural areas where access to face to face stores is more difficult or time consuming. Third, there is also evidence now that the location of stores themselves will influence e-commerce trade, especially by brand. For example, if you have a favourite brand but live far from a store for that brand you are more likely to become an e-shopper using that brand's on-line portal. Given that background the aim of this paper is to add e-commerce into classic location models. This requires three important steps. First, we build and calibrate a classic face to face grocery SIM for the Yorkshire region of the UK. Second, we estimate small-area demand for e-commerce groceries which includes both geodemographic and access to face to face stores (which will be much lower in rural areas). That demand can then be taken out of the face to face model. Third, we then need to allocate that e-commerce demand to the different brands that offer e-commerce by incorporating a new form of distance deterrence term. In the classic face to face model, as distance increases from a store then propensity to use that store declines, other things being equal. However, in the e-commerce model as distance to a store increases then the likelihood of becoming an e-commerce shopper also increases, especially by brand. In other words, we explore the idea of inverting the distance component for e-commerce compared to traditional face-to-face applications of the retail model.

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NEW EMERGING POPULATION AND SETTLEMENT PATTERNS: THE CASE OF SLOVAKIA

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Abstract

The paper's main objective concerns population and settlement changes in the spatial-temporal dimension in the 1996 – 2019 time span. As main methods of the research concentration quantities and local indicators of spatial autocorrelation were used. Achieved results point to the emerging outer city migration circle and inner – rural migration circle in most Slovakia regions on district LAU 1 level. Some of these clustering patterns also became statistically significant. Furthermore, the results show an apparent difference in population redistribution in municipalities between the Bratislava region and the rest of Slovakia; and significant imbalances between municipalities classified by size. Lower and medium-size municipalities (1,000 to 10,000 citizens) become decisive stabilization elements in settlement network formation. However, the current prevailing settlement form is unsustainable, especially in the Eastern part of Slovakia. Conclusively, in current terms, Slovakia is missing decisive territorial-urban policy. The urgency of the large-scale communal reform in Slovakia is inevitable.

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Glocalization of Natural Farming and Regional Development

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Abstract

The purpose of this paper is to examine the relationship between glocalization and regional development by focusing on how natural farming has been transformed and spreading in India. Natural farming is a farming method that follows the principles of no tillage, no fertilizer, no pesticides, and no weeding, which was advocated by the late Japanese farmer and philosopher, Masanobu Fukuoka, who lived in Ehime, in southwestern Japan, in the 1950s. This method is also known as “do-nothing farming.” It is a form of alternative agriculture that does not use any machines, chemicals or biotechnology. Natural farming has been accepted by many in various parts of the world as a means of radical dissent against conventional agriculture and modern civilization in general. The first half of this paper introduces a three-dimensional approach to analysing the mechanisms of glocalization. First, it focuses on the promoters’ efforts. Second, it explores the localities’ backgrounds in which the philosophy and techniques of natural farming were dis-embedded/re-embedded. Third, it regards the entire process of glocalizing natural farming as part of a complex system while depicting unexpected consequences. The last approach is a constructivist or rather de-constructivist analysis. The latter half of this paper details the transformation process of India’s natural farming practices. Although natural farming has been re-embedded differently in various farms in India, a standardized version of natural farming is now gaining greater power with strong governmental support in some Indian states, such as Andhra Pradesh, Karnataka, and Himachal Pradesh. The standardized version, which is known as “Subhash Kalekar’s Natural Farming,” contains many Hindu elements: the role of the cow is essential in its philosophy and techniques. This paper examines how those different versions of natural farming have been contributing differently to each regional development in India.

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Glocalization of Local Government Reform and Regional Development

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Abstract

This paper examines the case where the policy idea of governmental reform is applied in the context of Japanese local government reform. By following the process in which an imported policy idea spreads and is embedded in local governments under the pressure of stagnant economies and demographic changes, this paper tries to capture the phenomenon of glocalization from the perspective of public administration. Since the 1980s, many developed countries have been working on a series of administrative reforms widely known as “new public management”. Local governments, in particular, face the challenge of austerity and retrenchment while managing and steering a variety of public services for their citizens. Under such circumstances, various policy ideas for local government reform are introduced and shared by the global community of academia and administrative practice. Public-private partnerships have long been a major scheme for local government reform, and one of the latest ideas is the social impact bond (SIB). The idea of SIB was born in the United Kingdom in the 2000s, and is understood as a performance-based financial support mechanism utilizing private funds. SIB is now widely adopted by governments in Anglo-Saxon countries. In Japan, several municipalities have introduced SIBs in collaboration with major foundations and banks. On the other hand, Higashi-omi City, Shiga Prefecture, has introduced the SIB scheme to make the subsidy system of the local government more transparent, involving local people, and achieving results that lead to regional development. This unique version of the SIB is largely due to the history of citizen’s activities in the fields of environment and social welfare in Higashi-omi since the 1970s. The purpose of the new SIB, launched in 2017, is to offer the start-up grant for community businesses which tackle local problems such as job training for the young adult who withdraw from society. Based on the qualitative case study on the community-based SIB in Higashi-omi, this paper examines the process by which the new idea of governmental reform was embedded in the individual backgrounds and issues of a certain municipality and discusses the relationship between glocalization of local government reform and regional development.

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German Prisoners of War in Japan and the Regional Development during the First World War

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Abstract

The purpose of this paper is to investigate the effect which the German POWs detained in Japan during the First World War had on its regional cities, especially from the perspective of glocal human movement and the regional development. The war in Europe that broke out as a regional conflict between Austria and Serbia on July 1914 immediately turned into a war on a world scale, and on August of that year, Japan entered into the war against Germany, obtaining its colonies in the Pacific and China. After the fall of the German territories in the Pacific Ocean in October and Qingdao in November, about 5000 German soldiers were captured and sent to the POWs camps built in the Japanese regional cities. The path these German prisoners had taken to Qingdao has several patterns. Professional soldiers and civil servants had resided in Qingdao from before the war, while those who engaged in economic activities in Vladivostok were forced to come there due to the war between Russia and Germany. There were others who resided in other Chinese and Japanese cities and sent to Qingdao for conscription or as volunteers just before the war between Germany and Japan. These Germans had migrated to East Asia and Far Eastern Russia through the German colonial expansion worldwide, had gathered Qingdao due to the outbreak of the First World War, and then were sent to the Japanese regional cities. Such global movement of mankind accompanies the movement of knowledge and goods. In fact, the German POWs had brought various techniques to Japanese regional cities, such as manufacturing methods of sausage and rubber. Moreover, the advent of the German POWs had produced so-called ‘Horyo-Keiki (Boom due to POWs).’ Yet, while the economic and social effects of the POWs had been pointed out, the relationship between these phenomena and regional development has not been examined. What effect did the German POWs bring about on regional societies, especially in terms of their developments? This paper examines the situation of regional development which the appearance of the German POWs in the regional cities brought, in order to understand the relationship between the glocal movement of mankind and regional development.

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Implications of General Relativity Theory for Regional Spatial Interaction Modelling

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Abstract

In the last few years, there have been profound leaps in our understanding of the complexity and spatial dynamics in the cosmos. Several recent discoveries have radically shifted our theoretical and empirical views on the inner workings of the Universe. Perhaps most profoundly, the detection of gravitational waves, along with the first photo of a black hole, have finally confirmed Einstein's theory of general relativity. Accordingly, Newtonian gravity has been rendered passe in certain key regards. In particular, Newtonian gravity does not apply for phenomena in the Universe when there is: 1) extreme mass-energy density, 2) strongly curved dynamic space-time, and 3) mass- energy dynamics with $v \sim c$, where v is velocity and c is the speed of light. In such cases, gravitational dynamics are governed by the principles of General Relativity Theory (GRT) rather than Newton's Law of Gravitation. Using suitable analogies, we explore the extent to which similar properties and dynamics apply to spatial socio-economic phenomena on Earth, with a primary focus on spatial interaction in cities and regions. We hypothesize that the above three cases might pertain to megacities or megaprojects; metropolitan areas containing excessive flux in patterns of spatial interaction and travel times; and, regional systems where volume is at capacity. To test this and other possible analogies, we will consider conducting a meta-analysis of calibrated gravity models in the relevant literature, assessing how the performance of models correlate with these and other pertinent factors. We will also discuss how tests of general relativity used in cosmology might be adapted to assess when a standard Newtonian gravity model is not appropriate for characterizing urban and regional spatial interaction. Lastly, several analytical and computational solutions for GRT, along with a variety of so-called modified gravity models to account for the assumptions behind GRT, have been proposed in the literature. We will explore their relevance for spatial interaction modelling in regional science.

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Waste quantification (macro_micro) in the beaches of the Al Hoceima National Park

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Abstract

Al Hoceima National Park, much of which is marine, faces significant environmental challenges, including solid waste pollution. The pollution is a complex and multidimensional problem with negative implications for the marine, coastal and continental environment. The objective of this study is to characterize and quantify the solid wastes (macro and micro) that accumulate on the 5 beaches of al Hoceima National Park (Bades, Torres, Cala iris, Tala Youssef and Boumehdi). This knowledge would allow enlightening the decision making in order to bring solutions adapted to the reduction of this pollution or its eradication. Two waste collection protocols (micro-macro) were used. The collection of macro waste was carried out on three plots of 100m² each, for each beach; and the collection of micro waste was carried out on 3 quadrats of one square metre each on each beach. Using a 10cm² model, five random samples were taken from each quadrat. The results showed that 69.3% of the collected waste is of plastic type, 13.4% are of paper/cardboard and 13.2% are of organic composition. The main types of products identified among the collected waste are cigarettes butts (11.22%); plastic bottles and plastic caps (9.28%); and 6.01% are polystyrene pieces. Secondary mesoplastics and other primary micro-plastics are the majority of waste. They represent respectively 55.53 pieces collected and 49 pieces (Polystyrene: fragments and balls). These results show that plastic pollution is the main source of solid waste on the five beaches of Al Hoceima National Park.

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Potential impacts of Microplastics in the mediterranean marine environment: Al Hoceima bay case study

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Abstract

Micro-plastics contamination of the marine environment has been the subject of growing concern among scientists around the world. They have been reported to be ubiquitous contaminants in all marine environments all over the globe. Micro-plastics are characterized by their spatio-temporal variability due to sea currents, as well as by their physic-chemical characteristic, on the one hand and they are known by their persistence and their toxicity on the other. Due to their high absorption capacity, these contaminants can facilitate the transfer of hydrophobic pollutants from the water to the biota, in particular Polycyclic Aromatic Hydrocarbons (PAH), and therefore they involve indirectly the trophic chain degradation. It is in this context in which our thesis work lies, which generally aims to assess the extent of pollution of Al Hoceima Bay by these micro-pollutants. This project targets specially various objectives, firstly the identification of micro plastics concentration sites, by distributing the sampling points within Al Hoceima bay, secondly the characterization of micro plastics that exist in the bay, by summarizing their properties, their nomenclatures and their sources, thirdly the quantification of the abundance, density and distribution of these contaminants in this marine environment and finally the environmental impact assessment of Micro-plastics on the marine environment (water, sediment and biota) in our study area. To ensure the smooth functioning of our work, we did a bibliographic study in view of synthesize the various works carried out on the site of our study or on similar sites. Furthermore, we realized a summary of the various methods used to identify, characterize and analyse Micro-plastics. Moreover, we performed a prospective study in order to identify and locate the concentration sites of Micro-plastics inside Al Hoceima bay. During this study, we developed sampling and analysis methods for Micro-plastics in favour of each compartment of marine environment. In this regard, we did several field missions to collect samples from the three bay compartments. Concerning the surface water sampling we used the Manta net and for the sediment sampling we used the Van Veen tipper. Micro plastics samples taken from 19 sampling sites showed various shapes, colours, composition, sizes, surface morphology, abundance and strong spatial heterogeneity. Micro plastics collected from samples were classified into four types: fiber, film, granule and fragment. Some impacts of these micro-pollutants have been assessed through the analyses that have been made in aquatic sediments, surface waters and marine organisms. Altogether, our study provides a better understanding of micro plastic pollution status and prevention policy-making of Al Hoceima region habitats.

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Redrawing of a housing market: Insurance pay-outs and housing market recovery in the wake of the Christchurch earthquake 2011

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Abstract

On 4th September 2010, the city of Christchurch experienced a M7.1 earthquake. The earthquake damaged the nearby townships and the eastern suburbs of the city. This event was followed by a M6.3 earthquake to the southeast of the city on 22th February 2011. This event resulted in intense reserve fault motions which were directed toward the city centre. These earthquakes (and aftershocks) were the most devastating in the history of New Zealand. More than 95% of residences was insured for earthquakes. The earthquakes led to high losses to both the overall economy and insurance industry; up to US\$ 32 billion and US\$21 billion, respectively. Roughly 167 000 dwelling and 73 000 land claims was settled. The earthquake had serious consequences for commercial

and residential Christchurch. In this paper we ask whether or not, insurance pay-outs, as they varied locally in size and timing, had a significant impact on housing market dynamics in the years following the earthquakes. The question is a delicate one, as paradoxically the earthquake created a negative supply shock of houses, which in isolation correlates with house price appreciation. At the same time as the most damaged neighbourhoods may be more at risk for future earthquakes, potential buyers may be likely to look for houses in other less disaster-prone neighbourhoods. So, the supply shock may be offset by a demand shock. At a higher level the pre and post housing submarkets may differ as close substitutes before the earthquake may no longer be in the wake of the disaster. We utilize flexible machine learning techniques to address this contingency and concern. It is natural to assume that insurance pay-outs and their timing, affect local housing market recovery and their internal ranking. Initial analysis indicates that the higher insurance pay-outs tend to give a lower probability for a positive jump in rank for a given neighbourhood. This lower probability is significant even when controlling for earthquake intensity.

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Economic development processes of Central and Eastern European cities

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Abstract

The research seeks to explore FDI-driven transformation and development processes in Central and Eastern European (CEE) cities in the post-transition period. The geographical focus of the analysis is limited to post-socialist states, while the scale of the analysis targets the metropolitan and regional level. Research questions: 1) What common specifics characterize the economic development of CEE cities? 2) Can the existence of specifics indicating unique development paths (i.e. Visegrad Group, Western Balkan states; gateway cities, automotive cities) be verified? 3) What are the consequences of capital city centrality and the role of second tier cities? The first part of the study presents the background of the macro region. In the course of the past three decades, Central and Eastern Europe has witnessed a particularly dynamic transformation process. Central Europe has emerged as a winner of global industrial relocation processes, industrial decline was followed by reindustrialisation, while economic restructuring produced a multi-layered spatial structure. According to Gál and Schmidt (2017), the main specifics of the transition model include a double shift in ownership structure (from state to private, from domestic to foreign) and a double shift in the system model (from state socialism to market capitalism, from industrial capitalism to financialized capitalism). The region's externally driven and financed global economic integration was not the result of bottom-up development, which led to the proliferation of literature challenging core ideas of mainstream theories or presenting their variable geo-economic framework conditions referred to as externally-driven capitalism or the dependent market economy model (Nölke and Vliegenthart, 2009). The second part of the study focusing on the examination of individual urban development paths. While FDI was the dominant foreign capital type in the first phase of the transition (privatization), foreign bank capital took over the predominant role of FDI at the turn of the millennium. The unfolding of this process was spatially uneven since capital cities, port cities and western regions adjacent to EU Member States were seen to provide profitable investment opportunities by investors in the first round. Initially, investments targeted only a small number of cities and regions, hence, economic growth was also concentrated in these areas, providing them a source of relative advantage. The global economic crisis has impacted this trend, without, however reversing long-term tendencies. The penetration of advanced services follows the urban hierarchy and in the bulk of the states this sector is concentrated in the capital city. The dominance of capital cities and city regions is a well-established fact. In smaller countries, or in the case of central location, the role of capital cities cannot be overstated. In addition, there is a substantial difference in size between capital cities and second-tier cities in every respect.

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Innovative Activity over Space and Time - Spatiotemporal Modelling of Innovation Promoting Factors

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Abstract

As innovation and innovative activity are regionally bound and prone to spill over not only locally, their development over time is also not negligible. To show determinants for innovative activity over the course of time and stress the importance of considering time series together with spatial indicators is the matter of this paper. A time-dependent geoaddivitive model is able to factor in linear as well as nonlinear innovation-influencing factors, and consider time and space simultaneously. The dataset used is based on data by the German Patent and Trademark Office and is mined according to location and time of the published patents. All analyses are executed in the timeframe 2009-2016 on the map of German administrative districts (NUTS-3 level). The prevailing analytics follow Bayesian statistical reasoning. Results of the model show that time as well as space are relevant dimensions for investigating innovation in Germany. Theoretically motivated covariates like knowledge intensity, R D funding as well as productivity and openness impact innovation favourably. Population density seems to be negligible, and firm size impacts innovation negatively. Incorporating the spatial dimension leads to increased reliability and interpretability of the model. Including the time dimension is necessary, as the effects suffer from overestimation otherwise. The results allow better formulations of future models for innovation activity and allow improvements in targeting regional innovation policy. For the latter the model shows effects specifically for each region and for each type of determinant, so that precise leverage points can be concluded.

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Myanmar's Manufacturing Exports after the Lifting of Economics Sanctions

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Abstract

This paper aims to evaluate the Myanmar's exports of manufacturing products by using a gravity trade model for ASEAN economies. During the previous military-ruled regime before 2011, Myanmar had received the economic sanctions from western countries such as the United States, Canada and the European Union due to the suppression of human rights under this regime. Since March 2011, however, Myanmar has entered into a new regime of market-based economy with open-door policies under the civilian government led by President Thein Sein and the subsequent government headed by State Counsellor Aung San Suu Kyi. In accordance with the regime transformation, the economic sanctions have been lifted by the western countries since 2012. The critical question then arises whether the Myanmar's manufacturing exports have recovered towards the gravity-trade-standard of the other ASEAN countries for the post-sanction period of 2013-2018. It would be a relevant issue and timing to assess the current Myanmar manufacturing exports under the new open-door regime, in the sense that there have been a very limited number of quantitative studies on Myanmar trade under the new regime, and also that five or six years for the post-sanction period are rather enough to be analysed at a minimum level. The main findings from the gravity trade model estimation are summarized as follows. First, the Myanmar's manufacturing exports for the post-sanction period have been still significantly below the level of the gravity-trade-standard of the other ASEAN countries. Second, the lack in the institutional quality (in terms of government effectiveness) and the high natural resources rents (implying the existence of the Dutch Disease) in Myanmar are identified to be the significant contributors to prevent Myanmar's manufacturing exports from recovering towards the gravity-trade- standard.

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Vietnam's Challenge to Boosting Labour Productivity

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Abstract

Vietnam has maintained a remarkable record of economic growth since the 1990s whose average real growth rate over 1990 to 2018 was 6.8%. A growth accounting exercise shows that growth has been largely driven by non-ICT capital investment. Contribution of total factor productivity rebounded to the positive territory in 2010-17 from negative growth in the decade earlier. Contribution of labour input was almost zero in the same period, partly reflecting the labour participation ratio that is high already. The shift-share analysis of labour productivity reveals that the impact of labour reallocation declined toward the period of 2010-17. This implies the slowdown of labour reallocation from low-productivity sectors such as the agricultural sector to higher productivity sectors. The sustained growth of overall labour productivity over the medium to long-term is crucial for escaping the "Middle- income trap". In Vietnam, workers in the agricultural sector still account for a large share of the total number of workers. This implies the potential to materialise productivity gains by facilitating the labour reallocation to the manufacturing and services industries. Human capital development is key to promoting the labour reallocation, making the most of Vietnam's high performance of basic education.

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Elasticities of Regional Total Factor Productivity in the Colombian Economy

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Abstract

The principal aim of this paper is to evaluate the implicit total factor productivity (TFP) elasticity of each sector in the model by taking into consideration the Colombian regional structure with regard to national and regional output growth, in the long run. In order to reach this goal, a computable general equilibrium model (CGE) was specified: B-MCOL. The database that enables the use of the CGE model is the interregional input-output system for 2015 in Colombia estimated by The University of São Paulo Regional and Urban Economics Lab (NEREUS). The model is formed by productive sector, investors, household, federal government and regional government. There are 54 sectors responsible for production of goods in the 33 departments of Colombia. This simulation can be understood as the calculation of impacts on output growth given an increase in productivity in each of the sectors of the Colombian economy and this exercise will allow to identify from a new perspective the strengths and weaknesses of the Colombian economy that could be used to promote economic policies or restructure ongoing economic policies that no longer have significant effects. Empirical evidence over the years has strengthened the idea that differences in the stock of physical and human capital alone are not capable of explaining most of the differences in income among countries. In this case, the total factor productivity is a crucial element in explaining economic growth. The main objective of this research is to calculate the impacts of increased productivity in Colombia (by taking into consideration the Colombian regional structure) on output growth by estimating the set of implicit TFP elasticities in the context of the model, defining 1% shocks in TFP in each sector in each Colombian department. The sector that most affect national Gross Domestic Product (GDP) is the other services sector, followed by the industry sector. Bogotá is the region where increased productivity has the greatest impact on national GDP. Also, it has the greatest impact in the other regions as well. Almost 50% of the total growth after an increase in productivity is concentrated in three areas. The results of total factor productivity shocks showed that Colombia has a very concentrated economy, both regionally (Bogotá, as capital of the country and city that concentrates the largest portion of the national population, plays a starring role) as sectorally (other services and industry sectors with a significant share of the gross domestic product).

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Fair trade and rural development: assessment of preferences and potential participation of small producers in northern Morocco

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Abstract

Since mid-1980, there has been a growing international awareness that «trade not aid» is one of the most effective tools to reduce poverty in developing countries. It is in this global context that the Fairtrade movement began more than 50 years ago. It starts from a simple observation: rather than providing financial assistance to poor small farmers, it is better to offer them the means and techniques to develop themselves. Indeed, numerous studies have examined the impact of fair trade on the well-being of small producers participating in programs and the willingness of consumers to pay for Fairtrade and other labelled products. However, few studies have examined farmers' preferences for participation in the movement. Our research is part of this framework and proposes the use of an experiment of choice, to examine the preferences of small farmers of olive trees in northern Morocco for Fairtrade standards. The results indicate that small producers prefer long-term contracts, individual and cash payments.

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Retrospective analysis of rural development in Morocco

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Abstract

In Morocco, rural areas are experiencing a revival of interest, in particular with ambitious public policies in terms of rural and agricultural development and natural resource management. In view of its importance, rural areas seem to be the driving force behind all efforts and political concern because of their demographic, social and economic importance. Several sectoral programs have been launched to reduce the gaps in rural areas in terms of infrastructure and access to basic services, such as the National Rural Roads Programme (PNRR and PNRR2), the National Education and Training Charter, the National Plan for the Promotion of Health in Rural Areas, the Programme for the Collective Supply of Drinking Water to Rural Populations (PAGER) and the Comprehensive Rural Electrification Programme (PERG), the National Rural Roads Programme (PNRR and PNRR2), the Green Morocco Plan (PMV). As a result of these interventions, considerable achievements have been made in the area of basic infrastructure. They have made it possible to achieve an accessibility rate of 78% in 2014, a rate of access to drinking water in rural areas of 94% in 2014 and an electrification rate that will rise from 18% in 1995 to 98.6% in 2014. Thus, the school enrolment rate for rural girls in the 12-14 age group was 61.5% in 2014 instead of 39.9% in 2007. Life expectancy at birth increased from 67.4 years in 2004 to 71.7 years in 2010. This paper presents a retrospective analysis of different facets of rural development in Morocco and raises questions about the effectiveness and efficiency of public policy governance, particularly the related axes, the convergence and coherence of plans and programs with the national strategic vision of rural development.

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Rural development

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Abstract

Development has been the subject of so much debate and controversy since each historical period corresponds, more or less, to a dominant theory and a way of defining development. In fact, the Second World War had different consequences in the countries, and it created countries of the North that experienced a period of strong economic growth and countries of the South, who tried after decolonization to build their state and organize a national economy, hence the emergence of the dual concept of development and sub-Rural development has been in the past and is still a place of questioning today because of the objects it deals with. Development has quickly led to the development of a branch called rural development which is local, endogenous, participatory, and multi-sectoral. Rurality today in both developed and developing countries presents new definitions of rural according to different criteria to take account of economic, demographic and sociological developments. The rural area is therefore increasingly segmented into development areas supported by the people who live there, but it remains

very dependent on agriculture. The rural area is then characterized by a great diversity, a regression of the role of agriculture and its relative importance, but the rural world is always more disadvantaged especially in the southern countries. Rural development is also local, within a physical, economic and social space with specific trajectories with a central role for coordination between actors. The exogenous determinants of the transformation process of rural areas are globalisation, free trade and the environmental issue. In rural areas governance presents a major paradigm, in fact in the case of weakness of certain sectors or not visibility of certain groups of actors. Governance is one way of dealing with that. Furthermore, rural governance is a mechanism to create the conditions for multi- sectoral rural development since formal and public structures are sectoral. In conclusion, it can be said that today's agriculture is multifunctional, it fulfils functions other than that of producing agricultural products, it provides other environmental, economic, social, and heritage and cultural preservation functions.

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Land use changes as a factor increasing the vulnerability of the municipality of El Faïd to the impacts of climate change

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Abstract

The rural municipality of El Faïd has undergone significant changes over time because of several factors, the main ones being anthropogenic factors that make it increasingly vulnerable to the impacts of climate change. The objective of this work is to trace the evolution of land use dynamics in the municipality. For this purpose, a diachronic analysis of land use was undertaken by comparing land use between the years 2001 and 2019. The land use maps were elaborated by digitisation using Google Earth images and Geographic Information System (GIS) software, supported by ground truth data. Then a change detection was done using GIS software. The results show that intensive agriculture, which mainly occupies irrigated land with high potential, has undergone a very important progressive evolution. There has been a regression of traditional croplands. These lands have been transformed into intensive agriculture. Other land occupied by traditional agriculture has been abandoned because of the high aridity of the land and the succession of dry years. Forest-covered land occupies a large area of the commune. These lands have experienced a significant regression in terms of area covered and in terms of density. These changes in land use increase the vulnerability of the commune to the impacts of climate change, hence the need to mitigate it and strengthen its resilience and adaptive capacity.

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Climate change impact on spatial distribution of Moroccan forest ecosystems

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Abstract

Climate Change (CC) is one of the extreme factors that threatens biodiversity and affects all organisms and their habitat. It will lead to degradation of the natural environment, ecosystem productivity, food security and could create conditions of social instability. Understanding the impacts of CC on forest ecosystems is a prerequisite for any strategy that underlies their conservation and restoration. This study aims at studying CC impact on two remarkable species of Moroccan forest ecosystems (*Argania spinosa* et *Cedrus atlantica*). It was based on species distribution modelling using the Maximum Entropy approach. Results of this work could contribute to improve our knowledge related to the biogeography and the ecology of these species through identifying environmental variables, which limit their distribution, developing predictive models and characterizing geographical extent of the areas, which is favourable to these species under current and future climate conditions. Predicted potential suitable areas show that large parts of Morocco are bioclimatically suitable for these two species and that the

suitable areas are site specific and will be negatively affected by the future climate. The use of predictive suitability maps of these forest species are valuable tools for developing adaptive strategies in time and space to deal with CC. These results will provide technical and scientific support to scientists and forest managers in order to improve decisions process and to include CC into conservation and rehabilitation strategies to avoid any future extinctions of these hotspots of national biodiversity.

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The spatial dimensions of greenhouse gas removal technologies to address climate change: a critical assessment

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Abstract

The complex socio-technical challenges associated with meeting the goal of Paris agreement to limit global temperature increase to 1.5 °C create a policy and academic interest for the development of large-scale solutions to remove greenhouse gas (GHG) emissions from the atmosphere. These so-called GHG removal technologies (GGRT), also known as negative emissions technologies (NETs), represent a potential climate engineering method to remove GHGs from the atmosphere through enhancing and expanding existing natural (land or ocean) carbon sinks or creating new sinks and carbon sequestration options (IPCC, 2014; Royal Society, 2018). The environmental performance of GGRTs to date have been analysed using different methods such as material flow analysis and life cycle analysis (for a recent review, please see Goglio et al. (2020)). Life cycle analysis (LCA) is a standardized framework by ISO-14000 (ISO, 2006a, 2006b) and by the International Reference Life Cycle Data System (ILCD) handbook (European Commission, 2010) to assess potential environmental impacts and quantify resource use related to a product or a service their supply chain and entire life cycle of the product, “from cradle-to-grave” (Guinée et al., 2002). Using an inventory of inputs (resources required such as energy and materials) and outputs (products, waste and pollutants emitted) through all stages of the production cycle, it is considered as a powerful tool to assess the environmental performance of GGRTs (Klein et al., 2015; Plevin, 2017). A variant of LCA, consequential LCA (CLCA), takes into account the interdependencies between environmental performance of a technology/ product and the market dynamics. CLCA describes changes in physical flows and it predicts how environmental performance would evolve in response to market changes (e.g. increase or decrease in demand) within the system boundaries (Weidema, 2003). It consists of analysing substituted systems rather than just the actual system under study. Whilst capturing these feedback effects between a technology’s whole life cycle and economy are important, how these interactions evolve as a technology matures is largely ignored. Drawing from innovation studies and using a selection of GGRTs, the aim of this paper is to address this gap. More specifically, the objectives of this paper are three-fold: i) provide a brief description of the contribution of selected GGRTs to address climate change; ii) identify the supply chain of the selected GGRTs, and iii) offer a critical assessment of how supply chain and maturity of these technologies are characterised in CLCA approaches. Taking into account their differences in technology readiness levels, the analysis focus on the following GGRTs: Soil carbonation, enhanced weathering, bioenergy with carbon capture and storage (BECCs) and direct air capture.

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The Moroccan protected area network toward the integration of biodiversity in territorial development

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Abstract

Historically, protected areas have been created ad hoc with the aims to a strict protection of isolated areas devoid of human activities. However, recently, conservation strategies have evolved towards integrating biodiversity issues into territorial development. In this spirit, Morocco carried out between 1993 and 1995 a national study that identified a network of 154 sites of biological and ecological interest, including 10 national parks. This

network is currently the backbone of the Protected Areas Master Plan, which includes representative samples of the country's natural ecosystems. This master plan aims to harmonize conservation and local development, while placing protected areas at the service of the natural resource management and spatial planning. Based on the categories of protected areas proposed by the International Union for Conservation of Nature (IUCN), Morocco has the opportunity to appropriate some of these categories, so that they meet precisely a set of the territory development objectives through the adoption of five categories: National Park, Natural Park, Biological Reserve, Nature Reserve and Natural Site. The choice of these categories is based on the application of a gradient ranging from the strict protection of certain sites to spatial management enabling a set of development objectives. Thus, the aim of this paper is to present the particularities and originalities of the context of protected areas in Morocco, the constraints and issues of biodiversity conservation and strategic guidelines for their development for the benefit of local communities.

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Results Based Management: RBM: An Antidote to Program management

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Abstract

Results-based Management (RBM) is an important concept in the strategic system approach. It is systematic coalesce of efforts consciously made to achieve a desired result. It is a management approach purely shaped by the results. This study seeks to explore RBM in strategic system approach through the analysis of a life case study. This section discusses the results-based management logical framework and the theory of change. The logical framework of RBM evidently resides on the structured, logical model, which identifies the expected outputs and consequently the inputs as well as activities required to accomplish the outcomes. The logical framework is structured around five items: assess, think, plan, do and review. The philosophical assumptions underlying this study are based on critical realism. This study seeks to establish the mechanisms applied in results-based management and the structures that are required via a life case study of the United Nations Organizations. In critical realism ontology, three aspects are considered, the real, the actual and the empirical. To understand the application of RBM in the case study, this study combines all the three aspects of an insightful analysis. The study draws important lessons in the implementation of results-based management model stemming from the introduction of changes in the RBM framework and the incentives for motivating the management to adopt results- based management. The study notes the existence of RBM on policy papers, but there is the minimal impetus to implement it practically despite its potential benefits in achieving the organizational performance. In occasional cases where the framework is implemented, there exists an inadequate degree of inclusivity, participatory and enabling environment. The life case study focused on the United Nation Organization and the modalities for the implementation of RBM. As a critical step in the evolution of logical framework approaches, RBM attempts to respond to some issues of the Project Cycle Management (PCM) and Logical Framework Approach (LFA) methods. People often ask what the difference is between PCM or LFA and Results Based Management. In a sense, RBM is PCM done right. It provides more tools and directives on what should be done to ensure that project design is performed in a participatory way, and to make sure that one takes into consideration any assumptions and risks. In conclusion, this work has explored the concept of results-based management as a management approach that targets at the improving results in a three-thronged model constituted of Short-, medium-, and long-term types of results, outputs, outcomes, and impacts. The concept is particularly prevalent in the public and not-for-profit organizations. The study has focused on getting insight on the results-based approach in program management and its application in a selected case study. The study explored the application of RBM in the United Nations Organizations such as UNESCO, UNDP among others with a focus on the global, regional and country-based implementation of RBM.

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Endogenous growth policies for lagging cities and regions

Danny Czamanski

Abstract

Economic disparities among cities and regions persist and in some cases are increasing. This is contrary to neoclassical growth theory that suggests that eventually agglomeration processes are subject to diminishing returns causing disparities to disappear. The New Economic Geography theory suggests that agglomeration accelerates innovations and that it diffuses and spreads out from the economic core to the periphery (Fujita and Thisse, 2003). However, the Lucas paradox points out that contrary to the above, capital does not flow from rich to poor economies (Lucas, 1990). To promote development of lagging economies, extant policies focus on the lagging regions and attempt to create conditions that are attractive to the immigration of capital, labour and above all knowledge. The failure of these policies led Iammarino, S., Rodriguez-Pose, A. and Storper, M. (2019) to propose a strategy that takes into account the state of local institutional infrastructure and is termed place-sensitive distributed development policy. We study a variety of policies in the context of self-organizing economy in a prolonged far from equilibrium state. We utilize a dedicated agent-based model with local positive feedbacks that tend to possess a multiplicity of asymptotic states or possible emergent structures. Our model includes several types of agents including, firms that make decisions what to produce and whether to hire additional workers and individuals that make decisions whether to migrate and become entrepreneurs as an alternative to working for existing firms. In the spirit of the adjacent possible, immigrants have better chances to boost innovation, and therefore a firm receiving new employees have a higher chance to realize the next big idea. However, innovation also decays with time.

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Sustainable measures in hotels analysed from the demand side

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Abstract

Tourism, and especially the hotel industry has a huge impact on the environment. While revenues and the number of jobs in tourism are significantly increasing yearly, the negative impact on the environment is growing as well. Hotels have become more conscious over the last two decades, due to the legal obligations. In the point of view of marketing, it is very useful to introduce the guests to technological processes which a hotel operates. However, developing an environmentally conscious approach is a long-term process that must also function as an element of organizational culture. We can say that all tourism businesses have activities and impacts which are harmful to the environment. There are number of papers which investigated how, with which methods and tools the hotel industry could reduce its environmental footprint. The purpose of this study is to investigate the "green" hotel experience from a guest perspective, from the demand side of tourism. The aim of the research is to find out how much the guests are eco-conscious and responsible, if they take into account the negative environmental impacts of their travel. The research examines the extent of the guest experiences' decline while using different eco-conscious tools in hotels and whether guests are supporting green solutions at the expense of the decreasing of guest experiences. A survey was conducted among the guests of a four-star city hotel to find out the importance and disturbance of sustainable measures at a hotel. Based on the responses of the questionnaire, it is clear that guests are rather eco-conscious and they also consider what green activities and actions the hotel is pursuing. Based on the research the following conclusions can be drawn: hotels have a great responsibility for the "green" hotel issue. The guests will always be more eco-conscious at home than at the hotel, but this can be changed on purpose. The first mission is to make "green" the hotel's long-term strategy, which requires the commitment to the environment from the particular manager/owner.

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Risk assessment of gully erosion by Multicriteria analysis (Rhéraya watershed - Western High Atlas)

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Abstract

The Moroccan territory is 93% dry and where land degradation is fundamentally an environmental risk. It happens particularly in the mountainous regions of the High Atlas which are on the fringes of development and economic growth. This could take on disproportionate magnitudes under the combined effect of natural and anthropogenic drivers; the consequences are often exacerbated by inadequate management and exploitation systems of available natural resources. Gully erosion is the most active and harmful to the soil and the population's assets in mountainous areas (e.g., Rhéraya watershed in Western High Atlas). Preventing this degradation dynamic and correcting its symptoms would help mitigate the vulnerability of the local population and strengthen the resilience of socio-ecological systems. Reducing the risk of soil gully requires the use of decision support tools to make a complete diagnosis and identify priority action areas according to their severity level. The present study aims to systematically classify on an ordinal scale the risk of gully in the Rhéraya watershed. Risk is estimated as a combination of hazard and vulnerability. These two components have been estimated using aggregative indicators using multi-criteria analysis (MCA) of various biophysical (precipitation, land cover, lithofacies, slopes, aspect) and social factors (human issues, infrastructure issues, economic issues) related to land degradation risk. The approach is inspired from the SCALES model (Spatialisation d'échelle fine de l'ALéa Erosion des Sols/large-scale assessment and mapping model of soil erosion hazard), the multi-criteria analysis AHP (Analytic Hierarchy Process) and spatial modelling techniques (GIS). The main results lead to a systematic classification of the territory with a focus on ravines as regards of the risk that they constitute for the environment and the local population assets. The developed model could be used as a spatially explicit information system and as a catalogue (Atlas) of dangerous ravines for sizing torrential correction thresholds and identifying their localization. It also serves as a tool to build defences and soil restoration strategies to protect the environmental goods and services and enhance the resilience of hydro-ecological system.

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Management of risk in tourism

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Abstract

The tourism industry in Morocco is a fairly important economic sector; good year bad year he represents 8% to 10% of the country's GDP. The Moroccan state has always relied on tourism as a lever development producer of wealth and creators of jobs. In terms of tourism, Morocco has remarkable assets: its climate, its specific culture, its imperial cities and its geographic position. We should also underline the strong dependence of Moroccan tourism on five major European countries. Certainly, there seems to be some mitigation of the political risk associated with the Moroccan destination for French, English and Spanish tourists; tourists from Germany and Italy remain sensitive to this phenomenon. However, the Moroccan tourism sector remains highly vulnerable and dependent on demand foreign, mainly European. It is a sector at risk par excellence, because its evolution depends of the economic, political, security, climatic and health situation both at the national level internationally. The Effects of the Two Golf Wars, the "Arab Spring" and the Terrorist Attacks perpetrated in Europe or in the Maghreb countries are widely felt by Moroccan tourism. Added to this are the effects of climate change, which is hitting the territory hard. National; floods, floods, landslides, collapse of old buildings, more and more recurrent drought, without forgetting the seismic risks to which are exposed many regions of the country are all factors that can disrupt at any time, even deconstruct tourism which constitutes the main economic base of many Moroccan cities. However, the various economic development plans that Morocco had known since its Independence, as well as tourism sector strategies (Plan Azur for example) have not attached great importance to the tourist hazard which can occur at any time. Hence the need to adopt a new approach based on knowledge, forecasting, anticipating and managing tourism risk. It's Tourism Risk Management (or management of tourist risk). At a time of advanced regionalization, the Regions, each in relation to its natural and cultural specificities, its strengths and its structural weaknesses and through documents of territorial planning such as SRAT and PDR, but also tourism companies present in the territory are obliged to anticipate and prevent all kinds of risk: natural, technological, economic and financial, socio-political and security. Research objective: The objective of the thesis is to understand the management processes of the management planning of risks in a vulnerable economic sector such as tourism, their identification, their analysis, the planning responses to risks, as well as monitoring and controlling them as

part of a territorial and regional development project. **PROBLEM:** The strong dependence of Moroccan tourism on the international market has made it a vulnerable sector subject to economic, financial, political, security and now economic fluctuations climate. The central problem that will guide this research will consist in answering the following question: What approach and what device to put in place in a tourist region in order to know, anticipate and manage risks?

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A normative perspective of rural-urban development

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Abstract

The development endowed by digital intelligence is acting in a multi-scalar space. Highlighting the positive repercussions of digitalization leading to a better allocation of resources and to predictive risk management and analysis, particularly of the environment, is an important issue. Several scientists including institutional sociologists who are interested in the subject of development evolution and its impact on changes in human behaviour, institutional standards and rules of the game. An emergence of negative externalities (example: the degradation of environmental quality) is always possible in an uncertain dynamic since it is difficult to predict long- term sustainable development and assurance of urban-rural development. Two different worlds, urban-rural, one based on technology, digital and the ultimate resource which is human intelligence and the other on labour capital and on relatively traditional human practices. Risks of deterioration, of non-adaptation to uses, especially rural ones, and of privatization can take place. The question we are addressing in this study is what is the optimum, a balance to which we can innovate without damaging ecosystem services?

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Contributing to the assessment of land use dynamics in national parks Ifrane and Tazekka

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Abstract

Since protected areas are the most effective way to worldwide protection and conservation of natural resources, and performing tool to encourage and bring the success to sustainable development, the High Commission for Water and Forests in Morocco, work by all means to ensure rational and efficient management of those areas including national parks. Nevertheless, despite their status, the protected areas and in particular the national parks are experiencing a degradation and a regressive evolutionary dynamic of natural resources. Which makes it necessary to assess their conservation effectiveness. The work is based on Ifrane and Tazekka national parks and consists in evaluating their effectiveness based on four indicators: The land use and land cover changes; the land degradation; the biodiversity state at the hot spots of the parks; the land scape structure dynamics and habitat fragmentation. The work consists on mapping land use land cover changes in the national parks from the year of their creation till now based on remote sensing technology. In addition, the use of the Trends. Earth tool will make it possible to assess land degradation which is an indicator of the SDG number 15 which aims to conserve terrestrial ecosystems, based on the three sub-indicators provided by the 2030 agenda, namely net primary productivity, land cover and soil organic carbon stock. The assessment of biodiversity at the parks level is carried out at the level of the hotspots of the parks, which are the (PNA) Protected Natural Areas Tamrabta in Ifrane and the one of Tazekka in Tazekka Park. The study of biodiversity at PNAs through the quadrat point method is associated with a stratification based on forest population and cool and warm exposure. The calculation of various diversity indices will indicate the wealth and diversity state. The analysis of the landscape structure dynamic of forest formations and matorrals at the level of national parks via Fragstats tool will bring out the level of fragmentation of habitat.

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Effect of land use and vegetation cover on the organic carbon stock in the mountains of the Moroccan High Atlas

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Abstract

Morocco, like many other countries, faces the challenge of increasing its GDP while reducing its CO₂ emissions. In such a context, the sustainable management of soils in forest ecosystems and agrosystems to increase the organic carbon stock in soils by sequestering CO₂ is essential. Enriching the soil with organic carbon is essential for sustainable soil management, to adapt and combat climate change. In the mountains of the Moroccan High Atlas, the forest ecosystems, naturally subject to difficult climatic and edaphic constraints, are rapidly degrading under the effect of human activities. The objective of this work is to make a comparative study of the carbon stock in the different states of degradation of forest ecosystems and agrosystems to highlight the role of these systems in the storage of carbon in the soil. Four hundred and six samples were taken at different depths (0-10, 10-20 and 20-30 cm) for different land uses, and the bulk density and organic matter content were determined. The carbon stock in the first 30 cm of cultivated soils was 45.02, 13.22, 54.47 and 64.62 t/ha respectively for irrigated cereal, rainfed cereal, mixture cereal-arboriculture and arboriculture. In forest ecosystems, the carbon stock was 47.04, 50.18, 26.15, 59.37, 25.00 and 25.80 t/ha respectively for *Quercus rotundifolia*, *Tetraclinis articulata*, *Juniperus phoenicea*, mixture *Quercus rotundifolia* - *Juniperus oxycedrus*, *Juniperus thurifera* and reforestation of *Pinus halepensis*. Arboriculture makes it possible to store a significant level of organic carbon in the soil. *Quercus rotundifolia*, *Tetraclinis articulata*, mixture *Quercus rotundifolia* - *Juniperus oxycedrus* forests, although degraded, contribute significantly to the storage of organic carbon in the soil in the High Atlas of Morocco.

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Assessment and valuation of ecosystem services at a watershed level- the case of Beht in the middle atlas of Morocco

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Abstract

The upstream Oued Beht watershed covers an area of approximately 1,810 km² and it is home to the best natural ecosystems of the central Middle Atlas Mountains. It provides a large number of ecosystem goods services, namely: wood, aromatic and medicinal plants, fodder, and a large variety of other services such as: recreation, water and soil conservation, carbon storage, etc. However, these ecosystem goods and services are considered gifts of nature offered for free and therefore suffer from irrational exploitation by a large number of people with multiple and divergent interests. Associating monetary values to these goods and services will contribute to the sensitization of their importance to human wellbeing. Several valuation methods can be used to assess their values. This assessment will contribute to take into account the ecosystem services during decision-making processes and for consequence the preservation of the natural ecosystems. In this study, we try to assess various goods and services at the river basin level using revealed preferences or stated preferences evaluation methods. This evaluation aims at supporting and redirecting the objectives set for the watershed development to be in conformity with the requirements of sustainable management.

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Regional Development Implications of Improved Central to South Asia Transport Development: Summary of Recent Analysis by the World Bank

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Abstract

Background: Regional integration of the economies of Central and South Asia has long been stymied by the lack of transport connectivity. Path dependent development of the railroad infrastructure, in particular, has created a situation where the economies of the former Soviet Central Asian states have negligible trade flows with South Asia despite the formers' large resource supplies and the latter's massive consumer market. In addition, the decades-long instability of Afghanistan, which serves as the principle gateway linking Central and South Asia has inhibited infrastructure investment to improve connections. In the last few years, the planned construction of the Mazar-e-Sharif to Herat railway has served as the beginning of a larger project for regional connectivity. The government of Afghanistan has coordinated with the World Bank to engineer a series of rail connections to Pakistan, including the new container port of Gwadar and dry ports of Baramcha and Spin Boldak. Given the considerable investment risk, a team from the World Bank has evaluated existing and potential cargo flows with the goal of determining which of these linkages would be economically justifiable. In addition, this analysis illustrates which regions of Central and South Asia would be most impacted by a reorientation of existing supply chains. This paper illustrates the key results of this analysis, showing which gaps in the transport network continue to persist, which options exist for new routes, and the logistical and political challenges of pushing forward with infrastructure investment prior to the time when Afghanistan is fully stable. **Methodology and Data:** Base data is extracted from publicly available sources such as UN-Comtrade as well as from interviews with current shippers and potential future mineral producers. Additional insight on gaps in predicted versus actual trade are identified using a revealed comparative advantage (RCA) analysis using data from World Integrated Trade Solutions (WITS). RCA is used to compare Central Asian States' existing trade relationship with South Asia compared to their relations with Russia and China – two states with which trade relationships are already well developed. **Preliminary Findings:** Initial findings show that while existing Central Asia-South Asia flows are inadequate to recoup the substantial investment, a reduction in transport costs could allow a significant share of exports to South Asia that currently originate in China and Southeast Asia to relocate to Central Asia – thereby reorienting regional supply chains and enhancing regional integration. Mineral projects within Afghanistan also have the potential to bolster total tonnage and improve revenue adequacy over time. While investment risk persists, improved trade relationships can aid Afghanistan's incorporation into the global trade system. A major test is in ensuring that Afghanistan receives economic development beyond transit rents. Coupling inland port development with rail gauge change locations is seen as a critical element creating an environment for job creation and value-added services.

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The Role of Digital Technologies in Primary Healthcare of West Bengal, India: A Stride to Efficacy

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Abstract

There has been a recent trend in more than 120 countries to include digital technologies in national policies by 2015 (WHO). The Primary Healthcare in West Bengal, India has taken various initiatives to make primary healthcare accessible, equitable and community driven. This is done in pursuit of achieving a comprehensive healthcare according to Alma Ata in 1978. However, the inclusion of digital technologies in Primary Healthcare is less envisioned in India as it is costly and the concept is relatively new. Importance of digital technologies in primary healthcare is well perceived but how and where it can be applied is still faintly answered. In this context, this paper aims to discuss the scope of digital technologies in improving patient journey, enhancing the capacity building of community and facilitating the monitoring of health services in rural areas of West Bengal. The paper

will highlight how generating alternate location of health centres with the help of digital technologies in the form of spatial mapping can create effective location analysis of health centres. The proposed locations of health centres are efficient to cater to a greater number of patients than the existing ones. This paper will also discuss how digital technologies in the form of applications can improve the efficiency of voluntary health workers i.e Accredited Social Health Activist (ASHA) in emergency medical help, child birth particularly at night in rural areas. The application will also cater to the much-needed safety and security of health workers at night. This paper will also analyse the role of digital technology in monitoring the functions and performances of health workers like Doctors, Auxiliary Nurse Midwives in rural areas. The sample size of this work includes 200 ASHA workers and 591 patients availing primary healthcare services in Khargram Block of West Bengal. The alternative location analysis is performed by ARC GIS software for maps showing buffer zones, overlapping service zones, shortest path analysis and alternative locations of primary health centres. Development of Mobile Application to monitor the activities of ASHA workers and to generate system assisted alert in case of SOS will be done. The Mobile Application will be real time and facilitate collection of data in real time. ASHA's location will also be tracked for all kind of activities. The digital technologies in primary healthcare have already opened up a plethora of possibilities for fast and effective health service delivery system. However, in developing countries like India and its states the percolation of digital technologies is still at its infancy. This paper will be concluded that digital technology will surely prove to be a boon for primary healthcare system in future.

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The geostrategic position of Romania from the perspective of energy resources

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Abstract

The conflict from Ukraine created increasingly tense relations between the states of the European Union amid an energy crisis. For this reason, the article aims to demonstrate how energy resources have become a key element in the security architecture of a state. Therefore, the dynamics of international economic relations require a careful analysis of the geographical position of Romania from the natural resources perspective. It should be mentioned that the authors come from different fields, so the study will have different approaches. The purpose of the research is to demonstrate the importance of energy resources in the security architecture of Romania. In the context of a constantly changing international security architecture, energy resources are still a basic element in ensuring security. Due to the geopolitical and geostrategic events happened on the international stage, the states increased the importance of possession, capitalization, and access to the energy resources. The present study is an interdisciplinary one, carried out by a mixed team, between a geographer and an intelligence practitioner, which makes the subject to be approached from several angles. The objectives of this paper are the evaluation of the resources from the qualitative and quantitative point of view, and the way these resources are capitalized. Also, we will analyse the trade with resources and the policies in the field. In addition, we will also emphasize how the resources are strategically capitalized. The documentary sources were verified for a high degree of credibility and aimed at scientific works of geography, economy, law; visual materials (maps, graphs, sketches), legislative documents and public statements of the people in the field. The statistical data were collected from the website of the National Institute of Statistics and EUROSTAT. We used bibliographic methods for collecting information from both printed (books, scientific papers) and electronic formats (scientific articles, online newspapers). For texts, we used the method of semantic analysis and the message contained, according to criteria such as credibility, relevance, objectivity, accuracy, completeness. Also, the cartographic method was used to make the cartograms. The research started from the premise that the development and stability of a state depends exclusively on the management of these resources. Given the importance of the energy resources from Romania, the present study will highlight how this advantage can be enhanced depending on the way they will be used.

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Geographic Variations in Autonomous Vehicle Interest and Perceived Benefits

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Abstract

Survey based work has uncovered differences in the willingness to adopt and pay for autonomous vehicles. This body of work finds that men and people with higher incomes are more willing to pay for the features of AVs. Analytical results are less conclusive for people of various ages. In particular, research finds conflicting evidence about older adults' willingness to pay for AVs. Aside from individual characteristics that drive AV adoption, another important, but underexplored aspect of work to this point is how the geographic location of people impacts their propensity to adopt and use AVs. To provide some information about geography and its impact on the perceived utility of and the propensity of people to adopt AVs, this study will leverage survey data from the Michigan State of the State survey to test three hypotheses. One, geography impacts people's interest in AVs. Two, geography impacts people's perception of the importance of using AVs to go places. Three, people's perception that AVs will reduce traffic. Regression models are estimated and policy implications of the results discussed. To provide some information about geography and its impact on the perceived utility of and the propensity of people to adopt AVs, this study will test three hypotheses. One, geography impacts people's interest in AVs. Two, geography impacts people's perception of the importance of using AVs to go places. Three, people's perception that AVs will reduce traffic. Regression models are estimated and policy implications of the results discussed.

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How can Complexity Theory and Data Science assist Smart City Governance? A review

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Abstract

'Smart city' is a new label for cities worldwide, aiming to use the information and communications technology and enhance sustainability. Smart cities are adopting 'smart governance' policies in addressing complex social, political, economic issues, with the help of digital means. Data Science plays a key role in transforming a city into digital and smarter systems. As urban issues are nonlinear and dynamic, seeing a city as a complex adaptive system is popular among smart city literature, which requires understanding cities through Complexity Theory. Through the lens of Complexity Theory and Data Science, cities can be better understood, simulated and governed. The transportation sector is the backbone of a city and smarter transportation governance can offer better livability, workability and sustainability in smart cities; therefore, we zoom into smart mobility as an example in smart city governance to illustrate the functions of Complexity Theory and Data Science. This article reviews existing literature on Complexity Theory and Data Science in urban planning, presenting a portfolio of main authors, concepts, theories and their contributions to smart city governance, with a special focus on transportation. The review is aided by bibliometric analysis and key linkages among Complexity Theory, Data Science and Smart City Governance are identified. Complexity theory can provide both the theoretical framework and practical tools for smart city governance. Data science can enhance the management of complex systems in cities through advanced data collecting, processing and modelling techniques. Guided by complexity theory and data science, we conclude that smart city governance requires a theoretical framework of adaptive spatial planning to manage the complex urban systems. This adaptive planning framework can be integrated into dynamic simulation models to better analyse, simulate and ultimately enhance smart city governance. The article also concludes that the integrated framework of adaptive spatial planning and dynamic simulation models has great potential in assisting smart mobility and smart city governance but has rarely been applied in urban practice.

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Cross-border cooperation from the perspective of cultural diversity

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Abstract

"Culture is the pattern of taken-for-granted assumptions about how a given collection of people should think, act, and feel as they go about their daily affairs". Border regions have become a popular research issue in regional science. Cross-border cooperation Austria-Hungary has increasingly become important for the past decades. The cooperation has been studied from several points of view: (1) from the perspective of regional policy which supports competitiveness and/or economic growth, and/or good quality of life in the neighbouring regions; (2) from the perspective of mobility of labour, capital, goods and services that have caused changes in economies of both the neighbouring regions; (3) then certain types of firms have attracted much attention (e.g. multinational cooperation) but SMEs have been neglected in the fields of regional science and regional economics regarding cultural identity or diversity. It is a must to approach cross-border cooperation from the viewpoint of culture because different cultures have different norms, habits, beliefs and behavioural patterns. Talking about the future of border regions in the context of sustainable development does not just mention positive initiatives (the European regional policy focuses on fostering cross-border cooperation with the aim to enhance the competitiveness and innovation capabilities of border regions, the INTERREG V A Austria-Hungary Cross-Border Cooperation Programme is a good example) but challenges and misunderstandings in cooperation due to cultural differences of the regions. Due to the increasing cross-border economic relations in Hungary some researchers deal with difficulties regarding cross-cultural communication and they agree that the national border separates countries, regions, cultures and economics but at the same time connects them creating new opportunities to work together. The researchers and professionals working in cross-border SMEs agree that the growing trend to work with people of different cultural backgrounds provokes strong reactions, positive and negative. It is necessary to manage cultural differences if you work in cross-border business setting because culture teaches human beings to attach meanings to situations, people and things, and therefore influences them in the way they construct meaning when dealing with otherness. The purpose of the paper is to examine the cooperation between Austrian- Hungarian SME-s in cross-border regions in general and the cultural aspect of cooperation in particular. The paper first outlines the characteristics of cooperating SMEs, then it moves on to discuss a piece of empirical research which – through the interviews of twenty business actors from the neighbouring regions – aimed to find out whether and if yes to what extent members of two cultures are aware of the importance of cultural diversity. The results of the investigation indicate that cultural differences may result in misunderstandings, loss of trust or even failure to conclude a deal, nevertheless the cooperation in cross-border regions. Some of the findings are considered worth further investigations and hopefully regional policy makers accept that culture learning is a long and constant process and communication conflicts are rooted in the differences among individuals from different cultures.

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Sustainable strategic design in furniture MSEs in Uberlândia, Brazil

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Abstract

In the city of Uberlândia, Minas Gerais State, Brazil, there are 800 formal and informal SME's furniture companies. The vast majority of these companies are micro, between 6 and 12 workers, of familiar nature. The dispersion of SMEs in the sector over a very large territory and the small size of these productive structures have made it difficult for different actions to change the productive paradigm. The production of furniture in Brazil generates a large volume of wood residues and their by-products due to the cutting process itself and, mainly, by manufacturing waste. Each of these companies generates, on average, 300 tons of waste per month composed mainly of MDF chips and powder, i.e. about 7.2 tons per year, per company. Due to the environmental and legal restrictions to obtain solid wood, most of the manufactures use reconstituted wood panels, mainly of MDF produced from the reforestation wood. The manufacturing processes used by these furniture companies are therefore not sustainable, which configures approximately 22,000 m³ of waste discarded per year on vacant lots

in the city's peripheral areas. These residues are mainly composed of pieces of reconstituted wood (sawdust, chipboard and MDF scraps): most of the furniture industries still use waste in an irregular way. Residues resulting from the processing of reconstituted wood sheets may present some danger when they are not adequately disposed because of the presence of urea-formaldehyde in the composition and the high flammability of the material. The inspection and penalization actions have been ineffective, so it is necessary to rethink the problem involving the generation and disposal of waste from these companies. Most of these small organizations are too concerned with their livelihood, which is why they have not incorporated changes in their production that could lead to a general improvement in the processes, manufacturing methods and diversity of products. This paper presents a sustainable strategic design model for SMEs in Uberlândia which is part of the results of a multi-year research project, aiming not only to minimize the waste generated by these companies, but also to implement sustainability and design practices as strategies to incorporate added value to the developed products. These new products can generate visible economic gains for the companies and employment for the local community. The research project was based on applied research through active research methodology to support project development, with a strong intervention component at the level of participatory design of the different stakeholders and the evaluation process using a focus group.

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Spatial Patterns of Predicted Values

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Abstract

Considerable attention is paid to the spatial analysis of the residuals of predictive modelling. Of course, this is a very important undertaking, especially when considering the model assumptions of certain estimation techniques. However, the spatial patterns of predicted values are just as important for assessing the predictive performance of a respective model. In an ideal world, the predicted values of a respective predictive technique should be able to replicate, within reason, the spatial pattern of the observed values. The 2004 Moroccan census measured the human development index (HDI) for every commune in Morocco, the smallest unit for which data is available. However, when the 2014 Moroccan census was released HDI values were absent, along with the indicators needed to calculate it independently (i.e. life expectancy, income, years of schooling). In order to measure the change in HDI over the ten-year period, this paper uses conventional spatial econometric models (spatial lag & spatial error models) along with the random Forest algorithm in order to make out of sample predictions for 2014 HDI scores at the Moroccan commune level. It is the primary objective to see if, in certain situations, random Forest can outperform traditional spatial econometric models, and in turn discuss the benefits and trade-offs of using such an approach. In addition, Morocco provides a case to explore whether developing (emerging) economies might require a different approach to the empirical analysis of data (i.e. data science). Typical spatial autoregressive models might not work as well as other approaches because spatial patterns might still be emerging as the Moroccan economy continues to insert itself into the global economy, whereas spatial patterns in more developed economies tend to be more clear-cut and well-established where the patterns have evolved over decades. This idea, coupled with the fact that data in emerging economies is often scarce, inconsistent, or non-existent, makes quantitative analysis a challenge and methods borrowed from data science a necessity. After fitting the three respective models, random Forest was shown to have the best fit, as it had the smallest variance in regards to the residuals. However, this does not necessarily prove that it has the best prediction in regards to geographic space, as the random Forest algorithm is inherently aspatial. Therefore, the paper proposes a technique for assessing the spatial pattern of the predicted values of each respective estimation. This is achieved by simulating the dependent variable (i.e. HDI) and subsequently calculating Moran's I on a designated number of simulations (9999 in this case). This process creates a confidence interval estimation of Moran's I for the simulated dependent variable which can then be compared to the observed Moran's I of the dependent variable along with the Moran's I of the predicted values of the three respective estimation techniques. While none of the models perfectly preserve the observed spatial pattern, random Forest is shown to have the best performance.

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Delineating fine-scale urban functional use from Points of Interest data with neural network model

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Abstract

Urban function has been studied in both urban planning and geographic information science for decades. Understanding urban functional use not only provides a geospatial feature for urban modelling but also helps to detect urban problems, evaluate planning strategies and support policy-making especially in highly urbanised and densely populated metropolitan areas (Batty, 2012; Arsanjani et al., 2013). Different from the traditional studies focusing on physical environment with remote sensing data such as land use classification and land use boundary detection, studies now focus on socio-economic characteristics of land/building functional use with detailed and fine-scaled crowdsourced data, i.e. social media data, points of interests and other open-source and volunteered datasets (Crooks et al., 2015; Frias-Martinez and Frias-Martinez, 2014; Zhi et al., 2016). Among these sources, points of interest (POIs) are popularly applied in understanding urban functional use (Niu and Silva, 2019). POIs refer to point-based locations such as commercial property, public spaces, transportation facilities, etc. associated with detail including location, name, postcode, address, and so on. The distribution of POIs and combination between POIs varies in different urban areas. This variation reflects the preference of urban activities and indicates the pattern of urban functional use at a larger scale. Moreover, POIs are highly disaggregated data with precise location and can be applied at a variety of scales. However, previous work neither frequency-based approach nor neural word embedding such as Word2Vec considered the spatial relationship between POIs in the context of the first law of geography. In this paper, we recognised the capabilities of neural word embedding in delineating urban functional use from POIs and introduce neural network model (Doc2Vec) with sentence/paragraph feature input in the context of geographic space. This paper chooses the metropolitan area of London as the study area. This paper employs POIs from Ordnance Survey, which is the national mapping services in for Great Britain. This taxonomy is three levels, including nine groups and 52 categories and 582 classes. For each item in this POI dataset, it contains information such as Identified code, name, coordinates, address, postcode, telephone number, brand, and so on. Specifically, the dataset used in this case study is updated in March 2019 with 420,559 POIs throughout the London metropolitan area. Since this paper recognised the advantage of Doc2Vec model in term of presenting the relationship between POI categories with considering the spatial heterogeneity, we apply the model to POIs data by conducting nearest neighbour query of POIs based on London road network (40,000 random points), POIs sequences construction with local tags, vectorisation for POI categories by cosine distance, evaluation of Doc2Vec and clustering urban functional areas with K-means. The contribution of this paper is to introduce a new data source and a new tool for understanding the dynamics of urban functional use from bottom-up and provide a tool to predict and monitor the impact of urban dynamics.

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The contribution of economic activity and energy consumption to CO2 emissions

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Abstract

The pollutants that contribute most to environmental degradation are carbon dioxide emissions and PM10 suspended particles. In 41 years, from 1971 to 2012, greenhouse gas emissions have doubled, with CO2 accounting for two thirds of greenhouse gas emissions. The aim of this research is to analyse to what extent the excess of CO2 emissions is directly associated with energy consumption or are due to imperfections in production processes of goods and services. This research proposes a microeconomic model that explains the supply and demand of energy, energy consumption and emissions produced by energy consumption and economic activity in the economic equilibrium. The objective of this model is to find from the economic theory causal relationships between energy consumption and economic activity and between emissions and energy consumption. The emissions covered by this research are exclusively those of carbon dioxide, which was selected as the most

abundant greenhouse gas and supposedly the most responsible for global warming and therefore of the possible long-term environmental degradation. The most important purpose of this research is to analyse what part of the total carbon dioxide emissions is associated with energy consumption and which part is associated with economic activity, regardless of energy consumption. In order to carry out this analysis, the model has been applied econometrically on a sample of 20 countries during the period 1995-2015 with annual data coming from the International Energy Agency (2016). Six of these countries belong to the European Union and the rest of the countries in the sample belong to Europe, Asia, America and Africa. The total population of these countries accounts for 61% of the world's population. For the European Union are listed Ireland, United Kingdom, France, Germany, Portugal and Spain are listed. Also figures Iceland as European country. The Asian countries analysed in this research are: India, Indonesia, Saudi Arabia, Iran, Japan and China. Also figures Russia. Some American countries such as United States, Brazil and Mexico are included. And the African countries listed in this analysis are Morocco, South Africa and Nigeria. The five most important emerging countries considered in this analysis are framed in the BRICS block. The application has been carried out using econometric techniques that include panel data. The results of the application indicate that, in general, the process of carrying out economic activity, measured by gross domestic product in real terms, emits more carbon dioxide than the process of energy consumption. This seems to indicate the existence of certain imperfections in the productive processes in the most part of the countries in the sample. These imperfections in production processes generally contribute to emissions to a greater degree than energy consumption, suggesting a duty to improve these processes.

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What's new for understanding and managing people's use of the built environment?

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Abstract

SCOPE: Cities consume over two-thirds of the world's energy and produce 70% of global CO₂ emissions, mainly due to construction activities and buildings' functioning. Urbanization is one of the great challenges of this century, therefore the development of sustainable strategies to manage (and reduce) energy and natural resources demand in buildings is urgent. The way people use buildings plays a central role. Building performances are impacted by how people utilize spaces, maintain them, and adapt them to their changing needs. Today ranges of technological tools make it relatively easy to understand how users' behaviours occur into buildings and cities, and to inform people's interactions with the built environment. However, only few studies investigate users' behaviours in buildings, and consider them in environmental models. Thus, it is interesting to understand how sensors and digital tools can help to reduce buildings' impact by informing, on one hand, the end-users and, on the other, developers, building owners, and facility managers. With the aim to fill this gap, the objectives of this study are to: a) Map available tools, methods and data, including the scale of their application; b) Detect the extent to which tools, methods, and data integrate with one another, and evaluate new information that can be obtained by matching them; and c) Figure out the involved actors: who plays a role in data collection and analysis? Who produces data?

METHODS: Through a literature review, the paper compares existing tools and methods for data gathering on space utilization and user behaviour, in particular: a) The most diffused technological/digital tools for space utilization analysis; and b) The most diffused approaches/methods for energy and resource consumption analysis (i.e. Life Cycle Assessment, Ecological Footprint, and Post Occupancy Evaluation). These are analysed by: the data they rely on, their scale-up potential (from different types of buildings, to cities and territories), the actors involved in their application, and the beneficiary of the information produced.

RESULTS AND PROVISIONAL CONCLUSIONS: Results will show the extent to which different data and methods can be matched to obtain novel insights. It will be discussed how this match can advance extant models to manage users' behaviours toward reducing energy consumption. The article drafts possible protocols of data collection and analysis that can be applied at different scales, and that will involve different stakeholders. This study has the potential to encourage the digitalization of built environment products and processes, which can support real estate management strategies and responsible users' behaviours. Potentially, these could be expanded to the urban scale, through urban planning and crowd management models.

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Assessing the economic impacts of siltation in the dam of Oued el Makhazine

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Abstract

The large hydraulic structures are strategically important, they fulfil multiple functions that sustain the economy of the country. They contribute decisively to supply water sectors, mainly irrigation, drinking water and energy production. They provide also protection against flooding of large areas of the country, improving the environment and water quality. Unfortunately, siltation is detrimental to these large hydroelectric structures, whose consequences generate significant economic losses through negative impacts on the population, sectors and on the state. The Oued el Makhazine dam is not immune to this problem of siltation, because the watershed upstream of this dam has pedoclimatic characteristics that make it particularly vulnerable to erosion. This study aims to estimate economic losses based on the relationship between erosion and yield loss in off-site effects. While for on-site effects, the analysis focused on the costs caused by siltation on storage capacity, the supply of irrigation water, the supply of drinking water and industrial and the production of hydropower. Calculations were made using 2013 as a base year data. The results show that siltation cause relatively large losses in this area. At the scale of the entire Oued El Makhazine watershed, economic losses are estimated at 1.80 billion dirhams, including off-site costs of 1,6 billion DHS and those on-site of 190 million DHS.

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Analysis of the role of the social and solidarity economy in the development and territorial governance of a rural municipality

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Abstract

At a time of globalization and climate change affecting the planet, particularly rural areas, populations have found themselves faced with new economic, environmental and social dynamics that have changed their living conditions. To cope with these changes, we are now witnessing the renewal of forms of social mobilization in these areas. The rural commune of El Faid, province of Taroudant, Morocco, is symbolic of this movement in the sense that its inhabitants have been able to develop, in the space of only twenty years, a large network of 104 associations and 9 cooperatives working for the development of the region and fighting for its de-marginalization. Our research work aims to shed light on the effects of collective action and social transformations on territorial governance and the local development of rural communities in this commune. We have conducted an analysis in two stages. First, we established an inventory of associations and cooperatives in the commune. Then, we analysed the effects of these social and solidarity economy organizations in the implementation of territorial governance and on the development of the municipality. To carry out our work, we adopted three types of tools for data collection and field investigation (documentary research, questionnaires to associations and cooperatives and semi-structured interviews with local actors).

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Economic valuation of ecosystem services in Al Hoceima national Park

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Abstract

Ecosystem services refer to the tangible and intangible benefits provided by natural ecosystems. In many studies' ecosystem services are not taken into account in economic studies. Failure to take this externalisation into account leads to wrong decisions on the use of land and resources. Indeed, the absence of a value indicator with a price has often led economic actors to attribute a zero value to these goods and services of nature at the time of decision making. Additionally, these ecosystem services are subject to degradation due to overexploitation and lack of public awareness of their value. In the Moroccan strategy elaborated by the HCEFLCD for the conservation of fauna and flora, the Al Hoceima National Park was created in 2004 in the heart of the Western Rif. It is endowed with an exceptional physical and biological originality that offers numerous ecosystems providing goods and services (fishing, grazing, diving, bird and dolphin watching, exploitation of dwarf palm and Alfa, beach in summer, dead wood lying,...). But also, this area is at great risk of resource disturbance due to the economic activities of the local population in addition to the behaviour of visitors. The present work aims to contribute to the identification and categorization of the different supply services that the park offers. As well, to propose a monetary evaluation of each service determined according to an appropriate method. The first part sheds light on the monetary evaluation of the supply services according to the market price method. The second part deals with the monetary valuation of biodiversity using the contingent valuation method and the third part is devoted to the economic valuation of ecotourism using the transport cost method.

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Open innovation, third place and Living Lab: state of the literature relating to the new generation of territorial development models

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Abstract

In the new landscape of open innovation, we are witnessing the emergence of strategies, concepts, ideas or organizational forms, which aim to strengthen the role of users and of civil society in responding to diversity and complexity of their needs. In this context, third places, and more particularly Living Lab approaches, are experiencing considerable growth on a global scale in several fields of activity. (Dubé et al, 2014; p. 12). Living Lab approaches have historically emerged from user association practices in the definition and development of solutions inspired by information and communication technologies and are part of the evolution of territorial models of innovation. They bear witness to major transformations in the very conception of the development of territories and of the role that the different types of actors must play in it. It shows social experiments which present new arrangements between these actors and which aim to build conditions which promote the well-being of communities. (Doyon & Al, 2017, p.2). Based on an analysis of the literature and via the "Living Lab" approach, this research aims to examine the contribution of open innovation and third places in terms of territorial development. To this end, we will briefly present the concepts of open innovation and third place before focusing on the main concept of this research, in this case the Living Lab. We will then identify the forms, the forms of contributions of these new approaches to innovation in terms of territorial development.

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Traditional and innovative monitoring methods and tools to improve the management of flows and 'over-tourism' in (world) natural and cultural heritage sites: the case study of the Dolomites UNESCO WHS

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Abstract

The natural and cultural sites recognized through UNESCO programs, thanks to their extraordinary importance and outstanding value, represent case studies regarding tourism flow management in limit-situations and can provide very useful reference examples at a global level. UNESCO, through its programmes (World Heritage Convention, Man and the Biosphere Programme, UNESCO Global Geopark), has contributed to define the concept of world heritage as a value to be shared at a global level, transforming already known places into popular icons that 'every tourist must'. This type of recognition has contributed at increasing the attractiveness of these sites but, in many cases, it has led to compromise the balance between the opportunity and the quality of the visit and the integrity of the heritage. Moreover, this can also negatively affect the perception and willingness of the local communities to accept any new constraints and to actively support the preservation of the Site. Therefore, the overall management strategies of recognized sites normally include medium- and long-term socioeconomic monitoring actions of the effects of the recognition. In many cases, in an attempt to manage tourist pressure in iconic places, are also studied and implemented various methods and tools based on data and information collected from different sources and using different techniques. In the case of the Dolomites WHS the Overall Management Strategy has recently been developed and monitoring studies and socio-economic analysis have been carried out. Special attention was given to visitors, economic operators and inhabitants of the municipalities within and close to the Site. Traditional methodologies and techniques have been used such as qualitative interviews, the use of data from classical sources such as national and regional statistical databases and studies such as carry capacity using consolidated knowledge. In addition, big data analysis, carrying capability study and the use of data from social networks have also been tested. Author aim to present and bring to a common discussion the first results of the analyses carried out and to evaluate the use of different and 'new' sources and techniques to actively contribute to the overall aim of managing tourism-related flows and to tackle or prevent the potential phenomenon of 'over-tourism' in these worldwide but fragile Sites.

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Exploring Renewable Energy in Senegal: The ProGREEN West Africa Assessment

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Abstract

Access to energy plays an essential role in the growth and economic performance of Senegal, mainly through its key development sectors agriculture, industry and trade. Agriculture occupies a strategic place in national policy (development of the green economy, support food security, empowerment of young people and women, etc.). However, the sector faces many barriers linked to lack of energy access, poor quality supply, weakness of mechanization, inadequacy of harnessed water, insufficiency of fertile lands, difficulties in accessing improved and resistant varieties, weakness of the value chain, and others. To address these challenges, the government is investing in efforts to promote renewable energy access with the installation of large Photovoltaic (PV) on-grid plants. Decentralized off-grid renewable energy systems are also gaining greater interest. These off-grid operations have contributed significantly to our understandings of integrated systems, which are the focus of the Energy-Water-Agriculture Nexus approach. This framing examines not only access to clean and affordable energy in rural areas, but also looks at impacts of this on agricultural production, food security, income generation and the security of women and young people. In this context, the Promoting Gains in Renewable Energy (ProGREEN) project explores with a multidisciplinary team of Senegalese experts the main factors that revolve around the development of small-scale renewable energy systems as well as the impact of access to sustainable and affordable energy on the livelihoods of communities in rural and peri-urban areas. This presentation will provide the results of the ProGREEN assessment in Senegal, which demonstrates that the interactivity between access to energy (e. g. solar or bioenergy) and water control enhances economic growth in rural areas and substantially improves social equity, the quality of education, the performance of health services, the development of income-generating activities such as fish farming, gardening, the production of forest fruit plants, transformation of

agricultural products, and more. The results also show the needs and difficulties encountered by the beneficiaries of the projects as well as the prospects to promote Renewable Energy access, especially in ways that benefit vulnerable groups.

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Understanding Small-scale Renewable Energy Transitions in West Africa, the ProGREEN Project

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Abstract

Despite large untapped potential for renewable energy, a limited supply of affordable and reliable energy remains a persistent barrier to development in West Africa. Indeed, despite substantial investments in fossil fuels, the region has some of the lowest rates of electricity access in the world. Only about 42% of the total population is connected, and in the rural areas that rate is much lower at 8%. In addition, rural populations depend heavily on fuelwood for cooking and lighting. This energy vulnerability negatively impacts local economies and social development including health services, agricultural productivity and food security, control of water, agricultural value chains, youth and women empowerment, etc. Knowing the essential role energy plays for economic growth and performance and social equity in the region, countries are increasingly implementing efforts to attain international targets like the Paris agreement, as well as regional policy objectives such as the Regional Roadmap, ECOWAS Renewable Energy Policy (EREP), National Renewable Energy Action Plans (NREAPs), National Energy Efficiency Action Plans (NEEAPs), and National SE4ALL Action Agendas. The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) was also created to support governments in developing and implementing their national engagement towards 2030. As concrete actions to meet this agenda and objectives, countries like Senegal and Burkina Faso installed large scale solar plants to increase the share of renewable energy in the national energy supply. To reach populations in remote areas, a focus has also been placed on the promotion of small-scale renewable energy with the hope of reaching vulnerable groups and bringing significant changes in the livelihoods of local communities. In this context, the Promoting Gains in Renewable Energy (ProGREEN) project has been undertaking an assessment of barriers and enablers to more widespread transitions to renewable energy in Burkina Faso and Senegal and of development impacts of such transitions. In this presentation, I will provide details on the ProGREEN project and an overview of the small-scale renewable energy transitions in both countries.

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Findings and Lessons of the ProGREEN Renewable Energy Assessment in Burkina Faso

Lin Da

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Abstract

In Burkina Faso, communities and industries find many obstacles relating to insufficient supply and access to energy (i.e. 18.83% coverage in urban areas compared to 3.06% in rural areas). These obstacles are intricately linked to the agricultural sector and to water, health, social equity and the economy. Agriculture occupies more than 86% of the population with 34.4% of share in the GDP. Despite its importance in the economy, this sector faces challenges including low agricultural productivity linked to poor water control, poverty of arable land, low rate of use of improved varieties, etc. Approaching these challenges through an Energy, Water and Agriculture Nexus framing is essential for understanding the adaptation and resilience of the agricultural and other sectors in the face of global environment challenges and the energy transition. The Promoting Gains in Renewable Energy (ProGREEN) project with the collaboration of Burkinabe experts is carrying out an in-depth assessment of one facet of this framing, small-scale renewable energy (RE) systems in Burkina Faso. This evaluation aims to identify the factors enabling and constraining factors of the development of RE as well as their impacts on rural

communities. The method adopted is based on a participatory approach starting from a literature review of renewable energy projects initiated in Burkina Faso, followed by interviews with project managers and interviews and group discussions with beneficiaries of these projects. In this presentation, I will detail the results of this assessment including how small-scale energy systems such as solar pumping and especially biodigesters support the different Sustainable Development Goals in Burkina Faso in particular through improving food security, community health, gender mainstreaming, job creation in rural areas etc. Enablers and barriers to the spread of renewable energy, notably the political and regulatory framework, the investment costs, the access to finance and the national norms and standards will also be presented.

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Flash Flood Hazard Diagnosis Based on Geomorphology, Hydrology and GIS Techniques (Case Study of Kert Basin, Morocco)

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Abstract

Of all the natural disasters that hit the world each year, flash floods remain the most damaging and deadly. This study focuses on the assessment of sudden flood risk in the Kert basin based on the detailed morphometric characteristics of the Kert basin and its sub-basins. For a detailed study, a geographic information system (GIS) and mathematical formulas were used to evaluate the linear, superficial and relief aspects of the morphometric parameters. Twenty-five morphometric parameters were measured, calculated and interconnected to produce nine effective parameters for assessing the flash flood hazard in the study area. Two methods were used to assess flash floods and generate flood hazard susceptibility maps. The first method is the El-Shamy approach and the second is the morphometric risk assessment method. Based on nine morphometric parameters that affect the hydrological behaviour of Wadi as a function of concentration time. The mapping of flood zones aims, in particular, at the identification of the fields of flood expansion to preserve urbanization. In terms of natural risks, the absolute prerequisite for information, prevention and protection actions is the proper identification of the risk. The latter is assessed by the evaluation of two notions: "the hazard", the potential for destruction or degradation that represents the natural phenomenon and "the stake" which represents the value of this who is exposed to the incident. The hazard maps produced are intended to help planners and decision-makers develop appropriate plans to mitigate the adverse effects of floods and cope with flood risks.

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Diagnosis of the dams silting in the Mediterranean region in the context of climate change: "Case of the MBAK dam located in the Nekor watershed in North-East Morocco"

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Abstract

Water erosion leads to a reduction in the productive potential of soils upstream and dam silting downstream, leading to a loss of a part of the mobilized water volume and threatening the sustainability of hydraulic structures. The annual silting up of Moroccan dams corresponds to a loss in storage capacity of the reservoirs of about 75 million m³ per year. The changes in land use and climate expected during the 21st century is likely to accelerate the process of soil degradation and erosion. In this context, the Mohamed Ben Abdelkrim Khattabi Dam (MBAK), which was impounded in 1981 and is considered as one of the strategic reservoirs facing this serious problem, was chosen to analyse the silting rate over the period 1981 to 2016. Fed by the Nekor watershed, it is the sole source of water for the city of Al Hoceima and the surrounding urban centres. This paper aims to characterize the specific degradation (SD) of the Nekor through the study of the silting of the catchment area located upstream of the MBAK dam and to analyse the related silting rate as a function of the variability of the two

dynamic factors of water erosion, namely precipitation and vegetation cover. The approach adopted is based on the analysis of the bathymetric surveys of the MBAK dam to characterize the SD and the analysis of the siltation rate based on the characterization of the spatial and temporal variability of the two key factors of water erosion. The land cover dynamics were carried out using Landsat 5, 7 and 8 satellite images, the processing of these images was facilitated by the use of the Google Earth Engine cloud computing platform. The processing results of the bathymetric surveys over a 35-year analysis period (1981-2016) show an annual mean total siltation of about 33.7 Mm³ and a corresponding SD of about 18 t ha⁻¹ yr⁻¹. This study clearly shows the significant influence of the spatial and temporal variability of precipitation and vegetation cover on siltation dynamics.

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Operationalizing disaster resilience in Northern Morocco: a comparative study of composite indicator effectiveness for measuring flood resilience

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Abstract

Serving natural disasters and risk management purposes, resilience approaches aim to understand characteristics contributing to managing the capacity of an urban system to adapt and cope with natural hazards such as floods. The identification of metrics for measuring flood resilience is becoming a robust area of several studies. Many purposes, variables and assessment methodologies were applied. Indices are frequently used as a measurement tool. While getting the same name many index-based approaches for assessing resilience to floods have differences in indicator selection and calculation methodology. Leading therefore for different output scores and different policy implications. These inconsistencies call for more critical reflection on index design and utility. In this regard, discussing and comparing index outputs is an effective approach. Here, the Flood Resilience Index (FRI) is developed and applied at Fnideq, M'diq and Martil coastal municipalities (Northern Morocco) within the same theoretical approach three times. While the Composite Indicator FRI (1) is calculated with a set of indicators and compensatory aggregation technique, the FRI (2) incorporates different indicators and two alternative methods on constructing composite indicators: Principal Components Analysis (PCA) and Self-Organizing Map (SOM), to measure flood resilience. Maps, class rank changes, and correlations are used to realize a visually and quantitatively comparison. Results show that different theoretical frameworks influence highly scores, and the methodology of index calculation used has an even effect on output. The growing trend on resilience assessment could tackle simultaneously the assessment frameworks and validation step of results with transparency and critical presentation of the whole process limitations.

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Spatial justice, resilience and sustainability. Revelations of the evolution of the population hierarchy of the regions of Portugal

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Abstract

The article studies the evolution of the population hierarchy of the regions of Portugal to understand the role of geography, history and related political and economic developments affect the hierarchy of city regions. The work suggests the estimation of resilience and sustainability indicators based, respectively on the standard deviation of the population weight of each city region from the long-term weight of the city region. With the support of the instrumental Zipf's Curve - that relates city region hierarchy with the respective population weight - the analysis shows that there is a growing urban concentration since the sixties of the XX Century, faster during left driven government and the European integration. The approach method also shows that big and small city regions are more vulnerable than medium city regions, that geography measured by remoteness and latitude have a negative

influence in vulnerability and the same happens with the fast growth of sprawling suburbs and changeable port city regions. Non-Sustainability, measured by the distance to the long-term weight of the city-region and its actual weight reasserts the profile of winners and losers of changes in the political economic regime.

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How a pro-equity policy ended-up aggravating the unequal distribution of healthcare resources across Chinese regions

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Abstract

As a black swan, the 2019 Corona-Virus strikes China's unequal distribution and preparation in healthcare resources suddenly and heavily. With this Public Health Emergency of International Concern affecting China and more countries, it's time for us to seriously examine and revisit the essentials of how such unequal distribution has been formed. After two rounds of medical reforms in 1985 and 2009 and the tax-sharing reform in 1994, the current Chinese healthcare system shows the existence of a growing imbalance—a mismatch between government expenditures on healthcare and healthcare resources among cities across regions, which leads to the rising demand for equitable and quality healthcare services. Such a mismatch has created a series of challenges in terms of key medical service indicators, i.e., high-quality hospitals and physicians. We develop a structural equation model (SEM) to investigate the causal relationship embedded in four waves of hospital and fiscal expenditure surveys at the city level from 1985 to 2016. Our objective is to examine the causal mechanism responsible for China's uneven spatial distribution of hospitals and physicians, and how this unevenness has changed with the stated pro-equity objective of the government's fiscal policy. Structural path analysis reveals how medical expenditures have stimulated competition among hospitals and thus aggravated the disparities among Chinese cities in terms of reliable medical services. The SEM results show that China's "industrialization-oriented" fiscal system has contributed to a concentration of healthcare distribution in urbanized areas. Our model shows that the incentive mechanism of central transfer has led to the booming of local hospitals both in number and scale accompanying the rising fiscal imbalance in 1995. From 2005 and onward, we found that hospitals have continued to experience an expansion under China's managed system of medical institutions, which have also exhibited strong influence on the spatial clustering of physicians. The 2010s saw the diminishing effect of fiscal stimulus on hospitals expansion, and the model identifies a nation-wide pattern of spatial disparities accompanying local aggregation of high-quality hospitals and physicians. We conclude it is the hierarchical allocation both in fiscal supply and managed system that on the basis of administrative levels clamp down the equality of healthcare resources, which lead to the resources distribution, as we see, is in the other way round with the vulnerable population who would experience more difficulties in seeking for qualified healthcare resources.

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The Solow Growth Model and Trade: The Latest Empirics for the World and ASEAN Economies

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Abstract

We revisit the relationship at the nexus of innovation, savings, and living standards by estimating the productivity impact of accumulation in physical and human capital. Based on the latest Penn World Table (PWT version 9.1), we found that the augmented Solow growth model remains consistent with the international variation in both the level and growth of worker productivity. While the canonical Solow model still provides a reasonable approximation, the fit with the PWT data is weaker than in previous studies that make use of older and less comprehensive datasets. Furthermore, the evidence indicates that member countries of the Association of Southeast Asian Nations (ASEAN) as a group converge at about the same rate as the rest of the world. That is,

holding accumulation in physical and human capital constant, ASEAN countries grow at the rate predicted by the augmented Solow growth model. We then examine the implications of regional trading arrangements for convergence in standards of living using data assembled from the United Nations Conference on Trade and Development (UNCTAD) and the World Integrated Trade Solutions (WITS). To control for the presence of spatial effects, we adopt a spatial econometric modelling approach that incorporates both spatial lag and spatial error components. Preliminary results from spatial panel data analyses suggest that ASEAN countries tends to benefit from trading with the less developed neighbours while experiencing slower GDP growth as a result of trading with developed neighbours. Our study thus challenges the conventional wisdom touting trade with developed economies as the path to faster growth through innovation and knowledge spill overs. Furthermore, trade agreements with developed economies could actually lead to a slower growth path than a strategy that focuses on strengthening trade links with emerging, neighbouring economies.

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Coming Out of the Woods. Do local support services influence the propensity to report sexual violence?

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Abstract

Sexual crimes against women are severely underreported to the police, allowing for impunity of perpetrators. Observers suggest that a stimulus towards reporting the crime comes from nearby support services for victims of sexual offences -like refuges and advisors. Still, the evidence about the effects of nearby support on the reporting of sexual crimes remains scattered and mainly qualitative. This paper provides quantitative evidence on this effect, by exploiting the uneven geography of local support services which resulted in the UK after the introduction of the austerity program. Findings highlight a positive net effect of the provision of local support services on the victims' propensity to report. The positive effect holds also in the aftermath of a space-neutral high- impact media campaign empowering women to report sexual violence. This evidence relates to relevant policy implication, given that in some countries the austerity-driven cuts to public budgets have reduced and dispersed the local availability of support services, making digital support and/or helpline the only available options in many places.

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Migration and Innovation: measuring the effect of skill-specific flows on patents, trademarks and designs across Italian provinces

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Abstract

This paper investigates the effect of both international and interregional migration data, differentiated by educational attainment, on the generation of new knowledge on the receiving Italian provinces (NUTS-3). The research extends previous analysis focalized on patents statistics by using other intellectual property rights (IPRs), i.e. trademarks and design, to capture different shades of the innovative process. Using a dynamic panel models of simultaneous knowledge production function equations (KPF) between 2003-2012, we employ three separate IPRs as innovative output. As for the inputs, we include, as our variable of interest, the share of international and interprovincial migrants, divided by educational level (e.g. Hunt and Gauthier-Loiselle 2010; Miguélez and Moreno 2013; Gagliardi 2015; Bratti and Conti 2018). The model includes also "traditional" knowledge inputs such as investment in research and development (R&D), human capital endowment, population density, labour market characteristics (employment in manufacturing and services) and the degree of openness of the provinces to foreign markets.

Our results indicate that, when migration flows are broken down by educational attainment, the multi-faceted role of different skills on innovation emerges very clearly. First, as far as international migration is concerned, no positive or negative significant consequences were found on the patent productivity of the destination provinces, a finding that confirms the previous results by Bratti and Conti (2018). Nevertheless, for trademarks and design a positive relationship with highly-educated migrants - and a negative one for medium/low-educated migrants - was found. These differences suggest that the use of other intellectual property rights, in addition to patents, allows to grasp more widely a latent and heterogeneous performance of innovation in the provinces and thus have a better understanding of the consequences of knowledge flows. As for interregional migration, highly-educated migrants had a positive effect on patents and trademarks, but not design. Medium/low-educated migrants had, instead, a negative effect on all three IPRs, suggesting that large inflows of med-low-educated migrants may induce a higher employment of unskilled labour in traditional non-innovative sectors hampering the provincial capacity to innovate.

By providing a more detailed picture of the relation between migration and innovation, this article may help policy makers in their endeavour to find the appropriate migration policies to foster local economic growth and innovation. This is particularly important in countries, such as Italy, characterised by a North-South dualism. Our contribution points also to the fact that using only patents to account for innovation might not be enough anymore. To appropriately account for the quality of the new ideas, policymakers must consider the use of different indicators of innovation as well as differentiating by group and skills of migrant. Furthermore, the empirical methodology can become a useful tool for regional migration policy strategies since the use of the three IPRs are already implemented by the European Commission in their Regional Innovation Scoreboard (RIS) to measure the innovation performance of regions.

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Altruism in the time of COVID-19: We are all in this together, but who is we?

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Abstract

The unfolding COVID-19 pandemic poses the most serious existential threat to contemporary societies since WWII. This is likely to have wide-ranging consequences for patterns of cooperation and social cohesion within and between countries. Crises such as these heighten the tension between individual and collective interests, distilling the essence of a social dilemma.

The goal is to gauge the extent to which people act altruistically rather than selfishly as a function of their exposure to the COVID-19 pandemic, and, more specifically, toward which group such altruism is directed. Our study consisted of two online experiments conducted in the U.S. and Italy to evaluate the extent of altruism in the form of charitable giving, and whether such altruism has a more parochial or cosmopolitan character. In the context of an online survey, participants were given an unexpected monetary bonus and then asked whether they wished to donate some or all of the bonus and, if so, choose to which one of three charitable organizations -one international, one national, and state (U.S.) or regional (Italy) level- providing aid to those affected by the COVID-19 pandemic. Any amount donated was matched by the researchers so that the contribution to the selected charity was doubled. In order to assess the causal influence of construal of the ingroup on prosocial decision-making, our study included an experimental manipulation intended to “prompt” the participant to think about the pandemic crisis in terms of one of the three levels of inclusiveness.

Several patterns in our study are observed in both countries, lending robustness to our results. In particular, the willingness to benefit most the group at the lowest levels of inclusiveness -state/region-, the tendency for people more exposed to COVID-19 to donate more, and the moderating effect exerted by social identity. Nonetheless, contributions to more inclusive groups – national and international – were also substantial and larger in Italy than the U.S., suggesting that inclusiveness may be affected by contextual factors such as the uneven regional distribution of the threat in question, the time of the outbreak, and the nature of governmental response to the pandemic.

Our research provides a deeper understanding of the influence of pandemic-induced trauma on attitudes and behaviour, and seems to infer that even if global effort is constructed to address the current and other ongoing global crises. The preference for helping at the local level (state in the U.S. and region in Italy) should also be considered when designing relief packages and appeals for aid. Many global leaders have lamented the current failure of multi-lateral governance in addressing the spread of COVID-19, let alone facing up to other global challenges affecting our planet. Our findings suggest that whatever global effort is constructed to address the current and other ongoing global crises, it will have to consider the markedly parochial character of cooperation observed in our study.

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Approximating the impact of the congestion effect on users' attitude toward the public bus transport system: the case of Barcelona•

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Abstract

This study proposes to identify the basic features that shape citizens' decision towards the regular use of the bus public transportation. Despite the results of the current literature, income turns out not to be a statistically significant decision factor, whereas education and occupation are. Instead, it turns out that the congestion effect is the key determinants in making the decision to become a frequent bus user. Predictions about the impact of the reduction of congestion on the probability of becoming frequent user of the bus transport system emphasize that bus users with a high level of education and regular commuter in the urban territory are more reactive to the reduction of the congestion effect. These findings open an important discussion about the implementation of effective public policies to support the adoption of the public urban transportation system. Educated persons are very sensitive to the reliability of the public bus service, but to our understanding for other reasons. We previously discussed the potential pollution concerns of this group of people and it is worth noting that the bus fleet in Barcelona is mostly green in terms of source of energy, but the congestion effect may make this service not as reliable as expected. Finally, since income does not have a clear statistical significant impact on the probability to become a bus user, there is an interesting insight to discuss in terms of potential pricing policy for the service. Could a policy tailoring prices to the true trip distance be effective, rather than using a pre-established price criterion based on zoning?

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E-Commerce in South Africa: Business Practices in Customer Acquisition and Retention.

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Abstract

Internet penetration among the general public in South Africa (SA) is around 57% (www.statista.com), a large number for the continent. This has influenced businesses to use the Internet for customer acquisition and retention, but research suggests that issues such as privacy and trust are preventing the rapid spread of e-commerce in the nation.

The internet has made it easy for businesses to collect customer information for personalization purposes, for example, tailor the product to match the customer's need. However, customers do not believe that the data collection instrument, most often a web form, is secure. To overcome customers' privacy concerns, businesses provide policy statements indicating how customer's personal information will be used for business purposes. However, comprehending the legal language of the privacy policy makes it a difficult task for the customer (Zimmer, Arsal, Al-Marzoug, Moore & Grover, 2010: 397). The result, 71% of the customers do not complete web forms and provide the needed information for e-commerce transactions.

One way to engender business trust is by designing a web-form that customer perceives to be in her best interest and feel comfortable in providing the needed information. It is the purpose of this study to design such a web form. Specifically, the question, 'how can behavioural economics principles be used to design web forms that would engender trust in the businesses is addressed.

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Valuing marine biodiversity and ecosystem services: A contingent valuation study in Italy

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Abstract

Marine biodiversity provides valuable benefits to human beings, some of those easily recognized, such as the provision of food, some much less well known, such as climate regulation; yet people lack a direct experience of their economic values since no relevant market exists. This study reports the results of a contingent valuation study to estimate the public's willingness to pay (WTP) to improve biodiversity in some rare coralligenous habitats in the Venetian North Adriatic Sea, called Tegnùe. Coralligenous habitat constitutes one of the most important 'hot spot' of species diversity in the Mediterranean, notoriously affected by a loss of biodiversity as a consequence of human activities such as over-fishing and pollution, sediment deposition, recreational fishing and trawling, diving. A major threat is the increasing frequency of Abandoned, Lost or otherwise Discarded Fishing Gears (ALDFG) at sea. We surveyed a sample of 4000 Italian people and we found that WTP for interventions aimed to improving biodiversity through removal and restoration operations in the area is distinctly higher than the WTP for the preservation and prevention of further biodiversity loss. Our findings suggest that respondents perceive prevention and control activities as disentangled from restoration, the benefit of which can be clearly recognizable in their time horizon, while the benefits of preservation and prevention are perceived as much more ambiguous and less controllable. This study is particularly important because it proves that the aggregate benefits related to the improvement of biodiversity as a result of restoration and conservation activities are significantly higher in comparison to the estimated costs of these activities. Following the real activities undertaken during the project, the investigation, restoration, and removal costs incurred in cleaning up 20 Km² were estimated to be approximately €191,000. Thus, if we suppose that there are similar environmental conditions in all of the sites of the Adriatic Sea, the total cleaning up cost will be around €500,000, while the total benefits can be estimated as €97 million, assuming a discount rate of 5%, a number of families equal to 2,057,227 and a duration of the benefits equal to three years.

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Triggering the Integration of Minorities Residing in a Demographically Mixed Region into High-Tech Activities

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Abstract

This study attempts to identify the conditions necessary to promote the integration of very low socioeconomically disadvantaged minorities in mixed majority-minority regions into technological entrepreneurship and high-tech activities. We also look at how the smart specialization model can be adapted to these situations.

This experimental study was conducted in Israel and focused on the mixed region of Beersheva-Rahat and the surrounding Bedouin dispersion, where the minority population is ranked extremely low on the socioeconomic scale – on the lowest level.

The current study is a continuation of an earlier study conducted in the mixed region of Haifa-Nazareth, where the minority is ranked higher on the socioeconomic scale. The findings in that case show that smart specialization

in mixed regions requires a pre-phase of social-relationship and business-network building between the majority and minority populations.

The findings of the present study indicate that in mixed regions with a minority population that is ranked very low on the socioeconomic scale and has low level of readiness for technological entrepreneurship and high-tech activities, a pre-preliminary-phase is needed in order for smart specialization to work – a phase in which educational and training infrastructures are improved and the population gains awareness of its own potential for future integration in the high-tech sector. This phase constitutes an addition to the smart specialization model.

The study findings also point to the important role of the local and regional entrepreneurial initiatives in improving the minority population readiness to take part in that technological entrepreneurship and high-tech activities.

The study employs qualitative methodology. Primary and secondary data were gathered and analysed, and in-depth interviews conducted.

The study findings have a theoretical and practical contribution by expanding the smart specialization model for implementation in mixed majority-minority regions with a population that ranks very low on the socioeconomic scale, while showing the need for preliminary phases and for governmental policy tools that promote these pre-phases.

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On the Dynamics of Patient Migration Flows: Is Efficiency Performance Explaining Inflows for Neighbouring Hospitals? An Application to the Ecuadorian Healthcare System

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Abstract

This study aims to analyse whether higher efficiency performance of Ecuadorian hospitals attracts larger inflows of interregional patients to a given hospital and the existence of spatial dependence in terms of larger inflows of patients for neighbouring hospitals in the region. We develop a novel two-stage approach. In the first stage, we use conditional order-m estimations to obtain robust efficiency values for each hospital. In the second stage, we use a spatial Durbin interaction model to estimate the effect of hospital efficiency on patient migration flows and disentangle the spillover effects in the migration dyad. We make use of the Annual Survey of Hospital Beds and Discharges and the Survey of Health Activities and Resources provided by the National Institute of Statistics and Census, and the regional statistics of the Ecuadorian Central Bank. The results show a positive effect of specialized hospitals' efficiency in attracting patients from other regions. In addition, patient inflows present spillover effects not just on neighbouring hospitals in the same region but also from hospitals in regions neighbouring the origin. Policy implications refer mostly to well-planned and delivered decision-making strategies. Negative shocks affecting specialized hospitals could imply an adverse effect on the flow of patients to the whole region, affecting the regional public healthcare performance and potential welfare gains. Conversely, more resources could be directed to less-developed regions to incentivize competition.

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Crime and Chinese aid projects in Ghana

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Abstract

The impacts of Chinese aid in Africa have been the focus of recent studies, suggesting a high probability of elite capture and political patronage. It should make residents in the projects' vicinities feel neglected since the intended benefits that may accrue from the projects are not likely to trickle down to them. The paper examines

the impact of Chinese aid projects on criminal activities in Ghana. Using a geo-referenced dataset of subnational allocation of Chinese projects which is geographically matched with 10,797 respondents of Afrobarometer surveys for Ghana, we implement a difference-in-difference identification strategy to capture the impact of living near vicinity of projects under implementation at the time of the survey against areas where a project will be implemented in the future. The results suggest that living near projects under implementation makes residents prone to be burglarized but less likely to be physically attacked. There is no equivalent pattern when considering projects financed by other donors.

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City augescens: when housing matters

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Abstract

Housing has always been a constant of the morphology of cities, whose presence is the scenario against which urban life gains visibility. Housing has implications with the definition of social relations and the standardization of cultural values on the growing urbanization process, in which housing corresponds to the highest percentage of the housing market supply and is one of the main local, regional and national economies. Housing is a matter both local and global.

According to World Cities Report 2016, the housing function corresponds to more than 70% of land use in most cities and determines density and urban form. For this reason the housing issue must be placed at the heart of urban policies, especially with regard to the phenomenon of urban sprawl, which is seen as one of the biggest challenges for sustainable planning of the territory (EEA-FOEN) 2016).

In view of the dichotomy between the constraints of urban expansion and the benefits of scale economies, strongly anchored in housing production, it is today required that city public policies be able to adapt housing production to transformative processes resulting from the accelerated growth of cities (*civitas augenses*), taking into account the following key factors:

- a) The concept of urbanization simultaneously as a process of urban self-expansion and as a way of life, in the context of a new cities socio-spatial order;
- b) The awareness that the city where we will live in the future is already being modelled by spatial planning and the building of the present;
- c) The city as space-time creation and the urbanization as a way of life result both from man's ability to transform the environment that he inhabits, so the attributes of the built environment are key considerations, which require the most high architecture design standards of buildings and public spaces.

In the very deed of the construction, we must have present the social and cultural references that intervene in the relationship between space and man. If house building emerges as inevitability, what we build and how we build has currently reflected the preferences of the Real Estate industry more than the views of an architecture and urbanism committed to issues related to the social cohesion and the right to the city.

The New Urban Agenda UN-Habitat III (2016) puts us in charge of the idea that building and making cities are inseparable actions. For this reason, spatial planning acquires a growing role as a reference instrument for new governance structures to deal with problems and divergences of conduct in real estate markets.

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Local Government Expenditure and Socio-Economic Development: A Case Study of the Provinces in the Philippines

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Abstract

The analysis of the link between public finance and development is an important topic for policymakers in countries which have experienced decentralization process, particularly on how public funds can be allocated efficiently to induce or accelerate local development. Many countries have pursued decentralization under the assumption that due to proximity and familiarity, local government officials should know what is best for their constituencies. In the case of the Philippines, local governments were given fiscal autonomy alongside with the responsibility of delivering basic social services such as agriculture, health services, social welfare services, infrastructure, and tourism development. This study aims to explore the link between local government spending, specifically, social services expenditure and socio-economic development using the case of the provinces in the Philippines. This study also aims to examine the differences among provinces in terms of socio-economic development and social services expenditure. This paper devises a socio-economic index to analyse the socio-economic condition of the provinces. Socio-economic index is computed using various indicators that falls into four categories: economic, education, health, and infrastructure. This study utilizes OLS regression to estimate the relationship between socio-economic development index and social services expenditure. The result of the study shows that there is a huge disparity among provinces in terms of socio-economic development and social services spending. Provinces located adjacent to the capital have favourable socio-economic conditions and higher spending on social services. While provinces located mostly in Mindanao, particularly Autonomous Region of Muslim Mindanao (ARMM) have both inferior socio-economic state and lower spending on social services. The findings of the study also demonstrate that social services expenditure have positive and significant effect to the devised socio-economic index. To corroborate the findings of study, this study also analyses the relationship between social services expenditure and human development index (HDI). The link between social service expenditure and HDI also shows similar findings with this study: social services expenditure is positively correlated with HDI. This study also identifies four different types of provinces based on the relationship between socio-economic index and social services expenditure: Type 1(provinces with high socio-economic index and high social services expenditure); Type 2 (provinces with high socio-economic index but low social services expenditure); Type 3(provinces with low socio-economic index but high social services expenditure); and Type 4 (provinces with low socio-economic index and low social services expenditure). This study also outlines challenges and policy recommendations for the different categories of provinces.

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Community Gardens and Urban Residents' Quality of Life (QOL): A Case Study from Shanghai, China

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Abstract

In general, a high productivity due to the effect of agglomeration and economic growth has been realized along with urbanization in China. However, the accelerated urbanization has brought about environmental problems due to human activities, such as the reduction of green spaces, air and water pollution, noise and waste disposal problems in the country. Moreover, as urbanization progresses, the resources of available land in megacities are becoming more and more scarce, the lifestyles of residents have been influenced by a less communication among each other and the problems of community dilution are emerging (Zhang, 2017). On the other hand, in China, the middle class has been expanding in recent years, and they are increasingly concerned about the quality of life (World Bank & PRC, 2013). Therefore, to provide its local residents with a "better city, better life" (SHANGHAI MASTER PLAN, 2017-2035) has become an urgent challenge for urban planning.

On the other hand, existing studies have shown that urban residents' participation in community gardens can improve public health in cities (Armstrong, 2010). It is also pointed out that there is a positive correlation between the social capital of local residents and their interactions in community gardens (Katherine et al. 2010). Furthermore, a study on community gardens and social sustainability showed that trust and stewardship contributed significantly to social sustainability through community gardens (Rogge et al. 2018).

Therefore, the purpose of this study is to explore the role of community gardens in improving the quality of life (QOL) of urban residents through multi-functionality of community gardens in Shanghai, China. We conduct a web-based questionnaire survey on Shanghai residents (including users and non-users of community gardens)

and introduce structural equation modelling to clarify the following hypotheses: “The multi-functionality of community gardens can enhance the utility and life satisfaction of urban residents (H1)”, “People with higher levels of social capital also have higher levels of community gardens involvement and appreciation (H1-1)”, and “People with higher community gardens involvement and appreciation are more satisfied with local life (H1-2)”, Based on the analytical results, it concluded that a development strategy for urban agriculture is required in line with the vision of sustainable development of the city that meets the diverse needs of the residents.

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Assessing Disaster Risk by Integrating Natural and Socio-Economic Dimensions: A Decision-Support Tool

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Abstract

The paper provides a conceptual framework for a multi-dimensional assessment of risk associated to natural disasters. The different components of risk (hazard, exposure, vulnerability and resilience) are seen in a combined natural and socio-economic perspective and are integrated into a Disaster Risk Assessment Tool (DRAT). The tool can be used in supporting disaster management strategies as well as risk mitigation and adaptation strategies at much disaggregated geographical or administrative scales. In this paper, the feature and the applicability of DRAT are demonstrated by mapping multidimensional risk for 7,556 Italian municipalities. DRAT can be particularly useful to identify hot spots that are characterized by high hazard, exposure and vulnerability and by low resilience. In order to identify hotspots, we perform cluster analysis of the municipalities in terms of their risks ranking within DRAT. We also suggest how the tool could be exploited within the processes of disaster risk policy in Italy.

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Is there a Light at the End of the Eurotunnel? If not for the Investors than for the Regions?

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Abstract

Shortly after its opening in 1994, the American Society of Civil Engineers elected the Eurotunnel one of the “Seven Wonders of the Modern World”. The tunnel is 50-kilometer-long and links the region South-East in the United Kingdom with the region Nord-Pas-de Calais in France. It is one of the largest infrastructure projects in Europe financed by private funds only. However, exploding construction costs, which were financed mostly by debt, smaller than expected revenues (due to the delayed opening of the tunnel, fierce competition with ferry operators and overly optimistic passenger and freight numbers) led to substantial financial losses, and brought the operating company to the brink of bankruptcy several times. These losses, often considered transfers to the users, indicate a poor return on investment for the private equity and debt investors.

Against this background, the paper first offers an in-depth analysis of the financial development of the operating company since it was founded in 1986. We will quantify the losses covered by private equity and debt investors, analyse the reasons for these losses, and discuss the rationale for investors to agree to several financial restructurings.

Aside from the financial implications for the investors, infrastructure projects of this size always have long-lasting regional impacts. However, many cost-benefit studies of the project reveal only small positive effects and therefore conclude that overall the French and British economy “would have been better off had the tunnel never been constructed” (Anguera 2006, p. 291).

In this context, we seek to analyse regional effects of the tunnel by constructing a counterfactual scenario, enabling us to analytically compare the actual regional development given the construction of the Eurotunnel with the hypothetical development without its construction. In contrast to traditional cost-benefit analysis this procedure allows for a better separation of the effects triggered by the construction of the tunnel from other overarching developments (e.g. EU enlargement).

Following this idea, the paper uses the *synthetic control method* for assessing the economic impacts of the tunnel on different regions. The method tries to construct a synthetic control group for the *treated* region(s) by a weighted combination of regions not affected by the Eurotunnel. These regions are chosen to mimic the region(s) affected by the Eurotunnel for a set of predictors of the outcome variable (e.g. per-capita-income). The predictors contain variables that are typically associated with growth potential (e.g. investments, population density or sectoral shares) and refer to regional data from the UK and France covering the years 1975-2015. Preliminary results indicate positive effects of the Eurotunnel on the direct affected regions for the first five years (i.e. 1995-1999). Afterwards, results turn negative.

Finally, for an overall assessment of the Eurotunnel, findings at the financial and regional level are jointly analysed in a third step, for example in order to try to answer the question, whether regional benefits could have justified public funding of part of the construction costs. As this is work in progress, results are not robust so far, but will be presented at the conference.

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Spatial mobility and cruise passengers' expenditure: an investigation using GPS technology

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Abstract

This paper aims at analysing the relationship between tourists' spatial behaviour and expenditure at the destination by means of an integration of traditional questionnaire-based survey and GPS technology. The complex information derived from GPS tracking device are analysed through the implementation of various algorithm in order to synthesize key-characteristics of the itinerary undertaken. As a case study cruise passengers' behaviour in the city of Copenhagen are analysed thanks to the availability of information collected in 2018 and 2019. The relationship among cruise passengers' expenditure at the destination, socio-demographic characteristics and mobility is analysed through logistic regression models. The results show the relevance of spatial behaviour on expenditure. More in particular, stop activities are strongly associated with expenditure. Consequently, an analysis of stop locations is performed in order to highlight locations in which is likely that most of the expenditure is concentrated. The proposed approach is of relevance both from the methodological perspective, related to the analysis and synthesis of complex information derived from GPS tracking data, and from the applied point of view, with reference to destination marketing and management implications.

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An assessment of drought vulnerability among households with temporary migrant members and households without temporary migrant members: A comparative study across different income and social groups in rural India

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Abstract

In recent times, India is witnessing a significant growth in terms of both the vulnerability to climate change as well as the volume of seasonal migrants simultaneously. One of the several ways through which the climate change is supposed to impact India is the increasing frequency and intensity of droughts. India which to a large extent is dependent on the monsoonal precipitation pattern for recharging its vast drainage networks is also a country with a huge volume of workforce dependent directly on the rainfed agricultural system. A volume of field investigations has emerged which has shown a variety of migration behaviours among the different population groups, distinguished by their respective social and economic characteristics, under a given drought situation. At the same time there is also a debate between the narratives of migration as an adaptive strategy or a failure to adaptation during a given climatic hazard especially in the academic arena. Therefore, a policy choice between migration prevention and migration support under a drought situation needs to be properly backed by empirical evidences. These evidences are very small in size for the Indian population. In this direction, the present paper investigates the drought vulnerability among households with temporary migrant members and households without temporary migrant members in rural India across different income and social groups. Vulnerability is defined as a function of exposure, sensitivity and adaptive capacity following Intergovernmental Panel on Climate Change (IPCC) Assessment Reports. Household level sensitivity and adaptive capacity indicators are identified from India Human Development Survey 2011-12 (IHDS-2) which are merged with the district level drought exposure data collected by India Meteorological Department (IMD). Weights are assigned to the variables by principal component analysis and composite indexes are calculated for exposure, sensitivity, adaptive capacity and the overall drought vulnerability.

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An Economic Assessment of Resilience after a Large-scale Tsunami in Japan

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Abstract

This study aims to investigate how the production activities in 1886 municipalities of Japan recover when these activities stop due to a tsunami caused by Nankai megathrust earthquakes. As a disaster area, we focus the flooded zones in the hazard map published by Ministry of Land, Infrastructure, Transport and Tourism and prefectures. Furthermore, we assume three damage scenarios and different recovery speeds in each production sector. The dynamic recovery processes are simulated by using an inter-regional input-output model with 1886 municipalities of Japan. We show the recovery processes in the municipalities and analyse the resilience of the regional economy.

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Fiscal Resilience of Russia's Regions

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Abstract

Currently, the Russian Federation does not have a methodology to determine the degree of fiscal resilience of regions. There are certain elements that make it possible to state the presence of problems in the regional budget system (high level of public debt, budget deficit, and high share of intergovernmental fiscal transfers in budget revenues). However, these elements do not line up into a single system for assessing regional fiscal sustainability, or resilience.

The report was prepared as part of the implementation of the state task of the RANEPa for 2021.

The methodology for assessing the debt sustainability of Russian regions applied by the federal government reflects their creditworthiness, provides flexibility and correctly differentiates regulatory measures depending on

the amount of debt. However, it does not fully take into account the institutional and economic aspects, which reduces the consideration of the risks of budgetary sustainability at the regional level.

Federal measures of influence against regions that have exceeded the established limits of debt sustainability go far beyond the immediate sphere of debt and affect the area of overall fiscal sustainability. They concern not only the issues of debt policy, but also the choice of directions and volume of expenditures and other parameters of the budget. This gives practical relevance to the search for an answer to the question of whether debt sustainability indicators adequately reflect the state of fiscal sustainability of Russian regions.

In order to quantitatively characterize the budgetary sustainability of the constituent entities of Russia and to test the hypothesis on the differentiation of the concepts of budgetary and debt sustainability, we have developed the corresponding indices - fiscal sustainability index (FSI), and debt sustainability index (DSI).

The regional fiscal sustainability index (FSI) developed by us has an integral character, includes 20 indicators and takes into account the institutional and economic aspects.

Grouping according to the calculated FSI data, carried out on the basis of one-dimensional cluster analysis, made it possible to distinguish three groups of regions of Russia. The results of the grouping indicate that it is undesirable to link federal regulatory measures that restrain the budgetary independence of regions with purely debt indicators.

At the same time, in the existing system of federal regulation of debt sustainability, it is more effective to focus federal measures at high debt levels exclusively on the sphere of debt policy. The absence of additional restrictions on regional spending could have a positive effect on the overall fiscal stability of Russia in the medium and long term.

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Geospatial Technologies for Monitoring the Sustainable Development Goals

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Abstract

In order to measure progress in achieving the Sustainable Development Goals by 2030, 169 targets have been approved globally. Even though interest in implementing these goals is high, many states have not yet established a set of subnational indicators to measure the implementation of the SDGs and have not completed their own assessment of progress in achieving these Global Goals. This study aims to measure the progress towards achieving the SDG at local and regional level in Romania by calculating the SDG Index. For the calculation of the SDG Index at subnational level we propose an integrated approach based on 90 indicators, stored and processed in a PostgreSQL object-relational database. This approach offers three novelties: the generation of a territorial database on local level, which includes both rural and urban areas; the large employment of earth observations methods in the measurement of the SDG indicators; and the development of a new data model for the measurement of the SDG index.

The results show the concentration of the highest performances of sustainable development in some specific geographical areas. The rural areas and the extended peripheral regions in the eastern and southern part of the country are the poorest performers.

We outline that our model is an attempt to quantify the performance of each LAU (Local Administrative Units) on the SDGs, contributing in this way to calls for more progress in the operationalization of SDGs and in the evaluation of indicators' relevance. It will provide a policy-relevant assessment tool for the LAUs in establishing their position within each SDG, which in turn will help them to set up empirically sound and politically relevant Local Development Strategies. Moreover, understanding the differences in sustainable development across multiple scales and resources will enhance the ability of central authorities to balance sustainable development between national and various sub-national levels.

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Urbanization and Human Development Index: Cross country evidence

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Abstract

We assess the impact of urbanization on the value of country-level Human Development Index (HDI), using random effect Tobit panel data estimation from 1990 to 2017. We find that total urban populations, percentage of the urban population, and percentage of urban population living in the million-plus agglomerations have a positive effect on the value of HDI. Urban population growth rate and percentage of the population residing in the largest cities negatively effect on the value of HDI. Therefore, developing countries need to promote balanced urbanization with an improvement of urban basic services for improving the HDI rank.

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Technology diffusion and consumption growth: identifying spatial effects

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Abstract

In the context of a pandemic, consumer-controlled digital technologies are one of the key determinants of the sustainable development concept: they lead to the replacement of labour with capital, the growth of information and knowledges, reduce economic costs, expand consumer choice, take into analyse consumer preferences, and integrate the economic space. As we learned from the theory, the spread of technology leads to an equalization of growth rates in the long term for leaders and technological followers. Therefore, the aim of the study is to analyse the convergence of consumption, taking into account the spatial specifics and the impact of digital technologies on the average growth rate of consumption. *Research questions*: is there a spatial relationship in consumer spending per capita? Is there a β -convergence of the average consumption growth rate in the long term? *The hypothesis of the study*: Russian regions are not making full use of the household's digitalization in achieving sustainable development. The data sample is obtained from the "Regions of Russia. Socio-economic indicators. 2019" material. Dependent variable: the average growth rate logarithm of consumer spending per capita in 2014 prices. Independent variables: income per capita, share of population using the Internet; number of active subscribers of mobile broadband access to the Internet per 100 inhabitants, the deposits of individuals, savings rate ((income per capita, consumer spending per capita)/monetary income per capita). We used the boundary weight matrix, global Moran and Geary spatial correlation indices, and local Moran indices. In a study in the R software environment (plm package, splm package), models of unconditional and conditional β -convergence are constructed on panel data without/with a spatial component (according to the SAR, SEM, SAC types) with fixed effects and with random effects (Barro R., 1992):

$$1/T \cdot \ln(Y_i(t_0+T)/Y_{it0}) = \alpha + \beta \cdot \ln Y_{it0} + \sum \gamma_j X_{jit} + \rho W \ln(Y_i(t_0+T)/Y_{it0}) + \epsilon_{it};$$

$$1/T \cdot \ln(Y_i(t_0+T)/Y_{it0}) = \alpha + \beta \cdot \ln Y_{it0} + \sum \gamma_j X_{jit} + \lambda W_{uit} + \epsilon_{it};$$

$$1/T \cdot \ln(Y_i(t_0+T)/Y_{it0}) = \alpha + \beta \cdot \ln Y_{it0} + \sum \gamma_j X_{jit} + \rho W \ln(Y_i(t_0+T)/Y_{it0}) + \lambda W_{uit} + \epsilon_{it}.$$

The analysis revealed a positive spatial dependence of consumer spending in the Russian regions, the impact of shocks in neighbouring regions on the consumption growth rate in this region. Local Moran indices indicated the presence of local spatial clusters in consumer spending similar to neighbouring territories, regions, Moscow and Moscow region, Ural Federal district, Siberian Federal district, North Caucasus Federal district. All types of models predict beta-convergence of consumption in the long term, which corresponds to the concept of their sustainable development. No visible direct and indirect effects on the share of the population using the Internet and the number of mobile Internet subscribers on the growth of consumption predictably confirms the hypothesis of weak use of household digitalization in achieving sustainable development. Therefore, it is advisable for strategic

management institutions to influence the demand and digitalization of households in neighbouring regions, to develop online services in the practices of households. The measurement of the beta-convergence of consumption as an indicator of the sustainable development of regions, based on spatial-econometric models, provides *the novelty* of the work.

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Enhancing Our Understanding of a Regional Economy: The Complementarity of CGE and EIO Models.

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Abstract

Economic impact models are powerful tools for the assessment of policy changes in regional economies. Computable General Equilibrium (CGE) models have grown in popularity, becoming the dominant choice of practitioners and academics in this field. This popularity has been at the expense of an older class of model, the Econometric Input Output (EIO). The present paper demonstrates how both models, using the same input data, may yield different outcomes. However, the paper suggests that EIO has been underutilized but even though it provides a strong complementary tool accompany that enhance analyses using a CGE approach. This paper urges regional economists to rediscover the EIO model, especially two variants that are described in the paper, and bring them to the forefront of their research agenda.

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Does Foreign Investment Generate Regional Economic Growth in Emerging Countries and their regions? Case of Central & Eastern Europe and Hungary

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Abstract

The effect of foreign direct investment (FDI) on the host economy has attracted much research. Despite the literature is inconclusive it seems to agree that any positive effect of FDI on growth is largest in developed countries. However, in spite of this FDI is considered a panacea for the fundamental problems of economic growth in emerging transition countries including Central and Eastern Europe (CEE) where FDI became main source of investments from the 1990s. Post-socialist transformation is characterized by high dependency on FDI channelled by foreign MNCs into Central and Eastern Europe. In CEE economic restructuring was primarily driven by foreign direct investment (FDI) in the post socialist period, which in the short term contributed to the increased productivity and competitiveness. The paper examines the effects of FDI on GDP growth and GFCF, and tests the causal relationship between these variables in the Hungarian regions. Based on the econometric analysis, the study argues that it is not FDI that causes GDP growth, but more FDI flowing into the already more developed, higher-growth regions. The inclusion of Gross Fixed Capital Formation (GFCF) into the model also eliminates the significant positive effect of FDI. Government and EU-funds-generated investments play a much greater role in GDP growth than FDI. Our study demonstrates that the attractiveness of target regions for FDI can be explained by their initial higher level of development and geographical proximity to Western European markets. However, this paper also hints that FDI-driven assembly platform economy, in the absence of spillovers and additional factors of endogenous growth, are not sufficient to ensure the long-term prosperity of regions.

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Geoeconomics of transformation and economic bordering of Central and Eastern Europe

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Abstract

This contribution relates the process of economic bordering to the systemic and geo-economic features of Central Europe's post-socialist integration process. The major pattern that emerges is one of a high dependency on FDI, foreign multinational firms, European Union funds and exports to Western Europe. An innovative aspect of this contribution is the argument that long-term problems of capital accumulation in the context of centre-periphery dependency (and world systemic models) reflect bordering processes that are both structural as well as political in nature. The economic transition of Central Europe, and Hungary in particular, was fuelled by neoliberal ideologies and political agendas of "East-West convergence" that involved marketization and privatization. Both of these created a moral, legal and structural environment that rapidly cemented new modes of dependent integration into the EU and the global division of labour. At the same time, the most important historical dependencies of the CEE region, such as financial, technological and market ones, have remained constant (Gál and Schmidt 2017). This is complemented with the large energy dependency of CEECs on Russia. This not only further strengthens the external vulnerability of the region, but also makes re-interpretable the geopolitical and geoeconomic features of Central Europe as a 'buffer zone' situated between German and Russian spheres of interest.

We will first examine the geo-economic features of the externally managed and financed integration of post-socialist transition countries of CEE into the global economy and the European Union. We will also focus on the impacts of FDI and European Union structural funds on growth, gross fixed capital accumulation, per capita GNI and export in selected Central European countries. Preliminary results do not indicate a strong correlation between convergence and FDI, rather domestic savings and higher incomes are the most important factors. As a result, domestic policies based on wage competition and that give little support to small and medium-sized enterprises exacerbate core-periphery asymmetries and support an economic buffer zone narrative. In conclusion, we suggest that such economic bordering processes within the EU could have long-term consequences for political and economic cohesion in the EU as a whole.

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The Effect of a Free Trade Agreement with the United States on Member Countries' per capita GDP: A Synthetic Control Analysis

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Abstract

This article aims to evaluate the impact of signing a free trade agreement (FTA) on per capita gross domestic product (GDPPC). Although the immediate objective of a FTA is to increase trade between the signatory countries (Dür et al. 2014), from the perspective of evaluating public policy, it is important to evaluate its impact on citizens' well-being, and the GDPPC is a better measure of said impact than measures that pertain to trade alone.

In particular, we focus on the GDPPC of the 20 countries that have signed a FTA with the United States. This focus is motivated by the fact that the U.S. is the biggest, most developed economy in the world and has signed the most extensive trade agreements of any country. North-South agreements tend to be the most extensive, whereas South-South agreements tend to be the least far-reaching (Dür et al. 2014). Hence, this study helps shed light on the development effects of North-South agreements for Southern (developing) countries.

The United States has been an ardent supporter of trade liberalization. Since President Roosevelt's administration, the U.S. has assumed that trade openness guarantees stable economic growth. In that line, during the last century, the U.S. has traded with a variety of countries across the globe, becoming a leader and a role model on trade openness in this era of global economic integration.

The main trade agreement explosion occurred during the early 2000s, after agreements with Israel (1985), Canada (1988) and Canada and Mexico (1994). At the time of this study, the United States had signed FTAs with 20 countries. Two of these FTAs were multilateral (NAFTA and CAFTA); NAFTA includes Canada and Mexico, while CAFTA includes countries in Central America and the Caribbean (2004). The rest of the agreements were bilateral.

This study employs the synthetic control method (SCM) to estimate the economic effects of signing free trade agreements (FTAs) with the United States. This method allows for a counterfactual –the country's per capita GDP had it not signed a FTA–, which can be compared with the observed per capita GDP. This difference speaks to the causal impact of the FTA.

We principally find that FTAs seem to have a heterogeneous impact. In particular, there is evidence that signing a FTA with the U.S. had a positive effect on the per capita GDP of Chile and Jordan and that NAFTA had an adverse impact on Mexico's per capita GDP. In several other cases, no significant economic impact is discernible. In addition, the more a country depends on the U.S. for its trade, the less beneficial signing a FTA with the U.S. is.

This article contributes to the debate on the effectiveness of trade as a development strategy. In particular, the SCM opens up the possibility of a "case-by-case" analysis, ultimately revealing that a free trade agreement with the U.S.–a country situated at the world's technology frontier–has heterogeneous outcomes and, by itself, does not guarantee economic development (obtained through a higher per capita GDP).

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Effect of Tariff Liberalization on Mexico's Wage Differential

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Abstract

This paper studies how the North American Free Trade Agreement (NAFTA) affected wage differentials within Mexico considering internal migration. In low-skilled, labour-abundant developing countries, trade liberalization should theoretically increase the wage of low-skilled workers, decreasing income inequality. However, anecdotal evidence indicates that NAFTA increased the gap between rich and poor in Mexico, and empirical evidence is mixed (Hirte et al., 2020; Brühlhart, 2011; Bosch and Manacorda, 2010; Nicita, 2009; Chiquiar, 2008 & 2005; Hanson, 2007; Gonzalez-Rivas, 2007). Because trade may affect wages differently across regions within the country, accurate measures of wage effects must incorporate internal migration, otherwise apparent wage convergence or divergence might only reflect a geographic resorting of workers.

To study the effect of NAFTA on migration we first predict the probability that an individual will migrate based on the potential growth in municipal Gross Value Added (GVA) associated with tariff reductions from NAFTA. Because migration and wage outcomes are jointly determined, and likely both related to unobservable individual characteristics, we instrument for migration using local crop yield shocks, specifically corn, which have been shown to influence migration yet are unlikely to affect wages in the manufacturing, retail or service sectors in urban areas except through labour supply. Next, in a second stage, we estimate a wage equation as a function of trade, demographic and household characteristics, together with the previously instrumented probability of migration. By analysing trade openness and distance to the border, we find that workers closer to the US-Mexico border get a higher wage than their counterparts far away. But this spread diminishes as tariffs fall, after NAFTA. Further, we find that men with low wages get a boost from NAFTA in their wages while NAFTA has a negative effect for those with high wages. Thus, trade liberalization appears to have decreased wage differentials.

This paper offers the following contributions: First, to our knowledge, this is one of the first studies to consider the effect of trade on wages while explicitly controlling for migration. Second, we correct for the potential endogeneity of internal migration and wages by using a two stage least squares (2SLS) instrumental variable estimation. Third, by comparing low vs. high wage earners, we explore which workers gained and lost from trade. Fourth, we include the latest population census (2010) to observe long-run wage changes after NAFTA and ask whether wage differentials persist as the economy adapts to trade. The results of this research can help identify those barriers facing individuals and regions that limit their ability to benefit from trade. Thus, this research can help identify the areas of social investment and infrastructure investment that may help smooth wage inequality. Further, by identifying those regions and individuals who have benefited and lost from trade, this information can

be used to target compensation. Finally, using this estimation approach, regional governments can anticipate migration and wages in their region, and adjust local development plans accordingly.

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Infrastructure Investment, Funding Schemes, and Poverty Reduction: Evidence for Guinea-Bissau

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Abstract

Guinea-Bissau is a poor country with agricultural-base economy. The government has elaborated development policies aimed at improving the country's comparative advantage and poverty reduction. These policies resulted in US \$1 billion infrastructure investment program in 2015. This study aims to analyse the socioeconomic impacts of this program using a dynamic micro-simulated computable general equilibrium model. Our results show positive impact of infrastructure investments on the level of economic activity, productivity, and sectoral spillovers. The funding schemes determine these outcomes as they contribute to increase wealth accumulation as well as to mitigate in the long-term the urban and rural households' poverty.

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Trade reform, sectoral spillovers, and poverty reduction: Evidence for Guinea-Bissau

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Abstract

Guinea-Bissau has been facing socioeconomic development challenges since it became in the late 1970s. The challenges concerns reconciling import tariff and export taxes reductions to promote national economy integration and to use resources from trade gains to fight against extreme poverty. This study uses a dynamic recursive micro-simulated computable general equilibrium model to analysis the macro-micro level long-term outcomes of two trade reforms scenarios in this least developing country, which are imports tariffs and export taxes cuts. We observe that negative import tariffs shocks adversely affected the overall output, investment, and government consumption. Although real product does not decrease at the end of simulations period, the small recovery over time is not enough to counteract the initial negative effects, since the accumulated result is negative. Conversely, export taxes reductions positively affect macroeconomic aggregates and sectoral level performances, as well as rural and urban households' income, with stronger impacts for poorer ones. Our results suggest the relevance of accumulated wealth in mitigate long-term poverty as it plays an important role in households' income gains and hence in their long-term consumption.

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Effects of Covid-19 Crisis on Sustainable Development in Eu Regions

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Abstract

The Sustainable Development Goals have an important regional dimension, sometimes called 'localisation'. Achieving around 65 % of the targets is estimated to require local and regional authority participation. Numerous regions and cities have expressed support for the SDGs and many have integrated them in their policy

frameworks. Efforts to localise the SDGs are ongoing and regional achievements are featured in the national reviews presented at international conferences. But, at the beginning of 2020, pandemic crisis affects the implementation of these goals. Also, the COVID-19 pandemic crisis presents a wide range of challenges and has triggered a severe economic crisis in member states and regions. In response to developments in early 2020, the European Union set up a lot of measures and funding instruments to provide initial support during the pandemic crisis.

This paper presents an overview of effects on medical crisis on Cohesion and Regional Policy in context of actions taken in response to the COVID-19 pandemic crisis. Also, presents the relation between medical crisis and study of implementation of Sustainable Development Goals.

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Inclusive Attitudes towards Immigrants in Europe: The Role of Preferences, Space, and Economic Outcomes

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Abstract

In this paper, we analyse the extent of inclusive attitudes towards immigrants within European countries. To this purpose, we use data from the European Social Survey Round 1 and 7, collected in 2002 and 2014, respectively. The two waves contain a module of questions exploring different aspects of public opinion about immigration. We distinguish between variables identifying the kind of migrants Europeans wish from those variables providing information about the extent of contact with members of migrant communities and the perceived costs and benefits of immigrants on the economy, cultural context, and welfare system of host countries. The survey data are merged with data from Eurostat providing information on socio-economic conditions.

Natives' attitudes are measured by an index reflecting the overall level of support for immigration. The advantage of such a measure is that it can be broken down into specific areas of investigation reflecting people's perceptions of the effects of migration on the economic, cultural and welfare system. This allows to identify the role and the importance of different issues in determining the level of inclusive attitudes towards migrants. A similar measure is developed to cardinalize natives' preferences for the kind of immigrants they wish. We explore the correlation between our measure of natives' attitudes and the measure of natives' preferences plus an array of aggregate economic and social indicators.

We obtain a comprehensive picture of natives' attitudes towards immigrants that is broken down into specific areas such as rural/urban locations, as well as into groups identified, for example, by gender or country. We also show that different patterns of inclusive attitudes across European countries are in general positively related to economic activity and social capital while are negatively related to inequality.

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Interdependencies between spatial planning and the mining laissez-passer in cities, the case of Ecuador

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Abstract

Addressing urban planning as shared-resource is tied with the 'tragedy of the commons'. Since UN-Habitat III, Ecuador has embraced the opportunity for urban sustainability. However, while the *right to the city* is constitutionally anchored since 2008, the integration of strategic sectoral plans and their spatial link remains unclear. Aiming at a better understanding on how sectoral plans, particularly mining, are spatially articulated to

spatial planning instruments, we review the existing planning instruments as well as those from the mining sector. Next to the mining city of Zaruma, our desktop research combined with stakeholder and expert interviews, showed a vacuum in articulating sectoral planning with urban spatial planning instruments. Instead of interpreting wrong-will from the mining sector, we suggest further research on existing planning instruments that accommodate underground with surface land-use planning.

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Public spending and economies of scale in partial fiscal decentralized governments: The case of Chile

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Abstract

Economies of scale derived from over-urbanization could affect the average cost of public spending in some cities and, as a consequence, undermine the equal access to local public goods among municipalities. Those that reach economies of scale would be able to supply the basic required local public goods plus other additional benefits and opportunities, while those that do not achieve them would face problems to even provide the basic ones, causing an unequal supply between cities. Under such setting, there should exist redistributive spatial policies that compensate this inequality; if not, people that live in less concentrated regions could see their rights affected. This paper presents a framework for the assessment of economies of scale in local public spending in Chile, which is an interesting case because of its well-known particular geographical features as well as its high fiscal heterogeneity. Chile is characterized by a partial fiscal decentralization model, in which all municipalities receive funds from the central government to satisfy the minimum acceptable standard of living, but they can also complement with own funds generated by local collection to offer additional goods and services.

Empirical evidence of economies of scale has focused on centralized economies, but this issue must also be considered in decentralized economies. The behaviour of local governments under a centralized model could differ from the ones under a partial fiscal decentralization model. While the latter, who receive funds from the central government and are in charge of the provision of local public goods, may be interested in achieving economies of scale to use efficiently their resources; the former may not be interested in doing so because the central government is who controls the provision of local public goods. In this sense, it is important to address the presence of economies of scale in local public spending in non-centralized governments; that is, either in decentralized or partial fiscal decentralized governments. Therefore, for the purposes of this paper, we estimate the population level in which a reduction in the average cost of provision of local public goods occurs and we differentiate between municipalities with high and low fiscal dependence from the central government. Furthermore, we follow a theoretical model of cost efficiency that takes into account spatial interactions and spillover effects among neighboring jurisdictions.

Our preliminary results show that Chilean municipalities reach an optimum population level around 700,000 inhabitants, which is very high; in fact, only 2 municipalities would fall into this level. Once we control for the fiscal heterogeneity of Chile, we obtain that municipalities with high fiscal dependence reach their optimum population level around 45,000 inhabitants, while the ones with low fiscal dependence reach it around 700,000 inhabitants. This fact highlights the importance of considering territorial differences when addressing public financial issues and the local provision of local public goods.

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Electoral Earthquake: Natural Disasters and the Geography of Discontent

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Abstract

The recent literature on the determinants of populism has highlighted the role of long-term gradual trends of progressive isolation and prolonged economic stagnation in engendering discontent and, in turn, demand for radical political change. We investigate, instead, the potential of unanticipated local shocks in shaping the 'geography of discontent'. Using comprehensive data at a fine spatial scale and a quasi-experimental method, we document that the occurrence of two destructive earthquakes in Italy resulted in sharply diverging electoral outcomes: while the Emilia 2012 seism did not alter voting behaviour, L'Aquila 2009 earthquake paved the way for an impressive and persistent surge in right-wing populism in the most affected areas. Such heterogeneous patterns mainly originate from a stark contrast in the post-disaster reconstruction process. Our findings are consistent with the idea that not just "places that don't matter", but also "places that don't recover", can become populist hotbeds. This makes the evolution of the geography of discontent more unstable and, thus, unpredictable, and places an additional burden on the role played by institutions in managing local recovery and ensuring territorial resilience.

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Is COVID-19 The Great Equalizer? Heterogenous Impact of Mobility Restrictions in a Metropolitan Area

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Abstract

The capacity of areas within a city to comply with mobility restrictions aimed at curbing the COVID-19 pandemic is crucial to the local dynamics of the disease. In this paper, we study the efficacy of policies implemented to restrict mobility and their impact on the COVID-19 expansion, and how this impact depends on socioeconomic differences across within-city locations. To do so, we rely on unique and novel data showing changes in movements at highly disaggregated spatial levels. We use data from Bogotá to explore the relationship between mobility restrictions, as one of the main Non-Pharmaceutical Interventions implemented, people's mobility, and the expansion of the COVID 19 pandemic. Bogotá implemented a general lockdown, followed by district-specific restrictions and subsidies. We find that the general lockdown imposed in the city significantly reduced mobility (by about 47%). By contrast, the marginal impact of district-specific restrictions and subsidies is found to be small. When looking at heterogeneous impact across locations, we find that poorer locations, with a higher share of informal workers, as well as those where households who have deficient infrastructure, reacted significantly less to mobility restrictions.

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Contemporary socio-economic differences in Poland: (1) spatial polarization of development

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Abstract

The results of political elections in Europe and the world in the second decade of the 21st century show a clear trend of strengthening populist movements. One of the fundamental root causes is the persistent and even growing differentiation of the socio-economic development level, which results in permanent peripheralisation and marginalisation of some areas. This results in polarization and radicalization of electoral behaviour as a consequence to the unsatisfactory effectiveness of earlier implemented development activities and the economic exclusion of a part of the society living below the social minimum. The results of our study indicate the persistence of development disparities in Poland, despite the relatively positive trends in economic growth at the national level. We draw attention mainly to the strong significance of historical conditions (relict borders).

Against this background, we identify the scope and direction of geographical changes in Poles' electoral behaviour. We aim to determine the relationship between the level of socio-economic development and the support of political parties in spatial terms. The final conclusions emphasize the persistence of "territorial underpinnings" and socio-economic conditions of electoral populism in Poland, which to a large extent results from historical factors. Not only has the distribution of populism not been changed as a result of transformation and integration changes in Poland, but it has in fact been reinforced.

The research procedure consists of three stages presented on separated posters: (1) spatial polarization of development, (2) political scene and electoral behaviour, (3) relations between development level and political preferences.

First stage analysis of this cycle in this aims at determination of the scale and causes of subregional development differences in Poland. The analysis deals 2,478 Polish communes (LAU 2) and describes the period of 2004-2016 allowing for interactions determined for Poland during over last two centuries.

The research procedure involved the following steps: standardization of variables (23 indicators corresponding to five development factors), cluster analysis using the k-means method for 13 observations, verification of the typology using modified classification trees, creation of the typology for each observation in the pattern of communes with different level of development (five class), and finally the creation of a synthetic typology of the communes in the adopted pattern of development classes. The study used published data of the Central Statistical Office in Warsaw. The obtained results confirmed the occurrence of clear and persistent developmental differences in the space of Poland. They are largely determined by the polycentricity of the settlement network, the distribution of economically strong raw materials and industrial areas, as well as they show a large relationship with historical determinants permanently rooted in Polish space.

This study is carried out as part of the FORSED research project (www.forsed.amu.edu.pl) funded by the National Science Centre (No. 2015/19/B/HS5/00012): New challenges of regional policy in shaping socio-economic development factors of less developed regions.

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Effects of wind energy input on the sectors of economic activity in the semiarid region of Bahia

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Abstract

Renewable energies have been growing rapidly and gaining more and more space in the world electrical matrix in recent years. The accelerated deployment of energy from wind sources contributes to the annual reductions in CO₂ emissions. In the Brazilian electric matrix, wind energy already represents an 8% share in the country. From 2011 to 2018, 31 billion dollars have already invested in the wind sector. In 2017, investment in the sector represented 58% of the total invested in renewable energy. The State of Bahia has already received a large volume of investments in wind energy. The state's wind generation is located in the semiarid region. The region has experienced the worst drought in its history in recent years. Therefore, the semiarid region lacks policies that encourage regional development, the generation of jobs and income and actions to assist in living with the semiarid region. In this context, it is questioned how the investments in wind energy affect the sectors of economic activity in the semiarid region of Bahia, promoting development? Thus, the present study aims to investigate how the sectors of economic activities in the region react to investments made in the wind sector. For this purpose, it uses the input-output matrix of the semiarid region of Bahia for the year 2015 with 40 sectors, prepared from the matrix Bahia 2015, of GERI-UFBA. The analysis uses classic indicators, economic multipliers of employment and production and hypothetical extraction of input-output sectors, in order to investigate the effects on job creation and production. The results show that the effect of wind energy contributions in the economic activity sectors of the Bahian semiarid region, it was observed that around 18 billion BRL in wind energy has the possibility of influencing the total production of the semiarid by more than 28 billion BRL in direct impacts and indirect. As expected, the Civil Construction sector had the highest profile. Regarding the generation of jobs, the effects of the contribution can lead to the creation of more than 3,300 jobs. The most impacted sectors were civil construction and others in the extractive industry with the possibility of generating 548 and 348 total jobs, respectively. From the above, given the progress of the wind sector in the region and the contributions made,

it is observed that these positively affect several economic sectors, encouraging development. However, even with the effects of the contributions on the sectors being positive, public policies are necessary to provide a more significant development for the region. In addition, these, in turn, must consider the social and economic inequalities present in the semi-arid.

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Factors that influence on the enterprenuerial intention of unemployed employees in COVID-19 times

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Abstract

Currently, the COVID-19 pandemic has caused many changes both in health and economic terms. In Ecuador, the existent harsh economic situation was aggravated with an increase of the unemployment in 9 percentage points from 4% by 2019, to 13.3% by June 2020. Given this scenario, people who fell into unemployment and already unemployed people might see the entrepreneurship as a viable option to maintain or increase their income. In the Ecuadorian case, in which most of microentrepreneurs have a survival perspective, existent and new unemployed employees may have a defensive attitude to escape unemployment. Then, microentrepreneurship plays as a "refuge effect" (Vivarelli, 2004; Thurik et al, 2008). Therefore, the research question is: what are the factors that drive unemployed people to undertake their own business? Do these factors differ across types of unemployed, namely, existent unemployed employees and new unemployed employees due to COVID-19? To answer to these questions, data from a national survey undertaken by the educational institution Escuela Politécnica Nacional of Ecuador during the pandemic is used. This database accounts for 3,868 observations. To determine the probability of enterprenuerial intention, a Probit model is estimated for two types of unemployed people, namely existent unemployed employees and new COVID-19 unemployed employees. Sociodemographic characteristics, family conditions and financial aspects are considered as explanatory variables. Among the sociodemographic variables, we have sex, age, level of education, income level, the nationality, whether the person accounts for medical insurance and civil status. Among the family conditions we have the number of members in the family and number of income perceptors. Regarding the financial conditions, we consider the debt, the savings, necessity of credit and financial knowledge. Finally, the variation of income level due to the pandemic is included. The results show that the underlying motivations of enterprenuerial intentions vary across existent and new unemployed employees. For instance, the level of education influences in opposite directions. As the level of education increases, the entrepreneurial intention also increases for COVID-19 unemployed employees but reduces for existent unemployed employees. This result could indicate that unemployed employees in the context of a crisis use their human capital in entrepreneurship to improve their situation. The number of income perceptors reduces the entrepreneurial intention for COVID-19 unemployed employees, as there exists more mechanisms of consumption smoothing. This aspect is not significant for existent unemployed employees. Interestingly, the necessity for credit increases the intention of entrepreneurship for both types of unemployed employees. In this sense, policies that boost entrepreneurial activity by generating differentiated credit products for identified groups of people, are needed. The variation of income due to the crisis influences only on the entrepreneurial intention of existent unemployed employees. In this line, it is important to create opportunities through training and promote an optimal environment for entrepreneurship.

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Relationship between economic glocalization and the deposit-loan ratio of regional banks in Japan

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Abstract

The purpose of this paper is to clarify the factors behind the decline in the deposit and loan ratio of regional banks in Japan from aspect of economic glocalization. The deposit-loan ratio is the ratio of deposit balance to loan balance, which has been declining since 1990 in Japan. In particular, regional banks are descending rapidly, which is closely related to Japan's progress in glocalization in the regional economy. The earnings structure of regional banks is severely constrained, and people attribute it to their inability to find borrowers.

But that story is wrong. Because those points are based on exogenous money supply theory, modern monetary systems must be considered based on endogenous money supply theory. Certainly, it is difficult for regional banks to find high-performing borrowers. Theoretically speaking, the loan-to-deposit ratio is unchanged by bank's lending, however, as lending growth creates deposit balances and lending collection reduces deposit balances.

I had already argued the following two factors for the decline in the loan-to-deposit ratio in Japan. One is the purchase of JGB by private banks, and the other is the extinguishment NPLs directly. In this paper, I point out that these two factors are that the local economy is not responding to economic glocalization.

Because CPI in Japan does not rise, the BoJ has adopted a large-scale QE policy, which means that the bank buys a large amount of JGB. In this paper, I try to explore how regional economy in Japan responds to economic glocalization.

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Do Agglomeration Economies Influence Environmental Regulatory Competition? The Case of China

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Abstract

Using panel data of 30 Chinese provinces during the period from 2005 to 2015, this paper empirically examines to what extent agglomeration economies influence environmental regulatory competition. It is found that a province's environmental regulation, which is measured by the enforcement of command and control policy and market-based economic policy, is positively related to the regulation of its competitor provinces. Therefore, Chinese provinces do engage in environmental regulatory competition. It is also found that provinces with different levels of agglomeration economies respond asymmetrically to the change of their competitors' regulations. The more agglomerated a province is, the less responsive is the province's environmental regulation to its competitors' environmental regulation. In particular, the asymmetric response is only significant when provinces adopt a market-based economic policy to engage in regulatory competition.

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Easing the Effects of Austerity with Reforms: A Regional CGE Experiment on Brazilian Labour Productivity

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Abstract

Considering the literature favorable to the positive effects of institutional reforms on times of fiscal consolidation and the one that discusses the role of the State in regional inequalities, this paper proposes to measure the increase in labour productivity necessary to offset the effect of the contraction of the public sector on GDP, as a result of the current fiscal austerity agenda in Brazil.

The regional perspective is of paramount importance for this type of problem due the heterogeneity of the representativeness of the public sector, as well as the productive structure, in the Brazilian regions.

For this purpose, we used a dynamic interregional general equilibrium model (TERM) for the 27 Brazilian Federative Units (states), allowing a bottom-up analysis. The simulation strategy is divided into a baseline scenario and a policy scenario. The main results show that the increase in labour productivity necessary to ease the contractionary effects of fiscal consolidation varies considerably among the states, relatively more onerous to those of the Northeast region.

Macroeconomic results also follow the same pattern of regional heterogeneity. The explanation for this pattern is on the model features, in which a real stagnation of the Government expenditure happens indistinctly for all states but its impacts on each one depends on the importance of the public activity; as well as each productive structure, indirectly affected by the fiscal austere policy.

Overall, the results are consistent with the literature on convergence of income and productive activities in Brazilian regions. However, as some authors argue, the less developed regions seems not to be able to absorb the share of the declining sectors in the relatively more developed regions, mainly due to the low representativeness of technological activities in these regions, once the dispersion of the activities has occurred in seek of lower factor costs.

Therefore, the result of low perspective of household consumption aligned with the combination of lack of investment and high unemployment, in a sectoral composition that has little benefit from the austerity and reforms agenda, as evidenced in the results, makes such an increase in labour productivity in the most affected states illogical, suggesting a worsening of the Brazilian regional inequality.

The current crisis caused by the COVID-19 pandemic has shown the vulnerabilities of countries whose State prosecution has recently been hampered by austerity policies and overly pro-market reforms. The effects of the pandemic are systemic, but require special attention regarding the already fragile labour market and labour productivity in some peripheral economies. Due to the specificities of the National Accounts System data, the model does not capture the direct effects of cuts in public services in the household consumption budget, only the indirect effects. This aspect is something to be considered on this research agenda, in face of the current health crisis, with regard to the global evidence of vulnerability of the poorest in face of such a precarious situation of public health and education services, as well as high unemployment rates, in parallel of a considerable increase in income inequality.

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On the Working in border thinking to DIGITALIAN from “JIKOCHULIAN”: An Empirical Analysis in “DIGITAL SOULFULLIAN” era

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Abstract

This paper is about border thinking to digital thinking and analog thinking in "the DIGITAL SOULFULLIAN" era that means people who survive the predicament era about digitization.

In the wake of the Corona(COVID-19) disaster, which is already a year old (from the first wave to third wave or third silent wave means between third wave and next wave of the COVID-19), now, the use of ICT has been promoted in various aspects such as industry, medicine, and education. Japan is in the midst of a major change in social life with ICT technology. The significance of this paper is that Japan's social life is about to change drastically, and as a sustainable city, it is very significant for future digitized Japan to consider and analyse the turning point of innovative thought.

Digitization of information in all of its forms is one of the most developed things of the twentieth century. In Japan, Information as the business resource gets more important in addition to the conventional three business resources, human, goods, and money, trends. The era has begun when it is impossible to establish a business management strategy without an information strategy. The problems of "information literacy" and "digital divide" in the early days of information technology are the essence of relative disparities, and with the co-evolution of information and communication technology, business organizations, and business models, the boundaries of information disparities are advancing of information capabilities, it is important things. It has been fifteen years since the author has advocated the Novel theory "Information and Business Study" that the Information resource is as the core of four business resources since 2006. However, at least for this fifteen years, digital transformation is the biggest problem behind Japan's economy and companies, it still has not changed by leaps and bounds about digital in Japan. So in this paper discussed the question is Why hasn't this changed in the Japanese mind yet, whether we are now "ANALOGIAN" means pure analog thinking, "DIGITALIAN" means pure digital thinking or "JIKOCHULIAN" means the thought that both analog and digital information are important by interview survey and literature survey. This paper concluded that one person of United States appears to have DIGITALIAN thinking, but they are JIKOCHULIAN thinking in current Japanese citizen mind.

In the future, it is important to analyse other cases and when is the singularity from JIKOCHULIAN to DIGITALIAN, different of regional in the world, $0 \leq A$ and $0 \leq B$, and $\max 1 \leq A, B$ and so on about after the third wave and third silent wave of COVID-19 on risk society by the General and Unification study perspective in the future.

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Coordinated Development of Industrial Structure and Employment Structure: Evidence from Qinghai Province, China

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Abstract

Under the background of the digital age, how to study the coordination of industrial structure and employment structure is an important driving force to solve the problem of regional development, promote regional coordinated development and achieve sustainable development. This study selects the relevant data of industrial structure and employment structure in Qinghai Province from 1990 to 2019 as the research object, and makes a systematic analysis on the coordination of industrial structure and employment structure in Qinghai Province. Based on the Aitchison geometry and logarithmic ratio transformation of component data theory, this paper improves the existing coordination coefficient index to measure the coordination relationship between industrial structure and employment structure, puts forward the improved coordination coefficient index, and verifies the rationality of the coordination coefficient through the empirical analysis of Qinghai Province. In addition, in order to further measure the coordination degree of industrial structure and employment structure in Qinghai Province, this study takes the Moore structure value as the basic data. The method of grey relational analysis is used to calculate the lag time of employment structure. The research shows that:

(1) Compared with the existing coordination coefficient, the improved coordination coefficient has the advantages of theoretical and practical application. The improved coordination coefficient can measure whether the evolution direction of industrial structure and employment structure is the same or not, and can reasonably explain the change of the coordinated relationship between industrial structure and employment structure.

(2) The evolution trend of industrial structure and employment structure in Qinghai Province is basically in line with the law of modern economic development. However, there is still a certain gap between the development of the ideal industrial structure and employment structure.

(3) The economic development strategy has a long-lasting impact on the industrial structure and employment structure of Qinghai Province. The low quality of labour force and the low degree of labour marketization are formed in Qinghai under many factors, such as history, population, nationality, and geomorphology and so on. In addition, the degree of opening to the outside world is not high, the pace of urbanization is slow, and the investment in investment and consumption mainly depends on the transfer payment of the central government, which is also an important factor restricting the industrial structure and employment structure of Qinghai Province. It is also an important issue that we should think deeply about how to achieve regional coordinated development and sustainable development in the digital era.

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Contemporary socio-economic differences in Poland: (3) relations between development level and political preferences

Robert Perdał, Paweł Churski, Tomasz Herodowicz, Barbara Konecka-Szydłowska

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Abstract

The results of political elections in Europe and the world in the second decade of the 21st century show a clear trend of strengthening populist movements. One of the fundamental root causes is the persistent and even growing differentiation of the socio-economic development level, which results in permanent peripheralisation and marginalisation of some areas. This results in polarization and radicalization of electoral behaviour as a consequence to the unsatisfactory effectiveness of earlier implemented development activities and the economic exclusion of a part of the society living below the social minimum. The results of our study indicate the persistence of development disparities in Poland, despite the relatively positive trends in economic growth at the national level. We draw attention mainly to the strong significance of historical conditions (relict borders). Against this background, we identify the scope and direction of geographical changes in Poles' electoral behaviour. We aim to determine the relationship between the level of socio-economic development and the support of political parties in spatial terms. The final conclusions emphasize the persistence of "territorial underpinnings" and socio-economic conditions of electoral populism in Poland, which to a large extent results from historical factors. Not only has the distribution of populism not been changed as a result of transformation and integration changes in Poland, but it has in fact been reinforced. The research procedure consists of three stages presented on separated posters: (1) spatial polarization of development, (2) political scene and electoral behaviour, (3) relations between development level and political preferences. Geographically Weighted Regression (Fotheringham, Brunson, Charlton, 2002) was used to study the relationship between the level of socio-economic development and political preferences in Poland in 2005-2015. The value of the synthetic indicator was used as the explained variable describing the level of socio-economic development (see Part 1). In turn, the explanatory variable was the percentage of votes for political parties representing "Solidarity Poland" (mainly currently ruling Law and Justice) (see Part 2). Regression modelling has showed that the relatively largest support for the "Solidarity Poland" bloc is found in communes with low and very low levels of socio-economic development. It should be stressed that the examined relations are not limited to such a simple relationship and require more detailed interpretation, inter alia, as regards the level of socio-economic development, socio-cultural characteristics of the inhabitants and the urban-rural layout. In general, it can be assumed that the greatest support for "Solidarna Polska" occurs mainly in small municipalities, with dominant agriculture, located in the lands of the former Russian and Austrian Partition with a dominant population professing traditional Catholic values and with low mobility.

This study is carried out as part of the FORSED research project (www.forsed.amu.edu.pl) funded by the National Science Centre (No. 2015/19/B/HS5/00012): New challenges of regional policy in shaping socio-economic development factors of less developed regions.

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Contemporary socio-economic differences in Poland: (2) political scene and electoral behaviour

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Abstract

The results of political elections in Europe and the world in the second decade of the 21st century show a clear trend of strengthening populist movements. One of the fundamental root causes is the persistent and even growing differentiation of the socio-economic development level, which results in permanent peripheralisation and marginalisation of some areas. This results in polarization and radicalization of electoral behaviour as a

consequence to the unsatisfactory effectiveness of earlier implemented development activities and the economic exclusion of a part of the society living below the social minimum. The results of our study indicate the persistence of development disparities in Poland, despite the relatively positive trends in economic growth at the national level. We draw attention mainly to the strong significance of historical conditions (relict borders). Against this background, we identify the scope and direction of geographical changes in Poles' electoral behaviour. We aim to determine the relationship between the level of socio-economic development and the support of political parties in spatial terms. The final conclusions emphasize the persistence of "territorial underpinnings" and socio-economic conditions of electoral populism in Poland, which to a large extent results from historical factors. Not only has the distribution of populism not been changed as a result of transformation and integration changes in Poland, but it has in fact been reinforced. The research procedure consists of three stages presented on separated presentations: (1) spatial polarization of development, (2) political scene and electoral behaviour, (3) relations between development level and political preferences.

This presentation is about stage 2, the purpose of which was to characterize the Polish political scene and the electoral behaviour of Poles. The temporal scope of the analysis covers mainly the years 2005 and 2015. The analysis is conducted at the level of LAU-2 units (gmina), enabling detailed identification of intra-regional disparities. During analysis there were used desk research and indicators of electoral support level noticed in the parliamentary elections in 2005, 2007, 2011, and 2015. The formation of the Polish political scene during the transformation period was dynamic and characterized by the emergence of new antagonisms. In a generalized perspective the Polish political scene can be divided along two axes: conservatism vs. liberalism and individualism vs. communitarianism. Political parties can be further aggregated into two main political camps: "Solidary Poland" – more conservative and 'Liberal Poland' – more progressive. The results of the parliamentary elections justify the statement that the Polish political scene is subject to polarization, which in fact brings the party system closer to the bipolar system. The highest concentration of support for the "Solidary Poland" camp was observed in the south-eastern part of the country. On the other hand, the relatively highest support for the "Liberal Poland" camp was in north-western Poland.

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Regional patterns of 4.0 technological transformation. Conceptual reflections and empirical evidence from European regions

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Abstract

The creation and adoption of the new 4.0 technologies such as artificial intelligence, intelligent robotics, analytics, just to name a few, are expected to drive pervasive transformations and, potentially, radical impacts on the economy and the society.

Socio-economic changes are particularly affecting the domain of production and application of 4.0 technologies, i.e. sectors and markets that adopt (and under certain conditions co-invent) such technologies.

In particular, three main completely different structural transformations are at place: 1) the automation of industrial production processes (Industry 4.0); 2) the creation of new digital services (servitisation); 3) new service delivery and new traditional industry activities (digitalisation of traditional activities).

The territorial dimension of these phenomena has been so far neglected in the literature. This paper aims at filling this gap from both a conceptual and an empirical perspective. On conceptual grounds, the paper elaborates on the territorial dimension and impact of the three different 4.0 technological transformations. On empirical grounds, the paper documents these transformations in European NUTS-2 region over the period 2008-2016.

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Economic Valuation of Cultural Ecosystem Services: The Case of Landscape Aesthetics in the Agritourism Market

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Abstract

Natural and agricultural landscapes provide a wide range of ecosystem services, aesthetic landscapes being among them. Since these services have no market value, land-use decisions often ignore them in favour of urban sprawl, resulting with sub-optimal resource allocation. Here we suggest a novel method to evaluate the aesthetic landscape services of natural and agricultural ecosystems using the case of the agritourism market in Israel. We model the agritourism market as an oligopolistic market and formulate an equilibrium model with structural, double nested-logit, demand and pricing equations. The structural equations are expressed as a function of the attributes of the agritourism firm and the ecosystems adjacent to the attractions. We use aggregated market data and Geographic-Information-System (GIS) maps to estimate the model. Counterfactual scenarios of urban sprawl were used to estimate the economic value of aesthetic landscape services. The loss of welfare in the different scenarios ranges between 15 thousand USD to 21 thousand USD per squared kilometre depending on the type of ecosystem and the scope of the urban sprawl. We contend that this welfare loss can be used as the economic value of aesthetic landscape services to the agritourism market. These findings illustrate the potential of this valuation method in guiding decision-making and place ecosystem services on a level playing field with market-priced goods, thereby, contribute to the sustainable use of the Earth's limited resources.

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Cultural and Creative Cities and regional economic efficiency: Context conditions as catalysers of cultural vibrancy and creative economy

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Abstract

Following the hype that has been given to culture and creativity as triggers and enhancers of local economic performance in the last 20 years, this work aims at assessing the impact of Cultural and Creative Cities (CCCs) on the development of their regions. In this sense, the cultural and creative character of cities is considered as a strategic strength and opportunity that can favor the economic system of the entire regions in which the cities are located.

Exploiting a regional production function and data from the Cultural and Creative Cities Monitor (CCCM) provided by the JRC, the effect of cities' cultural vibrancy and creative economy on the output of the regions they belong to is econometrically explored. The possible role played by the enabling environment in catalyzing the action of cultural vibrancy and creative economy is also considered.

The implications are thoroughly discussed: CCCs are a strategic resource for the sustainable development of their region since they contribute to feed a long-term self-supporting system, interpreted according to a holistic conception that includes economic, social, cultural, and environmental domains.

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Measuring Transit-Oriented Development Degree Based on the Railway Transit Network Performance Considering Population and Facility Distribution

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Abstract

To respond to urban challenges such as car dependence, air pollution, urban sprawl, and congestion, transit-oriented development (TOD) is increasingly recognized and interested. TOD can effectively reduce car dependence by attracting people to attend activities near public transport. While previous studies are rich in the neighbourhood- and station-level TOD, very few studies focused on a universal measurement of the city- and regional-level TOD, which can be used to make efficient TOD planning in different cities regarding railway transit network performance in connecting population and facilities. Therefore, this research aims to measure the TOD degree of the city- and area-level in terms of the travel time reduction benefit from a railway network in 40 cities worldwide considering the linkage of population, facilities.

First, the TOD degree is defined using the linkage index of city- and area-level, which indicates the gap between the ideal and current condition in terms of travel time or the number of facilities. To calculate the linkage index, we define three speed settings by changing the speed of the network: (1) travel by using only the road network, (2) travel by current road and railway networks (current condition), and (3) travel by road and railway with railway speed (ideal condition). Calculating the linkage by comparing the current and ideal situation can help understand how far the current network performance is from the ideal condition. We assume two travel patterns for measuring the linkage index: population to population (long-distance travel) and population to facility (short-distance travel). Then, these linkage indexes of 40 cities are calculated using data collected from OpenStreetMap, including road data, railway data, and facility data. Finally, the relationship between linkage index and city characteristics such as population distribution, transit system, and facility distribution is investigated to determine the reasons for differences in TOD degree.

The major conclusions include the followings: On the city-level, (1) the railway systems of European cities have a high linkage index than some cities in developing countries, whether in long or short distance travel, due to relatively well-developed railway infrastructures; (2) railway and station density have a positive relationship with the linkage index, but differences in linkage index are observed between cities with the same infrastructure level; (3) this difference indicates the importance of efficient connections in railway systems between distributions of population and facilities. On the area-level, the spatial differences of the linkage index are clearly displayed. This research enhances the understanding of the TOD degree and provides benchmark points that contribute to decision-making processes regarding the TOD development.

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Analysis of Economic and Environmental Impacts of Shutting Down the Moroccan Refinery Samir: An Interregional Input-Output Approach

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Abstract

The closing of Samir's Mohammedia refinery in August 2015 due to financial constraints has dramatically affected fuel oil market in Morocco. In this paper we assess the economic and environmental impacts of the disruption of activities of Morocco's only refinery. We are able to isolate the oil refinery sector associated with Samir in a fully specified interregional input-output database, considering 20 sectors in 12 Moroccan regions. We base our empirical strategy on the "hypothetical extraction" method, which serves as the methodological anchor to isolate the systemic measures of value added and CO2 emissions related to the refinery activities in a typical year of operation. The overall impact of the shutdown is close to 5% of the country's output, with stronger regional impacts faced by Grand Casablanca-Settat, followed by its neighboring regions.

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Practical valuation of ecosystem services for local stakeholders: economic valuation considering local explicit data

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Abstract

For the achievement of 2030 SDGs agenda and conservation of ecosystem accordingly, it is important to assess the value of ecosystem and its services. In light of this, some initiatives such as Millennium Ecosystem Assessment (MA), The Economics of Ecosystem and Biodiversity (TEEB), Wealth Accounting and Value of Ecosystem Services (WAVES), Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES), and Ecosystem Services Partnership (ESP) are launched to develop measures for valuation of ecosystem services (ES), and researches are ongoing worldwide to evaluate ES. Although researchers expect that the results to be used in various decision-making related to business and policy, some studies have pointed out that the valuation results are not fully utilized for the decision-making. So-called “information gap” issue is pointed out and, some reasons for the gap are raised. Among this, some studies questioned that local specific factors are not fully captured in the valuation. This means that in most valuation cases, national statistics are mainly used for the valuations, and local on-site information such as geographical conditions and information/data on residents are not sufficiently reflected in them. This makes the use of results difficult for local stakeholders. In addition, most of ES valuations assess potential value instead of actual value which beneficiaries currently and actually receive from ecosystem. Some studies consider beneficiaries of ES, but ES valuations and tools that identify the beneficiaries of a given ES in a spatially explicit way are still minor. The economic valuation is regarded as a prerequisite for better decision-making, and some valuation results are already incorporated in various decision-making processes. In order to enhance the usefulness of ES valuation the number of beneficiaries of ES that link with economic valuation is crucial particularly for ecosystem conservation policy and management practices in a specific area. Additionally, local-specific information such as the number of beneficiaries can close the gap between valuation studies and decision-making regarding ecosystem conservation practices.

The purpose of this study is to obtain the valuation that is practically useful for policy decision makings particularly for local policymakers. More specifically, we chose flood control and water storage services of forest ecosystem as valuation objects, and assess the value of each types of ES in monetary term. The valuation is combined with information on beneficiaries. By spatial analysis with geographical information system (GIS), we estimate the number of households influenced by deforestation of upstream forest caused by the construction of solar power plants. We use a case of Satetsu-gawa river watershed in Ichinoseki-city, Japan. In this study, we firstly estimate the area of forest deforested due to construction of four solar power plants in Satetu-gawa watershed. Then the areas and the number of households located downstream of the river are also estimated. The households in downstream area can be regarded as beneficiaries of the services in the watershed. Finally, the value of each types of ES in monetary term is assessed using information on beneficiaries.

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Small Business Clinic: A data-driven diagnostic and advisory tool for SMEs in lagging regions

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Abstract

In Europe and in Greece, Small Business are a vital part of the economy and the challenges they encounter in their post crisis environment need to be addressed as a matter of urgency. Their size, in most cases, does not allow them to have real access to financial advice, guidance and support in planning, restructuring and developing their business, because of the lack of sufficient resources. In addition, such services are not always available outside large urban centers and the periphery. In contrast, larger firms typically receive these services from major

consulting firms that are mainly based in the capital or large cities and have the expertise, access to big data and business analytics tools. Lack of access to advisory services is partly responsible for the high mortality rates of SMEs and especially the mortality of new businesses. Adapting to changes in a successful way requires addressing critical operation problems and improving effectiveness in decision-making.

This paper is based on research work conducted in the framework of a project aiming to create a web-based online 'big data hybrid business analytics advisory service model' for SMEs, that incorporates business analytics tools utilizing big data and supported by experts, called "Small Business Clinic" (SBC). Our approach combines economic and business information available with survey data depicting also the perceptions, attitudes and choices of the entrepreneurs. Databases of structured and unstructured information, alongside with input data from the surveyed enterprises, are linked, correlated and analysed within an integrated business model in order to produce a set of indicators and algorithms. The tool delivers individualized diagnosis, benchmarking and advisory to small businesses in order to take advantage of "data-driven decision-making" and to achieve significant improvement in their productivity and profitability. Furthermore, the paper analyses the adjustment and prospects of the productive system of SME's of Greece. The analysis focuses on the role of the internal and external environment, specialization, human resources and inter-firm relations, as well as their ability to compete in the post crisis demanding environment. The analysis is supported by a pilot survey conducted in the region of Thessaly, inquiring the patterns of decision making, the drivers of change, as well as the perceptions and attitudes of small firms in a number of critical domains. The results of the survey are used to control and fine-tune the indicators and algorithms used to produce the diagnostic and advisory services to SMEs irrespective of sector and location.

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Location determinants and sustainability: an exploratory approach

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Abstract

This paper analyses location determinants of firms at local level focusing on role played by sustainability issues in shaping these decisions. The contribution to empirical literature is the identification of specific locational patterns driving decisions of sustainability-oriented firms. This is accomplished by using data for new firm entries in Catalan municipalities between 2004 and 2013. This paper is about this type of example, municipalities of the same country with no relevant differences in terms of environmental policies easily explained due to lack of local attributions on that issue. In these cases, the switch to environmental-friendly activities is no longer explained by policy decisions, but by spatial characteristics that favour some activities over others in view of asymmetries at industry level and act as location determinants.

Firms' location determinants have received an increased attention in recent years in view of the positive role played by entering firms over job creation and GDP expansion. Although empirical contributions have considered either internal or external location determinants, in this paper we will focus on the later. Concretely, we will analyse the role played by characteristics of the areas where firms locate or may locate. As these previous determinants have been largely discussed by several scholars we do not attempt to go further in that direction, but to explore a new path that has received little attention until now. We refer to the way in which sustainability dimension and changing social attitudes in developed countries may boost firm creation (and, therefore, location) in these industries. We hypothesize that not all territories have the same capacity to attract new firms, and not all firms locate following the same areas, giving priority to certain industries may benefit some areas. As there is a growing pressure towards specialisation in more sustainable activities, our results proxy future trends for firms' location patterns in many European countries.

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Spatial concentration of economic activities and regional export variety

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Abstract

This research aims to explore the influence of agglomeration forces on the product variety destined to international markets. For this purpose, the Brazil case study between 2002-2017 has been carried out. The hypothesis is that the Brazilian states (similar to NUTS2) that have the highest economic concentrations are those that export the greatest variety. The product variety that a state sells abroad is calculated by a Theil index convenient of the export's amount accounted by the Harmonized System (HS4) codes for international trade (Ministry of Industry Foreign Trade and Services, 2020). The independent variables are calculated to compound a spatial concentration index proposed by Ferrante et al. (2020) that measures the concentration of the event taking account its spatial distribution. To construct those concentration index for each state and year, the number of firms with more than 100 employees, and number of people with high education come from the Ministry of Labour (2020) and the information of Gross Value Added (GVA) of industry, services, and public administration, as well as data on population and GDP per capita are made available from the Brazilian Institute of Geography and Statistics (2020).

The dependent variable is modelled as a function of one-year lag independent variables through a generalized linear model (GLM), and observations are pooled across years and states. From the methodological perspective, this paper applies a novel index of spatial concentration able to take into account the geographical structure of the phenomenon under analysis. From the applied perspective, a deeper understanding of the underlying dynamic of trade flow generation, and of the impact of regions' dissimilarities on their capability of attracting consumers and firms, is fundamental in order to better orient regional development policies.

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From Global to Local: Exploring Interregional Linkages of Moroccan Exports in Domestic Value Chains

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Abstract

There is substantial value-added of services incorporated in goods exports, from intermediate services and services bundled with goods. In the quest for increasing and sustaining its competitiveness in Global Value Chains (GVC), Morocco still requires policies, capabilities, and infrastructure to promote intermediate services. On one hand, locational aspects of specific services, such as transportation services, are associated with relatively less concentrated spatial patterns, as production and consumption are more strongly locationally interdependent. On the other hand, knowledge-intensive business services (KIBS) tend to be highly concentrated in Casablanca. However, this does not exclude some movements towards dispersion observed in some business services, as long as working skills limitations are surpassed, which may give room for coordinated regional and trade policies to enhance participation in value addition in Local Value Chains (LVC) of peripheral, natural resource-rich, exporting regions. In this paper, we estimate the contents of services value-added incorporated in goods exports in Morocco, exploring the local dimension of the results. We use inter-regional input-output analysis to trace and map domestic value-added embedded in Moroccan exports. We also look at other dimensions of local value chains of exports in the country.

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Multidimensional Poverty in Morocco: An Exploratory Spatial Approach

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Abstract

In spite of the overall decrease in poverty in Morocco in the recent past, the pace of change did not affect regions equally. Poorer provinces faced slower reductions, increasing the relative gap in poverty indicators. In this paper, we explore the results of a multidimensional poverty indicator produced by the High Commission for Planning (HCP), the Moroccan official statistical agency, for the period 2004-2014. The Multidimensional Poverty Index (IPM) allows investigating the spatial aspects of different dimensions of poverty in the country. We find a clear spatial process underlying the distribution of the IPM. Moreover, the analysis undertaken at the province level suggests a persistent poverty hot spot in the northeast part of the country associated with poor infrastructure. Other poverty areas are more heavily associated with low quality of public services, particularly education and health. We provide a typology of geographically targeted sectoral policies, showing that there is no single recipe for all regions, since structural features matter.

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Towards an interpretation of labour productivity growth: patterns of regional competitiveness in European regions

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Abstract

The increase of labour productivity induced by technological progress is typically interpreted as the main determinant of regional competitiveness. In the last decades, however, the empirical verification of this mechanism provided contradictory results. We claim that labour productivity growth is just one of the sources on which regional competitiveness relies, being increasingly dependent on output quality improvements and that the combination of the different indicators is useful to produce different patterns of regional competitiveness. We offer a methodology for their measurement and an application to European regions. Our analysis shows that, even if structural differences persist, several regions in Eastern countries moved towards competitiveness strategies analogous to those of Western Europe.

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The effect of upzoning on house prices and redevelopment premiums in Auckland, New Zealand

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Abstract

We study the short-run effects of a large-scale upzoning on house prices and redevelopment premiums in Auckland, New Zealand. Upzoning significantly increases the redevelopment premium but the overall effect on house prices depends on the economic potential for site redevelopment, with underdeveloped properties appreciating relative to intensively developed properties. Notably, intensively developed properties decrease in

value relative to similar dwellings that were not upzoned, showing that the large-scale upzoning had an immediate depreciative effect on pre-existing intensive housing. Our results show that the economic potential for site redevelopment is fundamental to understanding the impact of changes in land use regulations on property values.

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Perception of the EU by Turkish citizens: Individual characteristics and local economic prospects

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Abstract

This study investigates the individual and local determinants of the EU support in a candidate country. The main objective is to focus on the uneven economic development trajectories of Turkish regions and to question whether local economic conditions have influence on the individual level of support to the EU. Controlling for a host of individual characteristics, our results show that regional differences in per capita income, unemployment and employment rate matters. Those regions with lower income and worse labour market outcomes have higher EU support. These results are robust in static and dynamic sense, suggesting that the current economic conditions and the evolution of long-run regional declines both shape the regional discontent in Turkey. Our prior knowledge from the developed EU countries validate that left behind places create the so-called discontent by opposing to integration and globalization. However, our results from a developing country show that disadvantageous left behind places demand for a change of the status-quo. In the Turkish case, observed discontent acts as a major motive to support the EU integration at the regional level.

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Renewable Minigrids for Rural Electrification in Ghana: Analysis of Households' Willingness to Pay

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Abstract

Renewable energy minigrids hold enormous prospects for the African energy sector in terms of enhancing clean energy access, while fostering sustainable low carbon development. The government of Ghana has established pilot renewable minigrids in 5 rural offgrid communities to provide mastery and learning for the electrification of over 600 existing rural communities that cannot be electrified via the national grid. Although, there is evidence on willingness to pay (WTP) for renewable-generated electricity in some developing countries, little is known about households' WTP for renewable-based electricity in Ghana and in particular renewable minigrids for rural electrification. The study sought to provide one of the first WTP estimates for renewable-based electricity for rural electrification in a developing economy context such as Ghana, setting the stage on how to de-carbonize the rural energy sector and spur low-carbon rural development. A Contingent Valuation (CV) survey was undertaken using structured questionnaires in all 5 pilot renewable minigrid project communities in Ghana, located in 3 of the 16 regions of Ghana. Two hundred households were interviewed adopting a combination of cluster and simple random sampling approaches.

We established that rural households are willing to pay an average of GHC29 (≈\$5)/month for renewable-powered electricity services, which is twice the amount they are currently paying based on the Uniform National Tariffs. Households in the rural areas are willing to pay between 9% and 11% of their discretionary incomes to cover the cost of accessing renewable-powered electricity in the rural, offgrid communities in Ghana. The findings suggest a positive attitude by households regarding their preparedness to pay for the cost of renewable-powered electricity services in the hope of contributing to a sustainable electricity service delivery and enhanced

access in the communities. We call for a closer view at these estimates in the development of tariff regulations and frameworks by the government for renewable minigrid development in the rural areas.

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Regional reindustrialization patterns and productivity growth in Europe

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Abstract

In recent times, and especially after the 2008-2009 economic crisis, we have witnessed a decline in productivity growth in the EU and the literature has often been referring to *productivity paradox* and/or *productivity gap*. However, the situation is in fact highly diversified at the regional level. In particular, the industrial structure of GVA has substantially changed over the last two decades and although a decrease in the share of manufacturing VA is a general (almost physiological) trend in advanced economies, it has been recognized that the EU needs to reverse the declining role of industry within its boundaries, strengthening industrial competitiveness to enable the transition to a low-carbon and resource-efficient economy (*reindustrialization*).

Starting from the critical issues related with the *deindustrialization* process, the present paper aims at highlighting different possible ways of *reindustrializing* and at highlighting their role in productivity growth. In more details, a regional reindustrialization may occur either reinforcing those sectors in which the areas were already specialized; or increasing the presence into more dynamic sectors and acquiring new know-how; or exploiting the pre-existing knowledge to reindustrialize in local core sectors, although without strengthening the specialization in those specific sectors; or, finally, reindustrializing in non-core sectors (niches) without improving the specialization in those sectors.

After identifying reindustrializing NUTS2 regions in the EU and the associated reindustrialization patterns, this work provides an econometric application meant at highlighting the effects of the different reindustrialization typologies on regional productivity growth at the sectoral, manufacturing, and aggregated level, also considering specialization features in advanced rather than traditional manufacturing sectors.

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Innovation for Sustainable Development in Poor Countries- Lessons from Ethiopia

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Abstract

Innovation is generally considered as knowledge creation (e.g., patents), R&D activities, and technological advancement. It typically benefits highly-developed regions, increasing their gaps with poorer regions. The integration of innovation in poorer countries can thus significantly contribute to their integration in the global economy. However, the common innovation policy concepts are inappropriate for poor countries.

We devise a conceptual approach for innovation in poor countries, design and test a simplified methodology for its implementation, and employ the case of Ethiopia for its demonstration. Our approach is summarized in four steps:

Innovation is not a goal in itself, but rather an instrument for the achievement of distinct national development goals (e.g., economic growth, employment, improved wellbeing).

Distinct types of innovation contribute to different development goals.

The innovation ecosystem factors should be adapted to the specific innovation needs and conditions of poor countries.

Innovation priorities should be adapted to the country's exogenous macro-economic conditions (development level, economic regime, economic structure, and development priorities).

The methodology employed to test the innovation needs and priorities of Ethiopia was as follows: key-informant interviews, focus group discussions, and questionnaires involving all ecosystem actors: government, academic and research institutions, business leaders (n= 49). Seven main ecosystem factors were tested (finance, human capital, infrastructures, information, academy, government services, culture) and evaluated through a total of 91 variables. Two aspects were evaluated for each variable, on a 1-5 scale: the variable's perceived importance for the advance of innovation, and the variable's current availability in the Ethiopian reality. The gap between the two scores indicates respondents' "frustration" level. The robustness of the findings is further corroborated by specific questionnaires for students (n=55), researchers (n=67), unemployed (n=53), and small enterprises (n=71). Secondary data on the national economy and the innovation situation in the country (drawing on the Global Innovation Index) complemented our primary data.

Findings indicate a gloomy economic situation and low innovation level, but at the same time high potential for growth based on a growing market, and considerable government commitment and efforts. The ecosystem analysis reveals frustration with the low availability of each of the factors, as well as their weak interaction within the ecosystem: lack of coordination between government, industry and academy; lack of coordination within government departments; and lack of interaction among businesses.

Several directions for innovation policy guidelines are derived from the analysis.

Adaptation. At given exogenous conditions, innovation efforts should focus on a broad-base adaptation of existing technologies to more traditional activities.

Impact innovation. Priority should be given to innovation types that can have major economic impacts and boost productivity and employment—e.g., in agriculture, industrialization, and SMEs.

Focus on market needs. Rather than encouraging technology push, the innovation policy should focus on the market pull, respond to people's unmet needs, and support privatization.

A governmental coordination platform is needed to set up the development priorities of innovation activities, strengthen coordination and collaboration among all ecosystem factors, and provide appropriate services and infrastructures.

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Innovation-disrupted spatial equilibrium: Insights from the Israeli experience

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Abstract

The emergence of innovation as a major engine of development challenges regional economic balances due to the strong concentration of high-tech activities in central metropolitan regions. Besides the positive influence of innovation on national growth, there is a regional market failure, leading to a disruption of peripheral regions' efforts to integrate into the national and global economy. We hypothesize that labour supply in the periphery responds by adapting to new requirements, while labour demand (through high-tech activities or start-ups) responds to changes in labour supply but also tends to concentrate in central regions. We expect that public policy can create a new equilibrium in the labour market, reducing the periphery-centre socio-economic gap.

We use Israel as a case study, given that it is a major leader in innovation but concentrates these activities in the metropolitan centre. We propose and test a conceptual approach using secondary data on the changes in the labour market.

The analysis of the Israeli experience leads to several preliminary conclusions:

Labour supply in the periphery shows a tendency to adapt to the new conditions, with increases in quality and quantity, which contradicts arguments about periphery desertion.

Labour demand in the periphery reacts to innovation new opportunities and to public policy measures and leads to changes in the domestic economic structures.

Yet, labour demand does not fully accommodate changes in labour supply, apparently as a result of insufficient or inappropriate policy measures.

A consequence of the insufficient balance between labour supply and demand is the persistence of periphery-centre gaps in unemployment and income.

An intensive research effort is needed in order to identify the policy measures that would lead to a better labour market balance.

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Spatial organisation of the innovative business in the urban area – new framework

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Abstract

Empirical analysis suggest that the spatial organization of the innovative industry is not stable over time. Over the years clusters of firms are shifting in terms of shape, density and their relative importance. All those alterations look like an evolutionary change in the spatial pattern of the business setting. Location decisions of the individual firms from the innovative industry aggregate into a herd-like behaviour of the whole branch. Dynamic actions of the large group of companies are not really explainable by the current theoretical consensus.

In this paper I will analyse the spatiotemporal pattern of the location choices in a highly innovative business branch situated within an urban area. Although it may seem that for such a progressive industry like technological start-ups the office location should not play any major role, there is an evidence that this industry as a whole is creating intriguing non-random spatial patterns that are gradually changing over time. I will investigate this non-stable spatial structure using a dataset consisting of individual-level information about the technological start-ups founded in Warsaw between 2010-2018. The empirical analysis will be conducted with a usage of machine learning methods supplied with more traditional econometrical framework. I will discuss the fluctuations in the general structure, presence of clusters, their location within the city and their temporal (in)stability.

Considering the evolutionary changes in the entrepreneurial herd behaviour I will propose a new framework which will allow for a deeper understanding of the urban organisation in the innovative business branches. Creating of such is needed due to the shortcomings of the currently prevailing theories. Classical and behavioural theories, New Economic Geography, evolutionary and co-evolutionary approaches – all of these are modelling the individual decisions about where to locate business in a context of unbounded space. Anyhow it seems that considering only stable-state, individual level solutions does not allow for deciphering the group behaviour of entrepreneurs. Especially in a restricted urban area those models do not seem to explain the temporal changes of the firms' organisation very well. In this paper there will be a solution proposed to tackle those shortcomings.

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Natural spatial pattern–when mutual socio-geo distances between cities follow Benford's law

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Abstract

According to Benford's law, the first one or more digits of numbers in any natural dataset appear with defined frequencies. For the first time, we use Benford distribution for spatial analysis to the geo-location of cities. The long-term history of urban locations is usually explained by social and economic factors. However, the spatial

pattern of the geo-location of cities and their populations is unknown. We claim that the geo-location of cities and inhabitants around the world followed the evolutionary process, which results in natural spatial distribution. Our study proves that mutual 3D socio-geo distances between cities and populations in the majority of countries conform to Benford's law, and thus the urban geo-locations have natural distribution. In a search for factors driving Benford's conformity, we discover that a mixture of three pure point-patterns: clustered, ordered, and random in proportions 15:3:2 makes the 2D spatial distribution Benford-like. We also find that the 1D distance between population modeled with the composition of gamma distributions follows Benford. In the simulation, we prove that for complex 3D Benford-like pattern, the conformity in 1D or 2D distributions is sufficient, although the spatial factor is more important. For spatial statistics, this study develops new spatial distribution to simulate natural locations and shows that n-dimensional space can be reduced to a one-dimensional variable of distances. For urban studies, it shows that evolutionary settlement patterns resulted in the natural location of cities, and historical distortions in urbanization, even if persistent till now, are being evolutionary corrected.

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Internal Regional Competitiveness: Lombardy, a multi-speed region?

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Abstract

The paper analyses regional competitiveness at sub-regional level through a novel methodology which adopts a matching design. By using firms-level data for Lombardy, a large and competitive European region, the analysis shows that the different territories of the region are differently competitive in different industries, and that static and dynamic analysis provide different results. A cumulative effect is shown to exist, by which firms located in the metropolitan area of Milan are more competitive and increasingly as such in time. Additionally, important differences also arise between the other provinces and, in most cases, cumulative effects are present also among them, with more positive dynamics arising in places where specialisation and static competitiveness are high. The differences between territories, and the centripetal effects, are also evident when the analysis is performed by adopting a territorial classification based the National Strategy for Inner Areas and on the degree of urbanization. These results are especially relevant to the design of Smart Specialisation Strategies, because they show, on one hand, that Nuts2 regions may be strongly dis-homogeneous inside and, on the other, that cumulative processes may leave territories behind inside the regions.

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Truck platooning technology diffusion: a micro-founded macroeconomic model with profitability condition and club effect

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Abstract

Truck platooning refers to the technology allowing Heavy Duty Vehicles (HDV) to travel in convoy formation using wireless communications and advanced driver assistance systems. Such convoys are called platoons. The lead truck is fully controlled by a human driver. In the followers, humans are still needed. However, in the "platoonable" sections of the roads, the followers react to the changes in the leader's movements automatically.

Platooning is expected to increase road safety and capacity, and to decrease fuel consumption and GHG emissions. However, despite the promises of profitability platooning suggests, the literature dealing with it lacks economic studies. Two important reasons may explain this situation. Firstly, the doubts concerning platooning technical functioning and its practical use are still numerous. Secondly, the literature dealing with the "engineering" aspects of platooning presents contrasting results concerning the benefits this technology can bring.

We explore here the mechanisms underlying the potential future spread of platooning. To the best of our knowledge, there are only two papers where the spread of a driverless technology dedicated to HDVs is addressed: Raj et al (2020) and Jesse (2019).

Despite they present very interesting insights, these papers can hardly be considered as falling within the scope of economics. In both, the adoption rates evolutions depend on time and on some other non economic criteria. Also, the two papers neglect an essential criterion for the commercial success of any driverless technology dedicated to HDVs: its profitability from the perspective of trucking companies. Yet, the individual decisions these companies make regarding these technologies is the cornerstone of their diffusion at a macroeconomic scale. To put it at its most basic, trucking companies' main objective is to make profit. Thus, they would adopt trucks equipped with new driverless technologies only if the profits generated thanks to them are higher than those generated by using the conventional trucks. As such, the issue of the "technological" trucks purchase and usage costs is central. However, to the best of our knowledge, this issue is never addressed in the literature.

Furthermore, when addressing platooning, it should be borne in mind that a truck equipped with this technology brings value only when it travels within platoons. Thus, from trucking companies' point of view, investing in such a truck can be profitable only if there are on the roads enough trucks with whom it is possible to form platoons. To the best of our knowledge, such a club effect has never been explored.

In the present paper, we build a micro-founded macroeconomic theoretical framework, dedicated to understanding some of the economic mechanisms underlying a potential diffusion of platooning. The model considers geography, expresses finely the costs of transport operations, and takes explicitly account of platooning costs. Furthermore, it formalizes mathematically the club effect inherent to the functioning and the commercial success of this technology. We simulate then many diffusion scenarios. In each one, we make different assumptions concerning the technology characteristics and the geographical environment. The calibration is conducted using different data sources.

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An Italian good practice of inclusive teaching for migrant students in an intersectional perspective

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Abstract

The Covid-19 emergency hit like a tsunami on the education and training system, requiring a sharp rethinking of the traditional ways of organizing education for children, young people and adults. From a lifelong perspective, the introduction of distance learning (DAD) on one hand, and of smart working on the other, has caused strenuous resistance to new technologically enhanced learning tools, and it has highlighted all the limitations of training interventions, not adequately designed. As a matter of fact, the quality of training and education does not only concern with the introduction of innovative technological tools (and hardware/software infrastructures capable of supporting them), and the digital competence of teachers and trainers suddenly required to use them, but above all with a methodologically based design, which takes into account the fundamental mechanisms of formal and non-formal learning, as codified in decades of research on this matter.

The reference context is an Italian public Institute of Specialized Education for the Deaf (Isiss) "A. Magarotto" in Rome includes the cycles of kindergarten, primary school, lower secondary school and upper secondary school. This school hosts hearing and deaf students who have with various disabilities, mainly of Italian nationality but also of foreign origins ("second generations").

The goal is to describe a good practice in terms of inclusive DAD, which can also be extended to other public and private schools, and to give policy indications regarding the post-Covid education and training system. The hypothesis underlying this contribution is that a methodologically based design is a critical success factor for teaching and an important indicator for the quality of a training offer that can be alternative to the face-to-face one.

Consequently, schools and training organizations that already practiced inclusive teaching have often been found to have an advantage in DAD, probably because their methodologies, theoretically founded, already aimed at creatively exploiting all the tools, technological and otherwise, designed to facilitate learning to all, able-bodied

and disabled. From this perspective, diversity (not only functional, but also cultural, ethnic and social) has really been a resource that has "taught" how to convey content in an optimal way to the widest possible audience of learners.

The survey is based on qualitative and quantitative data. The quantitative background data used are from Invalsi, Indire, Censis and Fondazione Agnelli sources. The qualitative data come from a case study, through in-depth interviews with privileged witnesses (teachers, parents, Headmaster) coming from the context examined. The focus of the interviews is on teaching methodologies, on coping strategies with respect to the Covid emergency of teachers, parents, pupils, and on the lessons learned for post-Covid. A qualitative textual analysis was carried out on the transcription of these interviews.

From the case study a good practice of inclusive teaching was reconstructed, able to adapt to the specificities of individual deaf and / or foreign pupils, who have never been left to themselves. This practice may also guide other school contexts in post-Covid, with intersectional inclusion prospective, in order to reduce inequalities in educational paths.

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The resilience of the cultural and creative industries in Italy in the face of the Great Recession: a geographical exploration

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Abstract

The cultural and creative industries (CCIs) have been subject to increasing policy and academic attention in the past years. The sector has been seen variously as a stimulus for urban regeneration and, more broadly, for local and regional development. Very interestingly, in U.K. and other EU countries, the cultural economy has been one of the few sectors that has weathered the storm of the 2008 Great Recession.

Starting from the curiosity that these premises arise and from the paucity of studies to date on the Italian CCIs, we analyse the resilience of the sector in the face of the economic-financial shock in order to ascertain whether this was the case also in Italy and whether the reaction to the disturbance shows spatial patterns. To this end, we use data from Aida-Bureau van Dijk database on more than 181,000 enterprises observed for the time span 2010-2018. The number of employees as well as the number of CCIs enterprises are gathered for 18 Nace Rev.2 sectors, in order to better disentangle the contribution of each sub-sector to the growth of the industry. Information is available at firm level, but to the purpose of this paper it is used at provincial (NUTS-3) level. Using a System Generalized Method of Moments (GMM-SYS) approach, and after controlling for socioeconomic characteristics, the determinants of the CCIs growth are analysed.

We ultimately contribute to the still under-researched debate on the role of CCIs in regional economic resilience proposing some reflections also on their ability to reactivate more rural regions, hence usefully informing policies.

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Industries, Occupations, and Entrepreneurship in Rural Regions

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Abstract

Economic development strategies aimed at fostering regional growth through entrepreneurship are increasingly important in lagging regions. While previous research suggests that having more entrepreneurs or self-employed can lead to higher levels of economic growth in rural and distressed regions, not all entrepreneurs are created equally. Some people may become self-employed due to a lack of other opportunities, while others may be more innovative, exploiting new opportunities and contributing to growth. Additionally, entrepreneurship in certain

industries may be more beneficial to growth than in other industries. At the same time, another strain of research has linked industrial and occupational diversity to entrepreneurship and regional growth, especially in urban areas, due to the cross-fertilization of ideas. However, rural regions may lack agglomeration economies and other factors conducive to growth that make the relationship between industrial and occupational diversity and entrepreneurship in rural areas less clear. Therefore, a clear understanding of the linkages between industries, occupations, and entrepreneurship in rural regions is needed. Unfortunately, the publicly available data on detailed industry-level employment are often suppressed in small and rural counties. Thus, to examine these relationships in the United States, we have obtained detailed county-level and industry-level data from Economic Modeling LLC (EMSI) on employment and self-employment. We first estimate models where we look at local economic growth in terms of growth in employment and population and assess whether entrepreneurs from certain industries contribute more to growth. We also use these detailed data to construct measures of industrial diversity to see how that affects economic growth. We estimate models for the entire United States, for rural and urban areas separately, and also separately for distressed regions, such as the Appalachian Regional Commission Region in the eastern United States. Our models include controls for historic economic performance and industrial composition, as well as controls for other factors that have been shown to influence regional economic growth. Finally, we estimate models where our dependent variable is the share of self-employed (overall) and the share of self-employed in key industries that initial analysis suggests may be important to regional growth. In these models, we are especially interested in whether the propensity to be self-employed is affected by industrial diversity and may explain why some regions have more self-employment (or more self-employment in industries that support growth) than others. Initial results suggest that self-employment in some industries does matter more for growth and that places with more industrial diversity have more self-employed. When complete, our analysis will provide guidance to help rural regions better target scarce resources in order to support regional prosperity.

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Climate change, water resources and economic impacts: an analysis for the Brazilian hydrographic regions

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Abstract

The global climate warming (from both anthropogenic and natural sources) is associated with changes in a series of components in the hydrological cycle. It is “very likely” that throughout the 21st century we will see a greater frequency of extreme water events characterized by intense and episodic rains with large amounts of runoff interspersed with long periods of drought and evaporation (IPCC 2007, 2014; Bates et al. 2008).

The irregular supply of water resulting from climate change brings limitations and risks to several economic and social activities (IPCC 2014). The cultivation of irrigated crops, forest production, fishing, hydroelectric power generation, industrial production, transport, tourism, water distribution and sewage treatment are examples of affected sectors (Gleick et al. 2009; Rosegrant 2014; Damania et al. 2017; Ritchie & Roser 2017). This reality becomes even more serious when considering the increase in global demand for water-intensive goods and services. (UN 2019).

In view of this scenario, studies capable of integrating the themes of climate change, water availability and economic impacts become necessary, presenting the vulnerabilities and possible mitigation and adaptation measures, thus seeking ways to guarantee the sustainable maintenance of the water supply and the social and environmental well-being (IPCC 2014).

It is in this context that we find the motivation to develop this work. Our objective is to examine the economic impacts of the change in water availability caused by climate change, focusing on the Brazilian reality. Considering the complexity of the problem, we built an Interregional Computable General Equilibrium (ICGE) model named Brazilian Multisectoral and Regional/Interregional Analysis Model with Water Extension (BMARIA-WATER), composed of 67 economic sectors and 12 Brazilian hydrographic regions, all this integrated with hydroclimatic modeling.

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Inevitable trade-off between economic development and environmental protection from island utilization: Experiences from China

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Abstract

An island is an important part of the global ecosystem. Islands are faced with an inevitable tradeoff between economic development and environmental protection. This article is concerned with the sustainability of island utilization. The paper chose eight island counties from China as a case study to analyse the relationship between economic development and environmental conservation in long-term series. The habitat quality and nighttime light data are used to value the ecosystem quality and human activities scale, respectively. To further explore the impact of human activities on the island ecosystem, we select a typical tourist island for microscopic analysis. This paper reveals the temporal and spatial changes of the island ecosystem under human pressure on a micro-scale. The ecological footprint, habitat quality, and social network location data are used to support the research. We identify, quantify, and spatially exhibiting the damage generated by human activities and revealing the relationship between this ecosystem change and human activities. The result reveals that 1) Humans bring more pressure on the island's ecosystem; 2) Island has the potential risk of over-exploitation. 3) The island ecosystems face a higher utilization intensity than that of land. We analyse the challenges and opportunities faced by islands. The paper reflects the trade-off between economy and development is essentially a choice between the short-term and long-term interests of humans. We build a sustainability action system to support island development.

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Impact of Covid-19 on Food Security in Sri Lanka

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Abstract

The global pandemic COVID-19 has created a massive range of adverse effects on many sectors including food security in many countries. COVID-19 leads it to a prolonged food crisis reflecting importance of new methods to prevent the present and future food crisis. Therefore, this is a situation where we need to analyse our existing food system, identifying its drawbacks and suggest solution to sustain and de-risking the system. Therefore, the major objective of this study is to analyse the impact of COVID-19 on household food security in Sri Lanka. This objective is achieved by analysing qualitative information using descriptive statistics where required. Before the Covid-19, at macro level Sri Lanka was food secured. However, at the micro level, there were issues. Importantly, a large number of people may vulnerable to the food insecurity due to COVID-19 due to several reasons such as reliance on purchased food rather than producing their own food, importation of some necessary food items, higher food ratio and inflation. *The impacts of COVID-19 effect on Sri Lankan food security through two ways: demand and supply side shocks.* Supply side shock will arise through international trade barriers, labour shortages, and domestic market close down in the locked down situation. Food supply chain is badly affected and it will affect food availability in the long run through lack of seeds, fertilizer, and agro-chemicals etc. Demand side shocks are raised due to lower purchasing power since sudden income loss of informal sector workers, and panic buying. More importantly, food price hikes due to lack of supply, may affect the demand side shocks. Impact on food affordability and availability may severe as consumers depend more on food market than producing their own food. Sri Lanka should meet the needs of the most vulnerable people and must keep the food supply flowing by prioritizing the health of the workers in the sector and their outputs. The main specific recommendations for meeting the needs of the most vulnerable people is the expansion of the existing social protection programs. It is important to ensure the continuity of agricultural supply chain so that reduce inflation. Suggestions for keeping the food supply chains uninterrupted are facilitating farmers to market the food they produce, promoting e-commerce channels, keeping the food value chain alive by focusing on key logistics bottlenecks and health of the

workers, addressing trade and tax policies to keep the global trade open, and managing the macroeconomic implications. As Sri Lanka battle the health and economic crises with massive public spending, it needs to control foodflations. Governments should assess the impact of their subsidies on the balance of payments and ensure they do not lead to deficits. And also, it must ensure adequate levels of foreign exchange reserves. In case foodflation, government should assess the fiscal policies.

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Agriculture and Food Security in Sri Lanka

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Abstract

Ending hunger and food security is a key challenge faced by today's world. Agriculture sector plays a major role to ensure food security of a country. Sustainable Development Goal 2 is about ending hunger, enhancing food and nutrition security and promoting sustainable agriculture. Country's agriculture and food security is strongly linked together. Examination of this link in case of Sri Lanka is important as both agriculture and food security are concerned. In one hand, productivity in the agriculture sector is decreasing and therefore the employment in this sector is also decreasing over time. On the other hand, although at the macro level Sri Lanka is food secured, image at the micro level is not good. Population growth, lack of economic and physical access to food, chronic poverty, climate changes and natural disasters, low labour in agriculture sector, lack of using technology in agriculture production, lack of infrastructure facilities, not having a proper marketing strategy, frequent pest attacks on crops, adversely affects the food security in Sri Lanka. Moreover, high dependency on import of essential food items also leads Sri Lanka into food insecurity. Severity of this dependence of imports was renowned during the Covid-19 pandemic situation. Improving agriculture is the key to combat food insecurity of the country. Increased agriculture productivity will also increase the food availability which is one of the four pillars of food security. Therefore, the objective of this research is to analyse the role of agriculture in ensuring long term food security in Sri Lanka. The research is mainly based on secondary data. Promoting investments in agriculture sector that increases food availability will have positive impacts on food security in Sri Lanka. Moreover, substantial investments in rural infrastructure facilities, new and modern technology, research and development based on agriculture productivity, using proper organized marketing strategies will contribute to the development of efficient methods of crop management and productive means of food production. National level policy on using harmless pesticides and pest control methods are also essential to secure agriculture products which will enhance food security. Improving urban agriculture, home gardening, and kitchen garden will also help to secure food security in urban areas especially during pandemics. A climate smart agriculture system is also very important to Sri Lanka as it faces frequent climate changes.

This study is a part of the project of 'Impact of Social Protection on Sustainable Development Goals: An Empirical Analysis' funded by the AHEAD research grant (AHEAD R2 DOR HEMS KLN No.12). Author would like to acknowledge the AHEAD project for providing financial support for this project.

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Linkages and Interdependence of the Agriculture Sector in Morocco: A Regional Perspective.

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Abstract

In Morocco, the agriculture sector plays a major role in economic and social development. Agriculture contributes 12% of GDP and employs about 34% of the labour force of which 40% are women. In addition to its importance in terms of value added creation, the sector plays a key role in poverty reduction, giving that the marginalized and poorest areas tend to be rural areas where the main economic activity is agriculture. It also contributes to food security by diversifying and stabilizing agricultural production, which has a direct impact on prices, especially those of basic staple food. Given the significant weight of the agricultural sector and the importance of the rural world in the Moroccan economy, this paper develops an in-depth analysis of the sector by region in order to show its systemic relevance in each region and to identify its potential to contribute to the green, inclusive recovery of the Moroccan Economy in the post-pandemic crisis. To do so, we base our analysis on structural properties of the interregional input-output table for Morocco, combining with detailed labour market and environmental databases.

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The unintended effects of cohesion policy: the wealthiest regions will further flourish in Romania

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Abstract

In this study, we explore a new research direction on the European Union (EU) cohesion policy. We identified a gap in the scientific literature and tested our assumption in Romania. According to our hypothesis, more economically advantaged regions attract more EU funds. We constructed several multiple regressions to determine whether GDP per capita and other economic variables can explain the total amount of structural and cohesion funds received by the different beneficiaries in certain regions. The results are mixed and support the hypothesis that wealthier regions attract more EU funds, which is not the intended purpose of the cohesion policy.

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Optimal openness for sustainable development of people and places

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Abstract

The paper chapter addresses the question of how open should and city-region be? The approach is rooted in the literature on Spatial Interaction Models subject to environmental, institutional, economic and technological constraints. The argument begins with the formulation of an open spatial interaction model with two channels: *Cardo* for the internal interactions constrained to environmental and technological restrictions and *Decumanus* for the external interactions limited by institutional and economic limitations. Results indicate that there two interdependent components for the optimal openness. First, the structural spatial interaction of the region, or the length of *Cardo* and *Decumanus*, or on the relative structural centrality of the city-region. Second, the multiplier effects of external flows that depend on the technological, institutional and economic constraints.

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Identifying the atmospheric and economic key drivers of global air pollution change: a combined SDA approach

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Abstract

The transmission of pollution across countries has been studied through the lens of atmospheric chemical transport or through its content in international trade, but only a handful of studies consider both channels concurrently. Yet, the rare exceptions do not highlight the economic sector(s) at the origin of the problem and thus fail to identify effective abatement strategies. In this paper, we integrate environmentally extended input-output trade linkages with physical pathways of carbon monoxide atmospheric transport to uncover the key drivers of the changes in intercountry pollution transmission. Based on a five-region model, the results indicate that most of the CO experienced in a country comes from its own production which is primarily destined to the domestic market; yet, emissions due to upwind producers are not negligible. It is especially true for South Korea which received from China a flow of CO emissions above the level it produced itself. By providing new insights into the interconnected economic and geographic sources of air pollution, this paper suggests more nuanced global emission abatement policies than the consumer-focused or producer-focused approaches currently used.

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IV-SDID: model and application

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Abstract

The most recent report of the IPCC predicts a continued increase in the frequency and intensity of extreme weather events. Agriculture, the economic sector most sensitive to changes in weather conditions, will be greatly affected by such changes regardless of a country's geographical location. Because of concerns about food security, a growing literature has investigated the capacity of international trade to act as a major adaptation mechanism to climate change. In this paper, we rely on a difference-in-difference setting with endogenous trade interactions (IV-SDID) to assess how the trade of wheat, a crop grown across 89 countries, and its production respond to drought. Based on fine spatial and temporal resolution drought data, our panel data results indicate that a drought promotes export when it takes place in the importing country, but it discourages export when it occurs in the exporting country. As a result, the true marginal effect of a drought on wheat production is based on a combination of its local impact and its impact abroad. Projections based on future weather and drought data by 2038-2070 challenge the estimates of the current climate impact literature by revealing that international trade is capable of mitigating the impact of adverse weather events on yield.

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Developing renewable electricity with carbon tax recycling mechanisms in the East Asia region

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Abstract

The East Asia region has become more important in terms of economy and population. Nonetheless, the region also has a significant increase in carbon emissions. One way to reduce carbon emission while ensuring economic development in the region is to develop more renewable electricity by using a carbon tax recycling mechanism. Nonetheless, there has been limited study on the impacts of the carbon tax recycling mechanism on renewable electricity development. Therefore, this paper analyses the socioeconomic and environmental impacts of the carbon tax recycling mechanisms to develop renewable electricity in the East Asia region. To achieve the objectives of this paper, this paper uses a multi-country computable general equilibrium for East Asia to conduct the analysis. There are three specific recycling mechanisms in this paper through additional investment in renewable electricity, indirect tax reduction for renewable electricity sectors, and subsidies for renewable electricity consumption by households. This paper finds that depending on the type of recycling mechanism and economy structure, a country could achieve double dividend or environmental benefits only. Regarding the best

policy to develop renewable electricity, this paper finds that in terms of the economic objective, investing in renewable electricity to renewable electricity development would mostly benefit all East Asian countries except for Singapore. Providing indirect tax reduction is only economically beneficial for China. Further, subsidizing renewable electricity prices for households would mostly benefit India and South Korea. Regarding environment objectives, this paper finds that investing in renewable electricity or providing indirect subsidies for renewable electricity is beneficial for all East Asian countries while subsidizing renewable electricity prices for households would not benefit Australia, Indonesia, and rest of ASEAN. This paper also finds that recycling mechanisms could alter the distribution pattern across countries in the East Asia region and some countries could reduce poverty incidences. Also, only a few countries have a reduction in poverty incidence. Investing in renewable electricity or providing indirect subsidies to renewable electricity reduces poverty incidence in Indonesia and the rest of ASEAN. On the other hand, China and India could achieve a reduction in poverty incidence by subsidizing renewable electricity prices for households.

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Proxying Economic Activity with Daytime Satellite Imagery: Filling Data Gaps across Time and Space

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Abstract

Satellite data has gained increasing popularity among economists. The most commonly used type of satellite data is night lights data, which constitutes a valuable proxy for economic activity (i.e., GDP) at the national and subnational levels.

However, evidence-based policy analyses may require measures of economic activity beyond the spatial and temporal scope of night lights data. When government policies affect economic activity in small regional units (e.g., urban districts), investigations of such policies need regional measures of economic activity. Moreover, studies on the economic consequences of historical events demand measures of economic activity with a long time series (e.g., analysing economic activity in the former German Democratic Republic). Night lights or other data might not yield the necessary regional and temporal scope in these contexts.

We develop a novel approach to proxying regional economic activity. We use daytime satellite imagery and apply machine-learning techniques to identify six different surface groups, that is, types of land cover such as built-up land or cropland. We demonstrate (a) how we compute these surface groups and (b) that the regional combination of these surface groups is a valid proxy for economic activity. The surface groups allow the measurement of regional economic activity both over a longer time series and at a more detailed regional level than other existing measures. While we demonstrate our approach for the example of one country (Germany), we have produced them also for other European countries and are currently producing them for the U.S. In principle, our procedure is generalizable to any region in the world, for which various types of economic policy analyses might require data on economic activity.

We obtain the surface groups from Landsat satellite data, which has three advantages over night lights data. First, Landsat data has a substantially higher resolution (30 meters) than night lights data (one kilometre), thus making possible analyses at more detailed regional levels. Second, the Landsat data we use starts in 1984 (whereas night lights data starts in 1992), therefore allowing for analyses over a longer time series. Third, Landsat data enables researchers to identify different types of surfaces, thereby providing a more nuanced measure of economic activity.

We compute the surface groups by applying a machine-learning algorithm in Google Earth Engine, thereby closely following the remote-sensing literature. To assess the value of the surface groups for economic research, we test their validity as a proxy for economic activity for Germany, using reliable and regionally detailed administrative data on GDP (available since the 2000s). Furthermore, data on household income (RWI-GEO-GRID) make possible an analysis at the level of very small grid cells (sized one square kilometre).

Our analyses show that the surface groups constitute a valid proxy for economic activity. At small regional levels, they predict economic activity even more accurately than night lights. Furthermore, the prediction error tends to be less spatially and temporally biased. The surface groups thus constitute a valuable measure for economic

research, particularly for assessing policy changes affecting small regional units and for analysing historical contexts.

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Measuring the environmental impact of traffic growth on different periurban zones of a middle-sized city

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Abstract

Spatial change of the periurban areas is one of the most significant urban development processes in Europe and even worldwide not only around the big metropolitan regions but also around the small and medium-sized cities. The urban sprawl affects the essential environmental, economic, and social functions of the impacted settlements. In the last decades, these processes reached the less urbanized Central European region, leading to very fast and less planned changes in our settlement system. Among its many environmental impacts, the well-known increase in traffic stands out, which is accompanied not only by an increase in congestion and accidents but also by a significant increase in pollutant emissions from transport in peri-urban areas. It is true that the scale of suburbanization in smaller agglomerations is significantly smaller than in metropolises, but it has more relied on individual modes of transport in the commuter traffic of the population. Our study uses COPERT (COMpERT Program to calculate Emissions from Road Transport) software developed in collaboration with the European Environment Agency (EEA), the Joint Research Center (JRC), the Aristotle University of Thessaloniki, and EMISIA SA to estimate the change in pollutant emissions, in the case of the agglomeration of a Hungarian middle-sized, industrially growing city (Győr, 130 thousand inhab.) between 1995 and 2018. In the second part of the presentation, we analyse the change in the spatial patterns of the different zones of the periurban area by GIS tools and set change in the traffic pollution against the types of change in the patterns of built-up areas. As a result, we will have a picture of the role of the different spatial types of the built-up area extensions on the air pollutions generated by the traffic.

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Urban strategic planning from the perspective of well-being: Evaluation of the Hungarian practice

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Abstract

The present paper evaluates Hungarian strategic urban planning from the perspective of well-being. It conceptualises well-being in line with Amartya Sen's capability approach (CA).

An important theoretical and practical consequence of the revival of the strategic approach since the 1990s is the increased complexity of evaluation. This resulted in the quest for concepts and principles (substantive normative criteria), which evaluation could be based on; and revived discussions around the concepts of "common good" or "public interest. We argue that the CA provides a meaningful concept of common good or public interest for evaluation. The open-ended nature of CA allows to embrace the complexity of strategic planning, but it is definite enough to provide a clear normative framework for evaluation.

The CA suggests three main issues for evaluation: (1) how the objectives of the strategies fit to the set of capabilities deemed to be valuable in a community; (2) how can citizens actually make use of the means of well-

being in order to further their ends; and (3) to what extent do citizens have the freedom to act as agents during the moulding and the realization of the objectives?

The paper evaluates the Hungarian practice of strategic urban planning. We base our results on 49 semi-structured interviews with various local actors in three second-tier cities. We carried out qualitative content analysis on the word-by-word transcripts of the interviews. We used deductive coding: we restructured the texts into categories derived from the capability approach, both in terms of the freedom for well-being and the freedom for agency.

Our results were rather critical towards the practice of strategic urban planning in Hungary. The CA-based evaluation showed that the actual objectives of strategic urban planning in Hungary are actually just means (and not ends) of well-being, which cannot necessarily be utilized by the actors. The diversity of actors and their values are largely overlooked. The direct concomitant is the loss of a huge set of relevant information for planning. The opportunities for agency are gravely restricted for numerous actors. The main barriers of agency are related to actors' inability to define and shape the spaces of participation.

In terms of theory, we conclude that the CA-based evaluation is able to supplement the dominantly used conformance- or performance-based evaluation approaches. We also found that instead of depicting an unachievable ideal, the CA is able to provide guidance for feasible steps to further well-being.

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Towards a circular development approach to integrate les bidonvilles within Casablanca

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Abstract

Slums represent a global ethical challenge that affects the well-being of cities. The vast majority of these areas are located in and around cities of the Global South because of the fast urbanisation and globalisation trends that have been met with insufficient employment, infrastructure and housing opportunities.

This paper will explore alternative slum development through the lens of circular economy (CE) principles. The model that is mostly referred to in CE is the definition of Ellen Mc Arthur foundation model: "A circular economy is a global economic model that aims to decouple economic growth and development from the consumption of finite resources. It is restorative by design, and aims to keep products, components and materials at their highest utility and value, at all times."

While CE has become a major policy goal in Europe and other "Western" contexts, it is hardly used in the developing context, still, circular processes are deeply embedded in the socio-economic realities in cities of the Global South. The main focus of the paper is to evaluate the potential of CE to alleviate poverty and address the challenges of informal settlements. In other words, the research question addressed in this paper is: can CE be applied in cities of the Global South to reduce socio-spatial segregation?

Building on notions of spatial justice and urban survivalism as well as the literature on the dynamics and resilience of informal areas, the paper proposes a contextualised circular economy (CCE) framework for the integration of slums. The framework is then tested empirically on the case of Casablanca, Morocco. Taking existing assets of les bidonvilles* as a starting point for development of circular activities, which potentially can lead to the integration of these slums at local and metropolitan scales by providing new economic opportunities as well as links across the socio-spatial dividing lines.

The empirical material is collected through a combination of methods: stakeholder interviews, spatial analysis and mapping, site observation of (circular) socio-economic activities and spatial conditions and explorative spatial design. On that basis, the paper identifies the key opportunities and barriers for harnessing local assets for a contextualised circular economy as a means for integration of les bidonvilles into the socio-economic systems of the city. This is done by proposing a circular slum integration design that takes the local scale as a starting point to inform the vision on the city scale.

The paper contributes to the literature by investigating the (often neglected) spatial dimension of circular economy and exploring the potentials for improving the well-being and socio-spatial integration of vulnerable

urban groups. It also innovates by demonstrating the potential of relatively low-tech solutions, based on traditional crafts or necessity-driven entrepreneurialism. While this paper offers policy and planning recommendations mainly for cities in developing countries, potential lessons can also be drawn for local circular economy strategies in more developed economies.

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Towards cohesion at the interface between the EU states? Cross-border economic asymmetry and convergence in the European Union

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Abstract

State borders are barriers that disrupt the course of socio-economic processes and interactions. They adversely affect the development of border areas, traditionally perceived as peripheral, lagging behind and economic outliers. Hopes for overcoming this situation are associated with the process of European integration. Within its framework, barriers resulting from the existence of traditional state borders are being gradually removed. The internal borders of the EU are becoming more and more "invisible".

Previous research does not provide a satisfactory answer to the question about the impact of border opening and economic integration on reducing the level of disparities in cross-border areas. On the one hand, the research results lead to the conclusion that EU enlargement should foster the cohesion of cross-border areas. Other analyses indicate an increase in disparities in the level of economic development of cross-border areas in the EU. Therefore, this issue requires clarification, especially as it is of great importance in the context of the effects of the EU cohesion policy. There are numerous studies on regional convergence and socio-economic cohesion of European regions, but they do not take into account the criterion of cross-border location.

This paper aims to fill this gap. Its main purpose is to examine the impact of reducing barriers resulting from the existence of traditional state borders on the relative level of development of border areas, i.e. on cross-border convergence (or divergence). Contrary to the existing literature on the subject, the article does not focus on border areas, but cross-border areas, pairs of regions including bordering areas located on both sides of the inter-state border. The article is the first empirical analysis conducted in such a spatial and temporal scope, which allows to deepen the knowledge on the impact of European integration and border opening on the economic cohesion of border areas.

The study takes into account the cross-border areas (NUTS3) adjacent to internal borders between EU countries in the period 1980-2015. The scope of the surveyed units is extended in accordance with the subsequent stages of the EU integration process. The basis for the convergence analysis is the indicator of relative asymmetry of economic development comparing the level of regional GDP per capita (in PPS) in two neighbouring border regions from different countries. It reflects the disproportion in the level of economic development of the border region of one country in relation to the neighbouring region from another country.

The obtained results confirm that the process of European integration leads to a gradual equalization of the level of economic development of cross-border areas on a European scale (cross-border σ -convergence). It was also observed that increased border permeability allows less developed border areas to benefit from additional development factors. As a result, they achieve faster growth than the more developed border regions on the other side of the border. The level of asymmetry in economic development in cross-border areas is reduced (absolute cross-border β -convergence). The results of the analysis also suggest that cross-border convergence is generally slower than convergence at the inter-state level.

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King Leopold's Skeleton: The Aftereffects of Colonialism on Urban Form and Spatial Inequality in Kinshasa, DRC

Nathan Hutson, Wise Lubanda

Abstract

Research Idea and Approach- Kinshasa (former Leopoldville) was originally established by the Belgians for the purpose of efficiently transporting ivory and rubber back to the mother country. The urban form of the city created a spatially-determined social stratification with a small riverfront core of Gombe surrounded by a vast unplanned network of alleys and self-constructed homes housing the vast majority of the native population. Kinshasa emerged as the DRC's primate city and sole administrative center, despite its location at the far periphery of the country. The city thereby replicates spatial inequality at both the national and local level. This dichotomy is apparent in modern day Kinshasa as the historic area of Gombe is well kept with a street grid similar to that one might find in a European city featuring palatial buildings and a large golf course. Ordinary Congolese are physically and culturally separated from Gombe yet continue to view it as the symbol of success. Many of the DRC's new elite now occupy homes and spaces vacated by Belgians. This paper aims to document the ways in which Kinshasa's colonial urban form has influenced post-colonial social development in order to determine the extent to which urban form perpetuates social stratification. **Methodology-** The paper relies on interviews conducted with current Gombe residents, Kinshasa residents outside of Gombe, and expats in first world cities. Specific questions include whether Kinshasa residents regard Gombe as the "downtown" or the most important part of the city despite its peripheral location. Socially ascendant Kinshasa residents are asked how much importance they would assign to living in or near the colonial core for reasons of social mobility. Interviews with older Kinshasa residents chart the shifting symbolism of Gombe through the colonial period, "Africanization" phase typified by the 1972 Rumble in the Jungle match which brought Congo (Zaire) to the world stage, and the Congolese civil war in the 90s which resulted in thousands of well-off Congolese fleeing the capital. **Expected Findings-** While research is ongoing, the effects of colonial urban form are still felt in Kinshasa with its premise of promoting inequality between the Europeans and Africans still functioning as a class based rather than race-based separation which compounds unequal access to education, jobs, and municipal services. We predict that recent emigres will recognize Gombe's controversial role in Kinshasa's development, however we also predict that second generation emigrants will be favorably disposed to Gombe due to its "ordered", Western appearance.

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On the Working of the SOULFULIAN on Risk Society: An empirical analysis of the KARAHORIAN, Osaka ,Japan

Kazuyoshi Hayama

Japan

Abstract

"SOULFULIAN" means people who survived the predicament. In this case, the predicament is about COVID-19. Because the current crisis is unprecedented. According to WHO(2020), On 31 December 2019, the WHO China Country Office was informed of cases of pneumonia unknown etiology (unknown cause) detected in Wuhan City, Hubei Province of China, and on May 3, 2020, The United States suspected that the source of the COVID-19 is China. However, the initial source of 2019-nCoV still remains unknown. So (first) wave and (first) silent wave and after first silent wave of COVID-19 is an academic area that is not well, completely, understood even among experts.

Digitization of information in all of its forms is one of the most developed things of the twentieth century. This paper is about the COVID-19 for a sustainable clean region. In the midst of the birth, after billions of years, the planet called Earth was formed. At the end of the twenty-first century, it will have been only a quarter of a millennium since computation emerged on Earth, which is a blink of an eye on an evolutionary scale—it's not even very long on the scale of human history.

But KARAHORIAN values human connections and the KARAHORI area continues to evolve sustainably from the end of the at least Muromachi (between 1336—1573) era period to this day of KARAHORIAN as the "SOULFULIAN" at the time of Corona (COVID-19) crisis.

For that reason, this paper investigated two things based on the historical perspective from the end of the Muromachi era period to the current of KARAHORIAN as the "SOULFULIAN" at the time of Corona (COVID-19)

crisis, one is behavioural characteristics, and the others are about not masks-wearing people. The purpose is to discuss for the sustainable clean region, so discuss the effects of the first wave, first silent wave, second wave, second silent wave, third wave, third silent wave, and after these of COVID-19 in KARAHORI streets, Osaka, in Japan. This paper presents indicative the after Covid-19 data. The significance of this paper is the study of improves the environment and based to makes it a clean environment by preventing in the future and prevention.

This paper presents the transport data and not wear face masks data in times of crisis and concludes that there are no major prospects for an environmentally friendly recovery from the COVID-19 crisis unless there are adequate policies.

The order of life takes place amid great chaos. It is significant to study the possibility of the future of a sustainable region based on the current data. It will become the assets to be studied in the future.

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The Geography of Manufacturing Productivity Shocks in Colombia

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Abstract

The objective of this paper is to understand how productivity shocks in the manufacturing sectors propagate across Colombian regions. According to Caliendo *et al.* (2018), fluctuations in aggregate economic activity may come from a wide variety of aggregate and disaggregated events. These events can reflect underlying changes that are sectoral in nature or are actually specific to a sector and a region. The heterogeneity of these potential changes at the sectoral and regional levels implies that the sectoral and regional composition of an economy is fundamental to determinate their aggregate impact. In this paper, we quantify, through a detailed CGE model of the Colombian economy (BM-COL model), the impacts of changes in the total factor productivity (TFP) on its manufacturing sectors. We evaluate the impacts of changes in productivity in the manufacturing sectors, classified according to their technological intensities, in each Colombian Department. Mapping of regional TFP elasticities will bring additional insights to the understanding of the role regional-specific policies related to manufacturing activities play in the Colombian economy. From the simulation results, it is possible to identify potential trade-offs between regional equity and efficiency. While some manufacturing sectors promote GDP growth and reduce inequality, others only foster economic growth at the expense of higher inequality. It is also possible to analyse the existing patterns of regional competition and complementarity. There is a more intense pattern of competition among Colombian regions, since increases in productivity of the manufacturing sectors in a given region, in most cases, tend to have a negative impact on GRP elsewhere. The analysis also reveal different dimensions of Colombia's economic concentration: Bogotá D.C., as capital of the country, plays a prominent role, followed by the regions of Antioquia and Valle del Cauca, with higher shares of GDP (together, these territories concentrate approximately 50% of the country's GDP). From a sectoral point of view, manufacturing sectors with a higher technological intensity (also more capital intensive) are concentrated in these regions as well, posing further structural challenges for pursuing a higher-quality insertion on global value chains with less spatially concentrated benefits.

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Smart Communities in the Countryside: What Comes After Proof of Concept?

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Abstract

The objective of our research is to present a new conceptual approach towards the 'Smart City' concept and a pilot application focusing on smart rural communities in a peripheral cross-border environment (Nógrád County, Banská Bystricky & Kosický kraj). The scientific approach is based on the basic concepts of 'smartness' but

introduces a new conceptual avenue in connection to small rural communities. Research generally focuses on mid-size and large cities and discover several aspects of smartness that are connected to size, number of inhabitants, functions and large-scale infrastructure as prerequisites.

To the contrary, our research objective was to support the basic hypothesis that smartness can be interpreted to less-developed rural small settlements also. Certainly, a different approach and methodology should be applied.

The main objective of becoming 'smart' is efficiency and technology-related. Our basic concept is that 'smartness' is not the privilege of cities and even rural areas and small settlements can break out from their lock-in situation through activities based on endogenous development, instead of placing and connecting ICT systems and infrastructures or promoting intensive industry settlement. We focus on the development of the local 'soft' elements and aim to generate 'smart citizens' instead of 'smart infrastructures and systems'.

In our previous research, we conducted an empirical research in a peripheral cross-border region in the Hungarian-Slovak border and based on the results, we identified several specific local needs for further development. We proved that smartness is not the privilege of cities, connected infrastructures and ICT are not the only means of the 'smartening' process.

As a follow-up applied research project, our basic concept is that welfare could be also achieved in the countryside with the application of the newest technologies. The main question now, after the proof of concept is: how? For this reason, we developed a new methodology to 'smartening up' small settlements in the countryside, that includes two main directions, such as Smart Village cross-border services and Smart Village know-how transfer. Our main objective is to support the 'smartening' process of rural settlements through the development of direct cross-border services, and thus, to operationalize the 'Smart Village' concept. This is facilitated by the Smart Village Roadmap, the Good Practice Catalogue, the Smart Database and Helpdesk service, the Smart Village Pilot Courses & the Smart Academies, the Mobile ICT Centre trainings, the Local Bloom Movement and the Local Development Hackathon.

As a final step, in order to measure & compare the development of the villages, we plan to elaborate & introduce a new, motivating service in the form of a Smart Village Award that is based on a Smart Village Indicator System to be programmed together by the Slovak & Hungarian partners.

The objective of the current research is to operationalize the Smart Village concept and develop a conceptual model and an indicator system for Smart Villages. In the current era of planning the next EU programming period between 2021-2027, including the Horizon Europe Programme, the topic and its possible policy implications are outstandingly actual and important.

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Digital Transformation of Universities and Industry 4.0: a common strategy for regional development

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Abstract

Never before have we experienced so many changes at such speed. We have been saying for years that the education sector cannot produce structural changes as fast as the labour market may need, but in recent months we have seen profound changes in all economic sectors.

In documents such as "The Future of Jobs Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution", 20 Educational Keys for 2020 and Future Work Skills 2020, different interpretations of what would be the most demanded competencies by the labour market were already observed, taking into account all the technological, social and socio-economic changes.

On the other hand, there is extensive literature on competencies and their incorporation into the curriculum at the university level as a teaching innovation practice. Among them are generic or transversal competencies that are being developed internationally by different universities, competencies that are supposed to be in demand in the future, citing among them as the most promising: social intelligence, strategic design, new media literacy, interculturality and focusing on the future of education or the professional profiles that will be in demand in the coming years, given their importance as a contribution to success in the knowledge society.

But the question arises as to whether there is a clear strategy in the digitalization of universities at the European level that minimizes the gaps for the agents involved; the skills demanded by the labour market and those that the university develops in the classroom.

Therefore, it is necessary to stop and think about what strategies are being carried out in the universities so that students are aware and informed of what their future position will demand and if these strategies are effective, to find out if students understand the concept of competencies, if they conceive that they develop some of these competencies in the classroom and not others, to know how to integrate them in the development of their CV and to know how to locate those activities or courses that complement the competencies that have not been developed during their academic life.

If we are talking about the professional community, we should know if they have enough information about the competencies implicit in a candidate's CV and if they have sufficient criteria to verbalize the competencies that are needed today in their sector.

About the University, we should question whether it has a curriculum in line with these competencies and whether it has interlocutors with the labour market that makes it offer updated studies.

These questions make us think of a situation in which the digital era we are living in may require greater clarity in the common strategy between the educational sector and the labour market for regional development. To this end, we propose a descriptive study of the shortcomings associated with each of the agents by analysing the information of certain recently published job offers, the websites of several universities, and their assessment by a sample of students from the University of the Basque Country (Spain).

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Immunizing workers in the pandemic? Lessons from supply chains, telework and commuting

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Abstract

Vaccination may be the solution to the epidemic-induced health crisis, but the allocation of vaccines is a complex task in which both economic and social considerations can play a role. A central problem is how the limited number of vaccines can be most effectively used in a country to reduce the risk of infection and mitigate economic uncertainty as well. In this paper, we argue that besides the high risk population, vaccination plans should include workers and rank them according to their infection risk and economic importance. To establish this argument, we explore the empirical relationship between important work-related factors in the local spread of the SARS-COV-2 virus, like telework potential and neighbourhood characteristics of workers and their commuting to work, and the structural characteristics of supply-chain networks of Hungarian industries and firms. Our study consists of two related parts. First, we construct industry-region level input-output networks from company reports on value-added tax and demonstrate the significance of telework potential in this network. Next, we explore the residence and commuting patterns of employees in manufacturing companies from mobile cell data, which we compare with the companies' position in the supplier network. Our results suggest early vaccination for workers in urban industries where telework potential is low. These are typically large industries that are central to the input-output network. By immunizing blue-collar workers in densely populated areas, vaccination can not only fight infection risks but can also mitigate production uncertainties of firms that are involved in many and difficult-to-replace value chains.

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Linking sustainable urban mobility and sedentary lifestyles in the digital age

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Abstract

Unrelenting population growth and urbanization are hampering efforts to manage urban mobility in an optimal way. Currently, 55% of the world's population lives in cities, rising to 75% in Europe. This figure is expected to continue to rise, asserting the problems arising from urban mobility as detailed in the UN-Habitat report; cities produce more than 60% of the greenhouse gas emissions that affect the health of citizens as a consequence.

This problem in cities poses a challenge in determining the most appropriate actions to achieve urban development with the least possible impact on the environment and citizens' lifestyles.

Based on the objectives of sustainable development, the concept of sustainable urban mobility was born. In view of the impact of the use of "passive" means of transport, it is necessary to implement models that reduce the negative effects of urban development by making certain practices such as walking, cycling, and public transport accessible.

Sedentary lifestyles understood as lifestyles with little physical activity and as one of the key factors in human mortality, have been the subject of much research. According to the World Health Organization, 60% of the world's population does not get the physical activity needed for health benefits, and this is an even greater problem in large, fast-growing cities. This has recently been exacerbated by the impact of covid-19 and the restrictions put in place to address it.

In the new digital era, using information and communication technologies (ICT), tools are emerging that can monitor physical activity and provide feedback to the user. Although several studies have shown that the characteristics of the urban area have an influence on the amount of physical activity that is carried out and can favour or discourage it, the relationship between the promotion of sustainable urban mobility and the rate of sedentary lifestyles has not yet been studied in detail.

Therefore, this proposal aims to analyse whether there is an inversely proportional relationship between the implementation of sustainable urban mobility policies and the rate of sedentary lifestyles. To this end, certain indicators will be shown on the basis of certain technological monitoring tools and the linkage of certain indicators proposed in documents from European institutions will be studied.

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EU macro-regional strategies and the Smart Specialisation Strategy: synergies

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Abstract

The aim of this paper is to provide a first assessment of the potential synergies and actual integration between the EU macro-regional strategies and the Smart Specialization Strategy (S3). S3 was a major novelty for the allocation of cohesion funds in the 2014-2020 programming period; it required countries and regions to identify key areas where public and private investment in R&D and innovation should be focussed. Macro-regional strategies emerged during the last decade as a way of addressing common challenges faced by defined geographical areas, including EU members and third countries to strengthening cooperation and contributing to achieving economic, social and territorial cohesion. This paper analyses the overlapping and synergies between S3 and EU Strategy for the Adriatic and Ionian Region (EUSAIR) in the 2014-2020 programming period and discusses the problems that emerged for effective integration between the two strategies.

Short introduction

S3 has started before the establishment of the Macro-regional strategies and before the adoption of Agenda 2030. The EUSAIR, as well as the other 3 existing strategies (Baltic Sea Region, Danube Region, Alpine Region), emerged as a way of addressing common challenges faced by defined geographical areas, including EU members and third countries to strengthening cooperation and contributing to achieve economic, social and territorial cohesion. At the crossroads of innovation policy and regional development, S3 has become a guiding concept to make Europe

more cohesive and, at the same time, to foster regions' competitiveness. It has been adopted by some 180 national and regional institutions within the EU as well as candidate countries and regions. It will remain at the basis of national and regional innovation policy in the new programming period.

In the post-covid-19 crisis and the challenges brought about by the digital and green revolution, it would be important to capitalise on the synergies between the two main pillars of the EU regional development strategy. Exploiting the potential synergies between these two strategies may foster inter-regional cooperation while contributing to sustainable regional growth and economic and social cohesion.

This paper will review the past achievement as well as the challenges and opportunities that are arising in the new programming period (2021-2027).

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A balanced policy approach to regional growth: Productivity and resilience

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Abstract

In the quest for efficiency, the considerations of resilience, which may or may not go hand in hand with productivity, are often disregarded until a shock hits. Large-scale shocks, such as the Great Recession and the ongoing COVID-19 pandemic, bring resilience forcefully to the forefront of policy agenda.

To understand how productivity and resilience are linked, it is useful to take a closer look at the concept of resilience. In the engineering literature, three dimensions define resilience of a system.^[1] These dimensions are robustness, resourcefulness and redundancy. Bruneau and co-authors (Bruneau et al., 2003^[1]) give the following definitions. Robustness is the ability to withstand a shock without the loss of a function; resourcefulness is the ability to deploy resources in order to resist a disruption or to recover from a shock and redundancy denotes the presence of elements that can be deployed instead of the affected ones in order to support uninterrupted functioning of a system.

Most generally, policies to promote productivity (growth) increase robustness and resourcefulness, thus buttressing resilience at the firm, industry or regional levels. The quest for productivity comes in obvious conflict with resilience in the redundancy element. Any redundancy is inefficient by definition. Firms and industries often strive to remove such redundancy by relying more on lean processes, just-in-time delivery and other practices. Narrowing the networks of suppliers to the "best" ones can also reduce redundancy and the associated costs of maintaining contacts with more partners. The downside is that a more concentrated supply networks can leave firms and regions vulnerable to shock affecting the suppliers (e.g. as a result of a natural disaster in the area of concentration or for other reasons).

Finally, the link between productivity and resilience also emerges from the system itself. Becoming a part of a system offers many opportunities to increase productivity, mostly through learning but also access to a wider range of suppliers and customers. In terms of resilience, the effect is not straightforward. On the one hand, embeddedness in a system can hedge against localised shocks where inputs can be procured from outside if local supplies are disrupted. At the same time, being a node in a system makes an agent (a firm, an industry or a region) potentially susceptible to shocks in other nodes. The final effect depends on the configuration of the system and the nature of a shock.

This paper reviews productivity and resilience policies against different types of shocks and demonstrates where such policies go hand in hand, where they are independent and where they counteract each other. A discussion on how to better combine considerations of productivity and resilience in regional policy design is also offered.

[1] The full list normally includes four elements, adding rapidity to robustness, resourcefulness and redundancy (Bruneau et al., 2003^[1]), although it is often reduced to the three most appropriate elements in specific applications (Fekete, 2019^[2]).

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Spatial Heterogeneity in the Spanish Labour Market After the Great Recession

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Abstract

The Spanish labour market is characterised by strong and persistent spatial differences in unemployment rates. These differences could have been affected by the internal wage devaluation policy adopted during the Great Recession and the 2010 and 2012 reforms promoting greater wage flexibility. In this paper we apply a geographic and time weighted regression to estimate a dynamic spatial panel wage curve using microdata from the Continuous Sample of Working Lives for 2002-2018. Our results show spatial heterogeneities in the time varying relationship between wages and unemployment that must be considered to assess regional resilience capacity for future crises.

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Discontent in the “peripheries”: An investigation of the rise of populism in Italy

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Abstract

The concept of periphery is not an absolute one. It goes beyond the mere interpretation in terms of geographical distance from a centre and of location on the fringes of a country or a region. It incorporates a “relational” character that is implicitly characterised by connotations of power and/or inequality. Therefore, peripheries can be actively created as an outcome of shifts in economic and political decision-making at various scales.

This study explores them from what we deemed to be a powerful lens nowadays, i.e. the growth of populism, and the discontent, as the perception of being too far away in relation to sources of power, it expresses. The recent populist wave has in fact brought to the fore the issue of peripheries as areas “left behind”, striking back in the ballot boxes.

In our paper, in order to investigate the role of different dimensions of peripherality and their changing geographies on populist voting patterns, we analyse the growth of discontent between the two last Italian general elections (in 2013 and 2018). To this aim, we first consider a spatial dimension of peripherality, i.e. the geography of access to services of general interest. Second, we explore some factors which might be associated with a condition of peripherality, meant as marginality. We find that geographical peripherality is a key factor in explaining the growth of recent Italian discontent with more remote municipalities driving populist voting. However, sources of resentment, very different in nature, are also present in another periphery, within cores, i.e. urban belts, where some conditions of social or material vulnerability, likely to be related to a condition of feeling “peripheral”, are strong predictors of the growth of populist parties.

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Spreading resilience: A spatial analysis of the benefits of hardening techniques for a troubled power grid

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Abstract

Tree-trimming operations (TTOs) are costly, yet widely used grid-management procedures utilized by electric utility companies globally. As diffused generation, electrification of the economy, and climate change pose challenges to utility companies, power grids and their reliability play an increasingly important role for developed and developing regions. Using data from a uniquely detailed dataset of outages and tree-trimming operations from 2009-2015 undergone by Eversource Energy in Connecticut, this study identifies the relationship between tree-trimming operations and power outages from three perspectives: i) number of outages; and ii) number of affected customers for occurred outages; and iii) duration of occurred outages. Methodologically, we employ four sets of models: Panel Fixed-Effects, Difference-in-Difference, Spatial-lagged models and a Temporally Spatial Autoregressive models. Areal units are author-specified raster, with a size of 2by2km (preferred), and 4by4km (as a robustness check). This modelling strategy accounts for both spatial and temporal relationships. Our results show that at the 2-km cell size TTO translate to 4.17% fewer tree-associated outages per year. In addition, occurring outages affected 465,187 fewer customers. These results are consistent at a lower resolution. In addition, TTOs have relevant spatial and temporal spillovers. Our work represents a novel approach in the quality of the grid-level data and the temporal coverage utilized. Our results are particularly relevant to utility companies and policymakers in areas exposed to climate change such as the U.S. Eastern Atlantic Coast, and they support further expansion of expensive, yet effective TTOs in densely forested regions.

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The role of medium-sized firms and business size evolution in regional resilience

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Abstract

Scholars have highlighted the role of regional features in the process of building resilience including the role of the dynamism in services sectors and innovation. However, the role of business size diversity and its dynamics in building resilient (and indeed resistant) economies has been largely overlooked in academic discourse. Moreover, economic development policy has focused on the two sides of business size spectrum, either on micro firms or on attracting larger projects through inward investments. In this context consideration of a 'missing middle' may exist in terms of policy development.

This paper focuses on the role of medium-sized firms in supporting regional resilience. Understanding connections between firm size distribution, business size growth dynamics and regional development provides insights for the regional resilience (and resistance) debate. This paper contributes by highlighting the importance of medium-sized firms as a consideration factor in determining the resistant or resilient nature of economies. We argue that locally-owned and highly productive medium-sized companies can offer a relative stability and facilitate the transformation of a regional developmental path, while a poorer performing sector can lead to regional resistance. The issue of medium-sized firms is organically related to business size evolution, the process of firms evolving from micro to small and medium-sized companies. We claim that a dynamic business population, with firms progressing relatively quickly from small to medium, contributes to the transformation and renewal of a regional economic growth path.

We examine these issues through the lens of the region of Wales. A framework linking regional economic resilience to firm size structure, evolution and heterogeneity is developed, before providing evidence of the significance of medium-sized companies in the Welsh economy and considering the implications for processes of regional resilience and resistance.

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The Regional Economic Impacts of Climate Change on Family Farming and Large-Scale Agriculture in Brazil: A Computable General Equilibrium Approach

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Abstract

This paper analyses the regional economic impacts of climate change on the agricultural productivity of crops linked to family farming and large-scale agriculture in Brazil. Variations in agricultural productivity estimated according to scenarios RCP 4.5 and RCP 8.5 (IPCC, 2014), between 2021 and 2050, were used as inputs in a Computable General Equilibrium Model (CGE). The model presents a regional configuration composed of the 27 Federation Units and 42 agricultural sectors, disaggregated into family farming and large-scale agriculture sectors.

Brazil, a country of great territorial extension and whose agricultural sector plays an important economic role, may be severely affected by Climate Change, with possible impacts on the supply, price, and stability of international food trade. The country stands out as one of the largest producers and exporters of soybeans, sugar, corn, orange juice, coffee, cotton, as well as poultry, pork, and beef (FAOSTAT, 2020). Internally, the sum of goods and services related to agribusiness corresponded to 21.4% of GDP in 2019, with 68% of this participation related to agriculture and 32% to livestock (CNS, 2020). The literature related to the impacts of climate change on Brazilian agriculture indicates considerable losses, especially for commodities.

Despite the literature being relatively extensive, it focuses on commodity studies and makes no distinction between types of producers. It should be emphasized that the Brazilian agricultural production structure is heterogeneous. Producers are distinguished in the use of inputs, productive factors, types of crops, and in the linkage to the domestic and foreign markets. Family farming is largely linked to food security and food production for the domestic market, while large-scale agriculture stands out in commodity production and the foreign market. The analysis of the impacts of Climate Change on agriculture and its potential economic effects should address the productive and regional specificities of farmers.

The results, in terms of economic impacts, indicate that the North and Northeast regions would be negatively affected, Midwest and Southeast would suffer moderate impacts, while the South region would benefit most. São Paulo, Paraná, and Rio Grande do Sul would show economic growth, softening the negative impacts on national GDP, which would show a decline of 0.01% in both scenarios. The phenomenon could contribute to the increase of regional disparities and the deterioration of food security conditions in Brazil. The results also indicated negative economic effects in the family farming sectors in the North and Northeast regions, with respective accumulated losses of 3.5% (1.3%) and 0.8% (2.8%) in Scenario RCP 4.5 (RCP8.5). Family farming in these regions is characterized by economic and social vulnerability, and the phenomenon of climate change may increase this condition. Large-scale agriculture sectors would also be negatively affected in these regions, with greater losses in the Northeast region. Family farmers sectors in the South region, more developed and inserted in the market, would benefit from a cumulative increase in activity of 1.2% (1.1%) in RCP 4.5 (RCP 8.5) in 2050.

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Subway expansion, jobs accessibility improvements and home value appreciation in four global cities: Considering both local and network effects

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Abstract

We explore the potential of incorporating accessibility analysis in studying the impact of subway expansions on the real estate market. We first demonstrate that using increases in accessibility to firms as a continuous treatment variable instead of its binary alternative, the station-dummy approach, yields better goodness-of-fit in a quasi-experimental econometric analysis. We show that the dummy treatment variable consistently reported overestimated coefficients of impact for new subway stations. Furthermore, accessibility measures allow the exploration of impacts beyond the local effects around new subway stations, shedding light on network impact that has been largely overlooked in the literature. To provide greater external validity to our results, we apply the same analysis to the cities of Santiago (Chile), São Paulo (Brazil), Singapore, and Barcelona (Spain) and explore the common results. We argue that the integration of urban economics and transportation analysis can bring

innovation to the empirical approach commonly adopted in the literature, and the use of accessibility measures in causal empirical studies on transportation impacts can produce more robust and comprehensive results and capture the nuanced spatial heterogeneity effects.

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Connecting Smart Specialization, the Green Transition and Socio-Economic Resilience. An Empirical Test

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Abstract

Smart specialization (RIS3) has been formally introduced as integral part of the 2014-2020 programming period of the European Cohesion policy to enable each European region prioritize investments in research, development and innovation and develop the its unique place-based competitive advantages. For the 2021-2027 programming period, the Cohesion Policy has the ambition to take the smart specialization strategies "one step further" and contribute to a "smarter Europe", through innovation, digitization, economic transformation and support to small and medium-sized businesses. Meanwhile, smart specialization is now expected to embark into a process of widening and support the ambitions of the new European Green Deal and the global Sustainable Development Goals. Sustainability appears at the top of the Smart specialization agendas, while the "smart directionality" towards the green transition is recognized as an overriding strategic priority. The Covid 19 pandemic adds an additional layer in the prioritization process and a new narrative for smart specialization at the EU level. The post-Covid RIS3 is now expected to support socio-economic recovery and resilience and to reduce vulnerability to shocks; "no places and no people should be left behind in the EU".

Within this frame of reference, the purpose of this paper is to question how a region can better mix, in an integrated smart specialization strategy, the ambition to move towards innovation-driven productivity growth, green transition (environmental protection), stability and inclusiveness. This is particularly challenging for the lagging-behind regions, with less developed research and development systems, where the impact of innovation on growth is estimated to be much weaker that in the core regions. To illustrate the case, we use empirical evidence from Romania, a "modest innovator" according to the European Innovation Scoreboard, which faces serious environmental pressures and social challenges. On this account, we intersect a measure of economic and technological specialization and an index of environmental and social pressures. The index will capture at least the following indicators: energy use and air emissions intensities by NACE Rev. 2 activity, structural change in employment (2010 - 2020) and the resistance to Covid pandemic (i.e. change in the number of employees between December 2019 and December 2020). Our investigation is meant to enhance understanding on how to manage the trade-offs between different sustainability dimensions and create synergies between policy objectives.

Acknowledgement: This work was supported by a grant of the Ministry of Research and Innovation, CNCS - UEFISCDI, project number PN-III-P4-ID-PCCF-2016-0166, within the PNCDI III project "ReGrowEU - Advancing ground-breaking research in regional growth and development theories, through a resilience approach: towards a convergent, balanced and sustainable European Union".

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Creating and Strengthening Comparative Advantage: The Region of Thessaly – University of Thessaly Cooperation Nexus

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Abstract

The literature on the role of universities on regional performance is broad and diverse, and some notable theoretical approaches have been developed over the years. The "entrepreneurial" university model attributes to

universities the role of commercializing scientific knowledge. The “regional innovation system” university model perceives universities as carriers of innovation. The “mode 2” university model suggests that universities must be engaged in collaborative research with other organizations towards producing connecting-to-the-environment knowledge. The “engaged” university model understands that adaptation of university functions to regional needs. Looking at the other side of the theoretical spectrum, the literature on the role of regions on academic performance is scarce and no body of literature has been formed. Apparently, scientific knowledge, up to now, seems to perceive the linkage between regional performance and academic performance as a one-way – and not as a self-sustained - process.

The paper perceives the Region of Thessaly – University of Thessaly cooperation nexus as a means for creating and strengthening comparative advantage. Under this perspective, the paper scrutinizes the interplay between regional performance and academic performance. To this end, the paper conducts a pilot questionnaire survey on the basis of structured (on the 1-5 Likert scale) questions that cover both the topics already accentuated in the literature and some equally important topics that need to be analysed. The survey is addressed to the actors that are (or need to be) engaged in the Region of Thessaly – University of Thessaly cooperation nexus. The findings of the paper provide valuable insight to both theory and policy-making.

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Rural to urban transformation in India as census towns: Rural-urban dichotomy revisited

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Abstract

The urbanization process in the Global South is characterized by the blurring of the boundaries between urban and rural areas and the lack of institutional capacity, which have made the process highly unsustainable. In India, an example of such development is the rapid growth of “census towns”. These settlements are not acknowledged as urban by the state, but they play an important role in accommodating population growth.

The current discourse on urbanization calls for new approaches to capture the peculiarities of growth in the global South. This paper takes the National Capital Territory of Delhi as a case study and adopts a mix of methods (field survey, ordinary least squares regression and geographically weighted regression) to highlight the emerging gradient of urbanization within official rural areas.

The article first examines the population and municipal status dynamics, location and economic characteristics of census towns as well as their migratory and commuting patterns. The status and costs of providing basic amenities and social infrastructure are then analysed. The paper emphasizes the contribution of contemporary theories that explain the growth of census towns and the role of secondary and primary data in capturing their characteristics. Taking advantage of the economic potential of India's urbanization as census towns will require the following: (i) the enforcement of reforms to empower Gram Panchayat for spatial planning and growth regulation; (ii) the discontinuation of subsidized infrastructure provision and charging development tax; and (iii) investment in decentralized infrastructure for more accountable and more efficient delivery of basic amenities.

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Integrating spatial development with infrastructure provision: A conceptual framework and its application to India

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Abstract

In recent years, scholars of urban studies have advocated strategic spatial planning as a way to better integrate infrastructure provision with spatial development in the Global South, especially given escalation in large-scale

development projects under neoliberalism. Although strategies to create transport corridor are prevalent in the global South, there is a lack of empirical research to evaluate these initiatives, in particular whether they have realized their general goal of reducing regional disparities. The current paper describes a multi-method approach involving spatial and non-spatial analysis to investigate spatial disparity along a proposed corridor and examine its integration within the existing settlement structure. The analytical framework is tested on India's Delhi-Mumbai Industrial Corridor. A rationale is developed to enable a critical view of corridor policies as strategies for development in the global South.

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Estimating the Local Government Spending Multiplier for Brazilian States: an Input-Output and a General Equilibrium Analysis

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Abstract

The differences in growth rates and economic activity levels between regions within a country motivated the search for strategies to reduce regional disparities. At the initial stages of development, economic activity concentration positively affects national growth rates while raising regional inequality. However, after reaching a certain regional concentration level, increases in the latter would dampen national growth. The fiscal policy aimed at lagging regions configures as a regional policy for their development. Nonetheless, there is no consensus in the economic literature about fiscal policy's role, and there are still limited studies quantifying the multiplier effects at the local level, especially in developing countries. The global financial crisis of the late 2000s revitalized this debate, given the monetary policy's inability to counter the falling of economic levels. From a regional perspective, the heterogeneity in the transmission of a fiscal impulse causes varied effects between regions within a country due to differentials in productive structure and interdependence. In this context, the objective of this paper is to analyse the impacts of Federal Government spending on Brazilian regional GDP and economic growth. Thus, we seek to answer which policies would generate the highest multiplier effect on output. This objective will be achieved through a computable general equilibrium analysis (CGE) for the Brazilian economy, which will measure the impacts from both the aggregate and the regional perspectives. In this sense, this paper offers another perspective on the multiplier effect: at first, by calculating for each state its Federal Government Spending Multiplier; secondly, it decomposes the total multiplier in its intraregional effect and the interregional effect. As a preview of results, we found that the multiplier is higher in more impoverished areas and sensitive to trade openness. These states are more dependent on government spending in the composition of their and GRP and possess a less diversified productive structure. The pattern of the government spending multiplier is similar in all of our simulations, which reinforces our conclusions. Also, in the Input-Output modeling, the multiplier effect estimate is much higher for all regions with the absence of the price mechanism through the substitution channel. When evaluating how the government spending multiplier reacts to variations in substitution elasticity of imports, our results were consistent with other estimates in the literature: increases in import penetration (both from other regions of the country and the RoW, provokes the diminishing of the local multiplier and vice-versa. Nonetheless, when analysing the sensitivity to the interregional import elasticity, our results suggest possible gainers with the interregional trade (mainly South and Center-West regions). Lastly, it provides evidence that there is no trade-off between mitigating regional disparities and fostering national growth. Our results may vary depending on how the government spending is funded, which we intend to incorporate in later analysis. In this sense, we contribute to the literature on the government spending multiplier at local levels, for a large emerging Market, providing estimates of the multiplier effect for Brazilian states, as the literature quantifying this impact is still limited, especially for underdeveloped economies.

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The Changing Role of Long-run Drivers of Labour Productivity

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Abstract

This research explores the drivers of global long-term productivity growth and how their roles have varied over time, through extensive literature review, examination of the development of drivers, and empirical analysis using the Bayesian Model Averaging.

The following findings emerge. First, historically, labour productivity growth has been driven by innovation, better education, and investment in physical capital. Innovation and private sector investment require a growth-friendly environment, with supportive institutions and policies, including policies that promote macroeconomic stability and the rule of law. Productivity growth also seems to benefit from expertise in producing relatively complex and sophisticated exports, which is associated with international technology diffusion.

Second, the effects of different drivers on productivity growth have changed over time. Innovation and experience with economic complexity, related to participation in global value chains and cross-border technology transfer, seem to have increased in importance. So have demographic factors, notably changes in population age structures. In contrast, the importance of urbanization, related to the sectoral shift from agriculture to manufacturing and services, has weakened.

Third, many productivity drivers in EMDEs fall short of advanced-economy conditions, despite remarkable improvements over the last 60 years in key human capital indicators such as the provision of primary education and infant mortality rates. This research documents these gaps in a systematic way. For some productivity drivers, including ones that are essential to innovative economies—tertiary education, financial development, and patents per capita—the gaps have widened. Improvements in other drivers, such as institutions and economic complexity, have stalled. In addition, many drivers of productivity growth have faltered, including those which had previously supported strong productivity growth. Working-age population growth has slowed, along with growth in average educational attainment. As the expansion of global value chains has lost momentum, so has the movement toward more diverse and complex forms of production.

Fourth, the COVID-19 pandemic has made the near-term outlook for productivity growth even more challenging. Weaker investment and trade, erosion of human capital, slower labour reallocation, heavier public and private debt burdens, and widening inequality could push down on productivity growth. Yet, the pandemic may also create productivity-enhancing opportunities such as lasting organizational and technological changes for business and education, diversifying global value chains, and changing social norms.

Fifth, the recent slowdown in productivity growth has multiple sources and, hence, action on a range of fronts will be needed. Governments seeking to raise productivity growth can increase public investment and stimulate private investment; improve human capital; foster firm productivity, partly through on-the-job training and upgraded management capabilities; increase the exposure of firms to international trade and foreign investment; enable the reallocation of resources toward more productive sectors; and, seek to diversify production. The benefits of many productivity-friendly policies could be enhanced by improving the macroeconomic and institutional environment.

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Dynamic Impact of Remittances on Aggregate Demand in Sri Lanka

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Abstract

The new economics of labour migration theory postulates that migration and remittances can enhance the GDP of the migrant sending/remittances receiving country through increased investment and consumption. Thus, the objective of this paper is to examine the impact of remittances on GDP via aggregate demand expenditure, in particular consumption, investment, and imports spending in Sri Lanka. It contributes to the literature by providing insights into the two countering views (pessimistic and optimistic) with regard to the impact of remittances on GDP. Understanding the separate and interdependent impacts of remittances on these expenditures is important to the promotion of migration and remittances as a development tool in many developing countries. The main theoretical basis of this paper is the development of a Keynesian type dynamic econometric model where remittances are treated as endogenous. This model is empirically tested using the VECM which captures deterministic structural breaks, simultaneity and the trend of selected variables. The

findings reveal that remittances and GDP have interdependent effects on each other in the long-run. Furthermore, remittances positively affect GDP via expenditures on consumption, investment and imports in the long-run, while there are no significant dynamic effects detected in the short-run.

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Aggregate Productivity growth from firm level data: the case of Vietnam and some methodological issues.

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Abstract

In this paper we use Vietnamese firm level data to provide a decomposition of the economy wide GDP per worker growth. The main components of the decomposition are: regional migration (labour movement across regions); TFP growth; Capital Deepening. In order to provide a figure for these components we propose to use production frontier methods to assess the performance of firms in each industry and in each region. After building the nonparametric production frontier we use it to quantify the magnitude of each component and aggregate it into economy wide effects.

We discuss the methodological issues associated with the use of firm level data and their aggregation into the economy wide components and provide some empirical evidence on the magnitude of these components in the Vietnamese economy. The underlying challenges in terms of estimating productivity growth are common to many other available datasets, including European firm level data.

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Radical Entrepreneurship: Challenging Caste-Based Discrimination and Socio-Structural Constraints to Inclusion in Rural Bangladesh

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Abstract

The rise of entrepreneurship as a strategy for development in the Global South is a reflection of growing geopolitical interest in the liberalization of economies and decentralizing state power as a means to maximize global social welfare. While it has been made clear that top-down approaches to 'empowerment' through 'financialization' often result in failed development attempts and stagnant markets, few studies have sought to understand entrepreneurship as it naturally evolves in its social and cultural contexts. In rural Bangladesh, characteristics of the non-institutionalized entrepreneur merge Western and South Asian market principles, creating a form of relational entrepreneurship that may open new pathways to mobility through dignified personhood creation, gender equality advancements, and economic opportunity not available to previous generations through other forms of labour.

In this paper I show how entrepreneurship among a rural Dalit community plays a significant role in the ability for poor families to change their circumstances. Through the observation of six entrepreneurs over six weeks, I found that entrepreneurs utilize certain behaviours to navigate three primary poles of inequality: economic stagnation and opportunity, social exclusion and inclusion and interdependence and context-specific agency. New freedoms gained through entrepreneurship enable marginalized men, and doubly marginalized women, to challenge the status-quo and negotiate power at a local level, opening new pathways for the study of 'radical' entrepreneurship as an avenue for the pursuit of upward mobility amongst marginalized groups in South Asia and elsewhere. This study is relevant to research which explores the role of self-employment and small enterprises in creating structural change at a local level, particularly in contexts of extreme marginalization.

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Measuring the Evolution of Regional Value Chains in Northeast Asia Using a Cross-Border Interregional Input-Output Model

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Abstract

The recent Regional Comprehensive Economic Partnership (RCEP) Agreement signed by 15 East Asian countries in 2020 marks the first time that China, Japan and South Korea (CJK) have gathered together under a single trade agreement. As the world's largest regional free trade agreement, RCEP is expected to accelerate the development of regional value chain of CJK as well as regional economic integration of Northeast Asia. International IO table have been considered a very useful source of data for analysis of production network or value chain (VC). VC trade is separated into regional value chain (RVC) trade – involving only regional production partners – and global value chain (GVC) trade – involving also extra-regional partner countries. This paper adopts input-output decomposition techniques to analyse the evolution of production networks in CJK over the period 2005-2015 from a RVC perspective. The main objective of this study is to find out what are the locational patterns of trade in value-added in Northeast Asia and how are these patterns changing over time. In this paper, the area is composed of 7 regions of China, 4 regions of South Korea, and 9 regions of Japan, while each region having ten industrial sectors. The primary data sources are the Transnational Interregional Input-Output Table for CJK, 2005, constructed by the Institute of Developing Economies, JETRO. Then, the updated cross-border interregional input-output table of 2015 is calculated based on the Eora Input-Output Database, China regional Input-Output Table and Korea regional Input-Output Table of 2015. Based on recent IO-based GVC indicators, this study tries to provide a more detail image of a certain region's (not only a country's) positions and degrees of participation in international production networks and measure the comparative advantage at the regional level rather than the national level. This cross-border interregional IO model is expected to find out (a) the evolution of interdependencies in regional trade and production networks between 20 regions in CJK through a matrix of cross-border transfers of intermediate goods by origin and destination, (b) value-added distributions and their evolution across the sample region, and (c) how a region's value-added is induced by its partner region's final demand.

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The Romanian Response to the COVID-19 Crisis: local, county or regional effort? A perspective on vaccination campaign

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Abstract

Against the backdrop of a continuously changing situation, Romania, as many other countries, has adapted on the go to the pandemic situation. On 27 December, 2020, the national vaccination campaign started. The existing literature shows that such an effort requires coordination and a clear strategy that must include all the administrative levels. But in this Covid-19 situation it is still unclear what role can be played by the territorial units (local, county and regional level) in unitary states. To address this gap in the literature this article tries to analyse the Romania's strategy in managing a national vaccination campaign and what is the involvement of local, county and regional authorities in pursuing this aspect. From the methodological point of view, this research is based on a comparative approach, by using also quantitative (statistics) and qualitative data. The analysis is done through primary data, obtained from government official websites, public declarations and other official documents issued by national and county authorities. The documents analysed were selected on the basis that they represent the official vaccination programmes and campaign materials published on the most widely-used platforms. This filtering of the material was based on the initial research, which showed that such terminological association on vaccination campaign was a common and important feature of the official programmes. According to the procedures, each hospital within which a vaccination center is organized establishes its vaccine

requirement for three days, based on the schedules made, and sends it to the county public health directorates. They, in turn, centralize the vaccine requirements from all the rounded vaccination centers and send it, by 1 pm the day before the actual vaccination, to the Regional Storage Center where they are rounded up. The regional storage center prepares, for distribution, the necessary quantity of vaccines, according to the requests / schedules received and distributes them, accordingly, to the public health directorates, respectively the vaccination centers. Therefore, the Regional Centers are not independent entities, they are based on the national structure, on units subordinated to the Ministry of Defense or the Ministry of Health. However, the preliminary findings of our study show that the use of existing regional structures might increase the efficiency and the level of coordination between the national and local authorities.

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Growth and Convergence of the Spanish Regions in the European Union

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Abstract

Growth and Convergence of the Spanish Regions in the European Union, is developed in six chapters and includes the evolution of the Spanish Regions, starting from the incorporation of Spain on January 1, 1986 to the European Economic Community.

The evolution of the population and the percentages of growth and participation of each Community in the national total are analysed, and its percentage growth or decrease is compared over time, in this aspect the loss of population in Regions such as Galicia and Castilla y León, among others, and like Madrid and the Communities of the Mediterranean Arc are growing in population.

The evolution of the GVA is collected by sectors and Communities, in its contribution to the national total, in its internal evolution and in national participation, which allows us to visualize the evolution of each Community both with the rest of the Communities, and with the average national and growth differentials between one year and another.

The growth of GDP by Communities and therefore we can verify the stages of growth and those of decline, both in their comparison between Communities and with the national average, as well as the evolution of each Community and its response to the crisis stages. Likewise, the GDP per inhabitant is analysed in each of the Communities, its evolution between each period in the Community itself, with the national average.

The evolution of per capita income is one of the main aspects of the work, and we have collected the data since 1960, and placed the Communities and their evolution in the different periods into which we have divided the years up to 2018 as a ranking (latest data published by the INE), and those that exceed the national average are marked in blue, so that we have a more visible and complete overview of the evolution of income in each territory and the differentials between one and the other and singularly between the highest and lowest income, as well as the national average.

This work shows the difficult moment of the Spanish economy, which demands a great national agreement to take advantage of the opportunity that the 140,000 million European funds represent to win the battle against the pandemic, laying the foundations for the change that Spain needs.

But in order to achieve the objectives set by the European Commission, the greatest possible consensus, Political Parties, Trade Unions and Businessmen, together with the Government of Spain, is necessary to reach an Agreement that specifies the actions to be developed and the priorities to be established in time and resources. The investment program capable of promoting the productive structure towards the new industry and advanced services, information technologies, communication and digitization, at the same time creating the Mediterranean railway corridor for freight and taking advantage of the strategic location of its ports as a gateway to Europe for intercontinental traffic.

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Evaluation of the Effectiveness of Firm Subsidies in Lagging-Behind Areas: The Italian Job

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Abstract

Since the late 1990s, Italian scholars have produced numerous studies in the field of regional policy evaluation, especially ones that have investigated the impact of financial incentives aimed at supporting the accumulation of private capital in underdeveloped areas. The number and innovativeness of these studies make it possible to define the presence of an Italian school for evaluating regional policies. This paper testifies to the importance and methodological advances of this school, putting it at the frontier of policy evaluation analyses. The presentation of the studies moves in two directions, historical and methodological, identifying the main themes and techniques addressed in recent years: the evaluation of Law 488 and negotiated programming policies, on the one hand, the advance in policy evaluation techniques in the presence of interactions and continuous treatment, on the other. The paper does not claim to be an exhaustive review; rather, it should be considered an overview of the historical path and the future prospects of what we call «the Italian school of regional policy evaluation».

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How do pandemics affect economic growth? Lessons from the 1968 H3N2 influenza and 2003 SARS

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Abstract

We evaluate the 1968 H3N2 Flu pandemic's economic cost in a cross-section of 52 countries. Using excess mortality rates as a proxy for the country-specific severity of the pandemic, we find that the average mortality rate (0.0062% per pandemic wave) was associated with declines in consumption (-1.9%), investment (-1.2%), output (-2.4%), and productivity (-1.9%). Our main findings highlight the role of both negative demand-side and supply-side shocks in the flu pandemic's aftermath. We also assess the impact of SARS on the 4 most-affected economies (Taiwan, China, Hong Kong, and Singapore).

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Openness and regional growth

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Abstract

The openness-growth nexus is an issue that has intrigued many scholars from different disciplines, like international economics, economic geography, regional economics, and international business for a very long time. While theoretical implications are quite clear, the empirical evidence is mixed and scarce, especially at sub-national level. Indeed, openness is not observable at regional level; therefore, it is difficult to identify a comprehensive and reliable set of quantitative variables measuring the different dimensions of the phenomenon. Despite this objective difficulty, much has been done and today we have a more comprehensive view of the nature of the phenomenon, as well as its trends and territorial impacts.

This is the starting point of this paper, which aims at presenting an overview of the most recent advances of the literature on the role played by openness in its two main economic manifestations – i.e. international trade and foreign investments – in fostering local development trajectories. The objective of the paper is twofold. First, it

offers a brief survey of the main theoretical and empirical studies that are relevant to provide an answer to the following questions:

- 1) Is openness conducive to economic growth?
- 2) Which theoretical principles can be applied at sub-national level?
- 3) How has openness evolved over time and how have these changes affected growth?

Secondly, the study wants to give appreciation of the Italian contributions to this field of research during the last two decades. The final goal is to outline the profile of a rather coherent series of research efforts that have enriched the debate on the openness-growth nexus both nationally and internationally.

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Does China's business matter to South America?

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Abstract

The increase in imports from China has, in the recent past few years, become an issue in terms of growing perspectives in several South American countries. From the perspective of consumers, the availability of low-cost Chinese goods is considered a benefit, despite concerns over quality and safety standards for a range of products. On the other hand, the main concerns from the local producer's side, are the increase of the competition between China's products and the local ones and the substitution effects due to cheaper Chinese imports. There have been a small number detailed studies of this issue for South America up to now. Brazilians and Argentinians domestic manufacturers, the two most industrialized countries in South America, tend to be the most seriously impacted in the region. To assess the possible impact of Chinese competition upon South American countries, we use a general equilibrium model, GTAP calibrated for 2014, opened for twelve regions (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela, China, and Rest of the World) and 65 traded commodities. This paper aims to explore the channels of interactions between China and South American countries. We explore the changes in the China's traded goods prices through a global computable general equilibrium (GTAP) which considers some South America countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela), China, and Rest of the World. This price shock is justifiable due to the size of China and its influence on world prices.

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Economic Crisis and New Firm Creation in Romania. Insights from Static and Dynamic Spatial Panel Models

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Abstract

Entrepreneurship has a key role in the transformation of Romanian economy and society, influencing economic development by putting innovative ideas to practice and creating new jobs, and by enriching the quality of life and human existence as well. Entrepreneurship dynamics depends upon a series of local and national economic factors, but is also affected by the international environment, like the current COVID - 19 pandemic. Statistic data show that new businesses are created at a slower rate rate during an economic crisis, when the economic climate is harsh and business opportunities scarce. Nevertheless, there are local differences in the reaction to crises, and new business formation tends to decline with variable intensity from one region to another, even in the same country.

The crises are acting like a trigger for some opportunity-driven entrepreneurs and resilient regions can thrive even in times of crisis or recover faster after the depression. Given the scarcity of regional statistical data regarding the economic effects of COVID-19 pandemic, we draw mainly from the lessons of the precedent major

crisis, namely the 2007-2009 Great Recession, for assessing the likely economic effects of the current crisis on new firm births. We focus on the interval between 2007 and 2020, aiming to investigate the impact of economic crisis and the difficulties generated by COVID-19 pandemic to new business formation in Romania, and to determine if the response to crises is shaped by location. This research extends the empirical debate in Țigău and Antonia (2020) on the determinants of new business formation in Romania.

In order to capture spatial interactions, as well as spatial short- and long-term effects, the method employed in our analysis relies on the estimation of various static and dynamic panel models. We tested the potential impact of a large variety of social and economic indicators on new firm creation and found that the most consequential factors of influence are the employment rate, unemployment and education. Our results convey a powerful policy message for both national and regional decision-makers. We believe that, while putting to test the entrepreneurial initiative, the current crisis might act like a catalyst that leads to innovation and reshaping our economy and society.

Acknowledgement: This work was partially supported by a grant of the Ministry of Research and Innovation, CNCS - UEFISCDI, project number PN-III-P4-ID-PCCF-2016-0166, within the PNCDI III project "ReGrowEU - Advancing ground-breaking research in regional growth and development theories, through a resilience approach: towards a convergent, balanced and sustainable European Union".

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The impact of COVID 19 Pandemic on HEIs – response strategies from Romanian universities

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Abstract

The negative impact of COVID 19 pandemic on global health systems is a dramatic one. Nevertheless, the pandemic triggered plenty of vulnerabilities of the world economy, international labour markets, as well as educational systems.

Moreover, important new trends should be identified, along with determinants that will certainly impact and reshape the future framework and economic environment related to educational processes and policies, labour force markets, consumer behaviour patterns, economic public policies, capital investments, etc. Despite the vulnerabilities revealed by the global health crisis, significant opportunities will occur, and sound interventions will be needed. That is why we consider that there is a stringent need for the educational systems to be able to adapt fast to the new realities and to implement correct, innovative and efficient response strategies in order to promote instruments and mechanism for flexible, dynamic and yet relevant, sustainable and trustworthy educational environment for all the implicated parties generating access, balance and equity for all the implicated parties to the process.

According to UNESCO's data, in March 2020, due to global lockdowns, 82.8% of total enrolled learners (pre-primary, primary, lower-secondary, upper-secondary and tertiary education levels) in 166 country-wide closures were directly affected by no access to in person education. One year later, in February 2021, the situation is improved, with 12.7% of total enrolled learners in 28 country-wide closures directly affected. Still, the international educational systems are confronted with problems related to digitalisation, access to support programs for vulnerable learners, reduced mobility for international students and teaching staff, reduced number of scientific events, reduced number of outreach activities in local communities, etc.

The present article aims to focus on the impact of the global health crisis on education, with a special attention paid to HEIs (higher education institutions) in Romania. We intend to identify and analyse response measures, as well as strategic approaches adopted by Romanian universities, in a comparative analysis with other models identified as being relevant for the investigated context, from the abrupt switch to online education, to support mechanisms for both students, teachers and administrative staff. We intend to sketch profile of those HEIs that are undertaking a responsible, accountable and resilient approach on the education in these challenging times.

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Place-based SME finance policy and local industrial revivals: An empirical analysis of a directed credit program after WW2

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Abstract

This paper examined the effects on the performance of local SMEs of a modernization fund program for small business enterprises implemented by Osaka Prefecture in the early 1950s. Utilizing firm-level panel data based on business credit reports, we empirically evaluated the effects of the program. We found an improvement in production levels among the recipients. In addition, recipients in sectors related to munitions production or in industrial agglomerations specialized in these sectors achieved additional or larger improvements in their production levels.

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Reassessing the penalty in commuting for immigrants: New evidence from Spain

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Abstract

This article examines the differences in commuting length between native and immigrant employees in Spain, a relevant issue since immigrants' longer commuting times may reflect an imperfect spatial matching of their labour supply and demand with negative implications for their relative labour outcomes and their individual well-being. The research differentiates immigrants according to their origin and is based on a rich, nationally representative database, the Survey on Quality of Life at Work (in Spanish Encuesta de Calidad de Vida en el Trabajo) that covers the period 2007 to 2010. One of the main novelties, as regards previous studies on the topic, is the novel use of decomposition econometric techniques, the Oaxaca-Blinder decomposition, that allow quantifying the joint and individual influence of a wide range of explanatory factors. This is relevant insofar they permit quantifying which part of the raw differences in commuting times between immigrant and natives is explained by their different characteristics and which part remains unexplained, reflecting actual differences in the patterns of commuting for individuals otherwise observationally similar. The evidence obtained shows that, although a relevant part of the explanation of the greater commuting observed for immigrants is related to observed elements such as a different use of modes of transport, they make overall significantly longer journeys when comparing with observationally similar natives. This commuting penalty occurs yet only in the case of immigrants from emerging countries as it does not exist for those from advanced economies, which are more similar to natives. Although the penalty is overall rather similar along several sociodemographic and occupational lines, it is much more pronounced for individuals living in large municipalities and in the region of Madrid, respectively, which implies that the vast majority of previous studies on the commuting of immigrants focused in specific highly populated geographical environments could offer a biased perspective and could not be nationally representative. To conclude, we offer additional novel evidence about the potential explanations of the commuting penalty of immigrants by testing the hypothesis that the unexplained differences in the commuting times between immigrants and natives are due to contrasting attitudes towards this phenomenon. Given that commuting has a similar negative impact on satisfaction in different domains of life for immigrants and natives, immigrants' longer commutes are not apparently associated to a greater tolerance to commuting, which helps to discriminate against potential competing explanations of the phenomenon.

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Capital Increase and Land Prices: An Essay among Brazil and United States of America

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Abstract

In the past decade, Brazil and the United States of America (USA) take turns in the position of the largest producers of agricultural commodities. As the main producers, the USA and Brazil stand out, being the first and second-largest producer of soybeans since 2015/2016. In these countries, agriculture has become an important sector for the economy, both to ensure food security and to generate foreign exchange through export. One way to reach this agricultural commodities production is increasing the planted area, no wonder that there was a growth of about 16% of the planted area between 2006 and 2018 in both countries. The need for more areas of plantation caused an increase in land value, which caused an increase in the capital employed (invested capital) since there is a need to invest more to purchase or lease land. The increase in the value of the land is justified by considering the land as a finite and necessary asset for agricultural production and which does not have a perfect substitute. Thus, there was an average annual growth of about 6% and 13% in land prices for the USA and Brazil, respectively, from 2002 to 2018. Therefore, all agriculture and livestock were affected by this increase in land values. In this scenario, this paper aims to analyse, quantify and, compare the economic effects between the USA and Brazil by the increase in invested capital, due to growth in land prices. The methodology used will be based on the simulation of economic scenarios based on Computable General Equilibrium (CGE) model, simulating three scenarios: (i) capital increase in land value for Brazil only; (ii) capital increase in land value for the USA only; and (iii) capital increase in land value for both countries. Through EGC modelling, it will be possible to verify the economic impacts such as import, export, prices, and production value in the agriculture sector due to the appreciation of agricultural land. Hence, this paper deals with a current and important theme that can help to make efforts and decisions by measure the impacts in increasing the planted area in the medium and long term.

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Impacts of Agricultural Cargo Transportation on the Brazilian Economy

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Abstract

For years, many studies point that cargo transportation services were responsible for the loss of efficiency of several sectors of the Brazilian economy, including one of the most important sectors for the Brazilian economy, agriculture. The Brazilian agriculture sector is dependent on transportation services for the flow of production from the point of origin to the final consumer, as well as the distribution of inputs and implements, such as fertilizers and agricultural machinery. However, some bottlenecks shrink the transport and cause inefficiency. This work relates the agriculture, cargo transportation, and economics all at once. Given the importance of agriculture for the national economy, the transportation sector represents a link between communication and product disposal, having the transportation services for agricultural and livestock, direct importance in regional economy's performance. This theme is representative in a scenario of high agricultural productivity with high export rates, especially agricultural commodities, generating a positive trade balance and attracting foreign currency. By combining agricultural and livestock, transportation services, and economy, the objective of this study is to investigate the impacts for the Brazilian economy given some change efficiency at agricultural cargo transportation service. To complete this purpose, there are two hypotheses: (i) cargo transportation is a limiting factor for the development of the Brazilian economy; and (ii) investments made in cargo transport are compatible with the current needs. This is a descriptive research of quantitative nature, focused on database analysis and simulation of economic scenarios. To fulfill the proposed objective and answer the hypothesis, the present paper will use a computable general equilibrium (CGE) model with the main data input as a Brazilian input-output table for the five macro-regions of Brazil and those interactions around the globe. The CGE model will be structure to express the cargo transportation services and will be based on the Project of Analysis of General Equilibrium of

the Brazilian Economy (PAEG) model, which is developed to represent a Brazilian economy in 19 sectors and 12 regions (five macro-regions of Brazil and seven other regions). Through the transport efficiency, shocks will be possible to indicate the impacts in the GDP, welfare, and value of production for the agricultural and livestock in all the five macro-regions, making it possible to prove or refute the hypotheses.

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Post-study migration behaviour – differences between native, foreign and international university graduates in Germany

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Abstract

We investigate differences in mobility behaviour between graduates who completed secondary school in Germany (German, foreign) or abroad (international) and analyse factors that might give rise to disparities in mobility after graduation. Our analysis focuses on the importance of job-relevant networks and work experience for mobility decisions that are linked to labour market entry because these factors are likely correlated with spatial job-search and the migration decision. The results of an event history analysis show that the long-term share of 'stayers' in the study region is relatively low among international graduates. Regression results indicate that differences in the probability to leave the region of study are associated with individual, study-related and regional factors. In particular, pre-study mobility and work experience turn out to be important predictors. The probability to stay in the university region does not significantly differ between German and international graduates, once we account for these factors. In contrast, foreign graduates who attended school in Germany show a higher propensity to leave the region of study for labour market entry than other graduate groups conditional on covariates.

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Population Concentration, Socio-Economic Development and Perception of Corruption in the Capital of Latin American Countries

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Abstract

The relationship between population concentration in the capital of a nation, where the powers that govern it are located, and the socioeconomic development of the region, is an issue that involves a double assessment, since this population can affect the country's decision-making center both positively and negatively.

The main work that seeks to investigate the influence of population concentration in capital cities in socioeconomic development and, mainly, in corruption, is by Campante and Do (2014), in which the authors seek to answer whether the isolation of the capitals of the American states contributes to less control over public authorities and, consequently, a higher level of corruption.

For the authors, isolated capitals are associated with less accountability. For this, they investigate two spheres of accountability, which are the role of the media and the electoral process. With respect to the media, they show that newspapers provide greater journalistic coverage with regard to state policy when the population is close to the capital, that is, the spatial distribution influences this issue. With less media scrutiny and less voter involvement, an isolated capital paves the way for a stronger role for money in shaping political outcomes.

In addition, for Campante and Do (2014) the low degree of accountability affects the final provision of public goods. This is because states with isolated capitals seem to obtain unsatisfactory results in terms of education, public welfare and health. Thus, low accountability, as a result of the isolation of the capital and, consequently, of corruption, impacts on the quality of governance.

And it is precisely this aspect that we intend to deal with in this work: how much does isolated capital allow corruption and affect the socioeconomic development of countries? In this context, we want to assess whether the location of the capital in a region with a high concentration of the population can be an indication of greater public control, that is, less corruption, greater human development and less inequality, and, consequently, greater socio-economic development. The region of analysis is Latin America and the data are for the years 2017 and 2018.

Analysing the results, it was possible to notice variations in the correlation coefficients of the different socioeconomic development indicators with the population concentration in the countries' capital.

The issue of social inequality measured by the GINI index is the most distant in terms of the correlation of population concentration in the capital. The intermediate factor is the Human Development Index, which is weakly correlated with population concentration in the capital. Finally, the index of greatest significance is the corruption perception index. The results seem to indicate that the population concentrated in the same city as the policy makers, are subject to more significant scrutiny, and thus corruption tends to be milder.

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The wellbeing impact of exogenous shocks. New Zealanders' reaction to Covid-19.

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Abstract

While several studies have explored the wellbeing consequences of crises, particularly economic recessions and natural disasters, investigations of countries wellbeing responses to epidemics remain relatively scarce. Several disciplines offer theoretical priors in the case of individuals but there is little in the way of theory or historical evidence that addresses the wellbeing response to epidemics at the level of the nation.

In this paper we explore the sensitivity of a national wellbeing index to the arrival and passage of COVID-19 in a small, physically separate economy in the South Pacific. The index is constructed from daily tweets originating within New Zealand which captured the daily mood of the country several weeks before the first domestic case of Covid-19 was recorded until several weeks after the number of cases had dropped to zero.

We find distinct reactions to the epidemic: a marked drop in national wellbeing generated by a descent in positive emotions which exceeded the fall in negative sentiment. We find the reduction in national wellbeing to be short-lived due in large part to the rapid and effective response by the New Zealand government whose actions saw the national mood return to 'normal' within a month.

Although our time series paper complements cross-sectional micro-level studies of the New Zealand experience, our average measures of wellbeing are unable to reveal the distributional consequences of the epidemic. We add this limitation to a number of challenges facing the growing literature employing tweets to monitor changes in national wellbeing.

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Urban structure to determine a equitable regional growth towards human equity: case study in Chía-Bogota, Colombia

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Abstract

The evolution of land use occupancy at present in the different cities of the world is very high. Particularly, in developing countries, large cities are the main attractor centers of activities, therefore, the social component

associated with this trend is very important. Thus, the constant modification of land uses, economic instability and environmental factors, as also social behaviour changes of big cities' inhabitants characterize the current urbanism. So the question arises how does the urban spatial structure and organization contribute to an inclusive and equitable socio-spatial evolution, considering the challenges of urban growth with climate change?

The case study is located on the northern limit of Bogotá's city, characterized by large volumes of mobility especially of a functional type (work-study-residence). Due to the rapid expansion of the peripheral areas in Global South, this research will help to understand and manage two urban areas that tend to come together in the future as an urban continuum. Therefore, the aim of this research is to define optimal locations and adequate urban growth areas, ensuring socio-spatial equity and mitigating impacts on climate change.

As a methodology, is proposed an analysis of urban morphology and an analysis of the (social) intensity on uses of activities and infrastructure, which allows characterizing the urban structure itself and identifying the appropriate mobility corridors for the implementation of new growth areas. The space syntax analysis is focused on the logic of urban space based on human behaviour (Hillier, B., 2005) which allows to know the connectivity, integration, choice and intelligibility parameters, to understand the global structure of the urban network (Ahmed et al, 2014; Liu et al, 2018).

This method could be applied to other urban areas, however, some adjustments to the spatial context are necessary. The (social) intensity analysis of spatial structure, integrates the mobility flows and the social characteristics of the study area with environmental factors (Ericson et al, 2020). The main data to be used will be the urban mobility axes (vehicle and pedestrian) through transformation into axial maps, land uses and classification of the social strata based on plot structure of the urban space.

As a result (based on the relationship between urban structure and social infrastructure), they are expected to consider the degree of entropy and spatial asymmetry, as well as to determine the optimal urban growth areas and to fit the United Nations urban development goals. One of the main discussion should be the identification of social urban structure that could be helpful to public policy of land use planning, as a new finding. This public policy on a municipal scale, as an instrument is one of the most important in urban space and the results obtained can support the policy in a more equitable and adequate management when it is necessary to select or delimit new areas of urban growth. The study should conclude with evidence of suitable allocating urban expansion areas which will allow better efficiency of urban land as a limited resource.

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The effect of subway expansion on travel times in Santiago-Chile. Evidence from Uber Data Movement

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Abstract

According to the INRIX 2020 report, 3 of the 5 cities with the highest traffic congestion problems belong to Latin America. These problems are related to high urban primacy and lack urban planning characteristic of underdeveloped countries. For example, in the case of Santiago de Chile, Frost & Sullivan estimate economic losses by around 2.5 billion dollars by 2018, in relative terms it exceeds seven times the local public budget the city. To solve the problems of traffic congestion, many of the Latin American countries, including Chile, have implemented transport policies. However, as Yañez-Pagans et al (2018) indicates, in Latin America there is a deficient culture of impact evaluation of transport policies. In this sense, the objective of this research is to evaluate the impact of the expansion of Metro line 6 on travel times to the main employment centers of the city. To achieve the objective, the four main destinations for work reasons are considered according to the SECTRA 2011 origindestination survey. Then, from Uber's vehicular transport services we obtain georeferenced daily travel time information between origin and destination for a period of 20 days prior to and 20 days after the opening date of Metro line 6. Using the opening of the new Metro line as an exogenous shock that modifies travel patterns and that allows evaluating its causal impact on traffic congestion through an interrupted time series regression estimate (ITSR).

The research hypotheses are that the new Metro line had an impact on the reduction of travel times and that this impact follows a spatial pattern. The results show that travel times are reduced after the opening of the new

Metro line, but significant only for three of the four main employment centers with reductions of around 7% and 14%. Similarly, it is obtained that the impact of line 6 is spatially heterogeneous, which is reflected in the clusters formation of benefited areas and affected areas with increases in travel times, which are close to the employment centers.

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Blue-ing Children's Space: The Promise of Blue Urbanism to making Child-friendly Cities in the Southeast Asia

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Abstract

Objective: This paper proposes a framework for child-friendly coastal cities at risk (CCaR) in Southeast Asia (SEA) toward an inclusive blue urban agenda in the Global South. It seeks to forward the importance of acknowledging the complexity of coastal cities within SEA in planning child-friendly and sustainable cities over the next decades.

Background & Global South relevance: Southeast Asian coastal cities encompass two-fold projections: (1) impact of climate change and (2) increase in children population. The low-lying Southeast Asian coastal cities are disproportionately vulnerable to environmental hazards, such as floods, storm surges, and coastal erosion. At the same time, SEA cities expect a surge of young population by 2050. Focusing on children in SEA cities offers an understanding of the topographical and demographical uniqueness of Global South urban settings. As the future generation in SEA absorbs climate change impacts, children need to be protected from coastal cities' risks. Such context also suggests South-South dialogue among Southeast Asian (SEA) coastal cities as they share vulnerable futures arising from coastal city risks. To have child-friendly coastal urbanization means to be future-oriented in terms of climate risks.

Context: In line with the UN's Sustainable Development Goals (SDGs) and New Urban Agenda (NUA), this paper examines five Southeast Asian "Global Future Cities" identified by Global Future Cities Programme (GFCP) under the UK Foreign and Commonwealth's Prosperity Fund (UK FCO): Surabaya (Indonesia), Iskandar (Malaysia), Melaka (Malaysia), Cebu (Philippines) and Ho Chi Minh (Viet Nam).

Methodology: Through a secondary data analysis, this paper reviews City Context Reports from the five SEA cities and identifies opportunities and challenges to urban child-friendliness based on the UNICEF-recognized Child Friendly City. Drawing lessons from a comparative analysis, this article discusses urban issues in coastal cities that impact children, as well as underlying barriers and enablers for a child-friendly blue urbanism observed across Surabaya, Iskandar, Melaka, Cebu and Ho Chi Minh.

Results & Discussion: Three main observations transpire from such examinations. First, diversity of materials (manuals/maps) on child-friendly disaster guidelines are lacking, which calls for producing materials based on children's diverse backgrounds (differences in language, religion, gender, disability and/or ethnicity). Second, despite the existing efforts to educate children on resilience against coastal-related disasters, there is a need to draw attention to raising awareness and communicate climate change risks to marginalized children (urban poor and street children). Third, child participation in urban planning is limited, implying the need to include children as key informants to contribute toward climate change adaptation measures. With the wisdom from such observations, this work proposes a Child-friendly Blue Urban Framework customized for the SEA context and child-friendly city framework.

Conclusion: This work identified challenges and limitations with respect to child-friendly cities' standards that may undermine their effectiveness of urban policies in SEA cities. To address such concerns, this work encourages the need for a South-South dialogue among SEA coastal cities toward integrated coastal zone management that are both resilient and child-friendly.

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Regional patterns of wellbeing through pandemic lockdowns

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Abstract

Several papers have tracked wellbeing patterns through lockdowns across multiple countries since the onset of COVID-19. Findings have been diverse, reflecting different lockdown experiences and differing country and societal characteristics.

Much less work, however, has examined regional patterns of wellbeing through the pandemic. New Zealand's official statistical agency (Stats NZ) has collected a range of data on wellbeing before and through the pandemic which this paper utilises.

The paper provides a (largely descriptive) analysis of wellbeing developments across 12 regions of New Zealand which vary in their degree of rurality. It focuses on four wellbeing metrics: overall life satisfaction, self-rated health, self-rated financial situation, and loneliness. The analysis relies on both temporal variation in the wellbeing metrics and on variation according to lockdown experience. The first lockdown was shared equally across all regions, but subsequent lockdowns have affected northern regions (particularly the largest city, Auckland) more than elsewhere.

The New Zealand experience of virtual elimination of the virus in the community (through the first nationwide lockdown) is unusual internationally; hence the national-level findings may not be generalisable to many other countries. The unique regional perspective provided here does, however, add a rich extra perspective on how lockdowns may affect different places within a country.

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Vulnerable People, Local Labour Market Resilience and Global Shocks: New Zealand evidence from the Covid-19 pandemic and the Global Financial Crisis

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Abstract

Despite its remote location in the South Pacific, New Zealand is tightly integrated in the global economy through trade, tourism, capital & migration flows, and strong digital connectivity. Nonetheless, the country weathered the Global Financial Crisis (GFC) relatively well. More recently, exemplary public health policies have muted the economic impact of the Covid-19 pandemic to date. Despite these favourable national outcomes, there are large differences across people and places in the impact of these exogenous shocks, although the shocks themselves occurred nationally with virtually no spatial differentiation. There are interesting similarities and differences between the socio-economic impact of the GFC shock and Covid-19 pandemic shock. In this paper we focus on one key outcome of public policy concern: the uptake of social security benefits in the short-run (first 12 months) after the onset of the shock. We construct a two-wave panel of 66 regions observed in 2008-09 and 2020-21. We link the corresponding social security data with regional characteristics mainly obtained from the preceding censuses. Using data reduction and model selection methodologies we find that pre-shock vulnerability in terms of unemployment is a key predictors of post-shock growth in social security uptake. This conclusion is robust to accounting for interregional spatial spillovers. There is notable similarity between the impact of the two shocks in terms of demographic composition (age and ethnicity), and the extent to which the self-employed and those in the private sector are relatively more exposed to the shocks. Income and wealth differences and the regional sectoral mix matter too but in a different way when comparing the GFC shock with the Covid-19 shock.

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Regional disparities and heterogeneous convergence in Indonesia: A multiscale geographically weighted regression approach

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Abstract

Large and persistent income disparities characterize the subnational regions of Indonesia. The study of regional income dynamics and convergence is important for both scholars and policymakers. Many scholars find the evolution of regional disparities in Indonesia particularly appealing due to its complex and rich geographical structure. Indonesia is the world's largest island country composed of more than seventeen thousand islands. It is also the world's fourth-most populous country with most of its population located on Java island. Indonesian policymakers are also greatly concerned with the evolution of spatial disparities. Aiming to foster regional development and inequality reduction, Indonesia has implemented large-scale decentralization reforms since the late 1990s. District-level governments now have larger political discretion and economic resources to design and implement development plans that respond to the local needs and interests of their constituents. After two decades of a decentralized government system, however, there are few studies that examine the evolution of regional disparities and convergence in Indonesia using recent methods from the spatial statistics and econometrics literature.

Motivated by this context, this paper employs a Multiscale Geographically Weighted Regression (MGWR) model to examine the spatial variation of regional income convergence across Indonesia. This new MGWR model provides a multiscale analysis of spatial heterogeneity. Given the large socioeconomic, demographic, and geographic differences across Indonesian islands, models based on spatial heterogeneity are likely to provide a more accurate and realistic assessment of a regional convergence process. Most previous studies have largely ignored the role of spatial heterogeneity. They usually report a common convergence speed for all subnational regions. In contrast, this paper departs from the assumption of a common convergence speed and aims to identify multiple spatial clusters that characterize the heterogeneity of the regional convergence process of Indonesia.

Regional studies about Indonesia are usually constrained by a modifiable areal unit problem (MAUP). Specifically, the number of districts, as well as provinces, have largely increased in the post-decentralization era. To handle this issue, most previous studies have used smaller samples based on the initial number of provinces and districts. In this paper, however, a larger sample is used based on a novel dataset that is constructed for the current number of provinces and districts. This sample covers 514 districts over the 2010-2018 period.

Preliminary results indicate that spatial heterogeneity plays a significant role in the process of regional convergence in Indonesia. Specifically, there are location-specific convergence speeds. The MGWR model also identifies significant spatial non-stationarity in both the speed of regional convergence and the determinants of regional growth. The marginal effects and spatial scale of the growth determinants clearly indicate an east-west divide in the evolution of regional disparities. Taken together, these results indicate a multi-speed convergence process that has a marked spatial distribution. These results also highlight the need to re-evaluate policies of spatial cohesion and territorial development in Indonesia.

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The urban-rural divide in anti-EU vote: Social, demographic and economic factors affecting the vote for parties opposed to European integration

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Abstract

In recent years, protest voting, voting for populist parties and, specifically for Europe, votes for parties opposed to European integration, have increased substantially. This has focussed the attention of researchers and policy makers on the causes behind this trend. Most of the existing research looked at voters' characteristics, mainly values, education and age, or economic insecurity, such as rising unemployment or a declining economy more in general. This paper focuses instead on the urban-rural divide in anti-EU sentiment, and tries to explain why cities – and urban areas in general - in Europe tend to vote less for Eurosceptic parties. Using electoral data for national elections at the electoral district level

for the years 2013-2018 and political parties' orientation as assessed by the Chapel Hill Expert Survey, we find robust statistical evidence of a lower anti-EU vote in cities, towns and suburbs than in rural areas. We also find that drivers of voting for anti-EU parties differ significantly between urban and rural areas in the EU and UK, despite some similarities. We show that three factors are associated to a higher anti-EU vote in all areas: growth in unemployment, a low turnout and a higher share of people born outside the EU. A sluggish economy is associated to a higher anti-EU sentiment in rural areas, but not in cities and towns and suburbs. Higher shares of university graduates, people aged 20-64, and of people born in a different EU country reduce anti-EU voting in rural areas and towns and suburbs, but have no impact in cities.

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Space, Land Rent and Income Distribution

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Abstract

The paper addresses an evident bias in the theoretical scientific trajectory of regional science: a bias towards a functional-geographic dimension, addressing mainly the production and demographic side of the economy, as opposed to a hierarchical distributive dimension, addressing the power and income distribution side. This neglect has generated in recent times the inability to foresee and even perceive the phenomenon of growing «uncertainty» and «discontent» in wide parts of the society. The geography of physical assets should merge with a geography of control through networks of power élites and the selective and cumulative learning role of places. The use of GDP statistics at constant prices should be replaced by current prices, pointing out disparities in monopoly pricing and unbalanced terms-of-trade between the large cities and the rest of territory. Income distribution should be intended in three senses: personal, functional (wages, profits and rents) and «territorial». Early results on these fields are shown, pointing out the difficulties of a part of the middle class, threatened by the automation of their occupations, and the command role of large cities. Evidence are shown concerning the increasingly unbalanced situation of Italian cities (with a widespread effect on entire macroregions as the Mezzogiorno: again!) and of European cities.

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“With no siblings, but with home”: single patent-class inventions (SPIs) and regional technological diversification in Europe

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Abstract

This paper aims to investigate the extent to which the incidence of single patent-class inventions (SPIs) on the regions' knowledge base can affect their technological diversification. Drawing on the literature on technological relatedness, we argue that SPIs contribute to make regional knowledge bases more “siloeed” and reduce the opportunities of knowledge recombination on which technological diversification depends. We also maintain that SPIs contribute to attenuate the role of relatedness in regional technological diversification, as siloeed knowledge bases entail less dense local knowledge networks, with lower cognitive constraints for the entry of new technologies. Our empirical application, undertaken with respect to EU-28 NUTS2 regions over the 2008-2015 period, introduces different measures of regional SPIs and show that, as expected, they both negatively correlate with the regional propensity to technologically diversify and negatively moderate the effect of relatedness on the same capacity. Important implications are drawn with respect to the implementation of regional specialization strategies of research and innovation.

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Key Enabling Technologies and the complexity of jobs, tasks, and skills in Emilia-Romagna

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Abstract

During the last decade, the economic literature has depicted different scenarios with respect to the effects of the "fourth industrial revolution" on employment (Brynjolfsson and McAfee, 2014). Within this framework, one interesting field of investigation concerns the effects of Key Enabling Technologies (KETs) on regional occupational structures and the related implications for skills development. It is widely argued that KETs will lead to a major shift in skill demand due to both the change in the occupational composition of the labour force (between-occupation effect) and the need for new skills or a change in the relative skill composition in certain job categories (within-occupation effect).

Focusing on between-occupation effects, this paper investigates whether a more intense use of KETs corresponds to a higher demand for more complex jobs, tasks, and skills in the manufacturing industry of Emilia-Romagna region, Italy, between 2008 and 2017. The empirical analysis relies on three data sources. Employment data come from the Sistema Informativo Lavoro – Emilia-Romagna (SILER), consisting in administrative linked employers-employees microdata collected by Italian regions. Such a system encompasses all occurrences concerning a job position (hiring, firing, conversion and fixed-term contract prolonged duration) at the firm-level. These data are merged with information provided by the INAPP-ISTAT national survey on jobs, tasks, skills, and work attitudes for all the occupational profiles in Italy. With this information we compute two dependent variables: (i) following Autor et al. (2003), the routine task index (RTI), defined as the share of local employees accomplishing high-, or low-, routine tasks; (ii) following Hidalgo and Hausmann (2009), three indicators of complexity, based on the diversity and exclusivity of jobs, tasks, and skills respectively. While the former aims to measure routine-biased technological change at the intensive margin, the latter is more suited for measuring it at the extensive margin. Data on regional KETs endowment come from OECD-REGPAT. KETs-related patents are identified as those labelled with at least one International Patent Class (IPC) and/or Cooperative Patent Classification (CPC) identified by the European Commission feasibility study on KETs (EC, 2012). Specifically, we use NUTS-3 regional patent applications to the following six classes of patents that we redistribute to local labour market areas (LLMA) in the region: advanced manufacturing technology, advanced materials, industrial biotechnology, nanotechnology, micro-, and nanoelectronics, and photonics. Our fixed-effects estimates show that a higher share of KETs in an LLMA corresponds to a higher level of task and skill complexity, but not of job complexity. Using an instrumental variable approach, we find that this result is robust to endogeneity. The general-purpose, and enabling, nature of KETs stimulates a higher demand for a more diversified, and exclusive, portfolio of tasks and skills while keeping job profiles unchanged. We also find that such a relationship is particularly strong for advanced manufacturing technologies.

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Cross-sectional Dependence in Gibrat's Law

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Abstract

One of the most conspicuous empirical findings in the social sciences is Gibrat's law or the law of proportionate effect. The idea was developed by (Gibrat, 1931) for French manufacturing firms and concluded that firm growth is a random effect, independent of firm's size. This law is also widely found in cities' growth, income, and wealth.

Since Gabaix (1999) and Eeckhout (2004), it has become popular to test Gibrat's law in cities. In general, there are both static and dynamic ways to test Gibrat's law for city's size empirically.

The static approach is to test the distribution of city's size. Distribution of city size is a controversial issue with two common contenders: the Pareto and the log-normal. The law of proportionate growth gives rise to a log-normal distribution. When the process is normalized, and a lower bound is set, the distribution leads to a power law in the upper tail.

This paper provides additional evidence on whether Gibrat's law holds for the growth of broadly defined 'cities' such as MSAs and NUTS regions. This paper extends the random growth model to incorporate both strong (common factor) and weak cross-sectional dependence (spatial dependence). A regional population random growth model with global and individual technological shocks is formulated. Common factors and spatial dependence are derived as a result of interregional migration.

It is shown that if the growth processes of regions obey Gibrat's Law with cross-sectional dependence and when the spatial weight matrix is non-stochastic, the unit root process can still lead to Power Law distribution in the tail.

In the empirical section, I test both static and dynamic hypotheses of the random growth model using three regional datasets of European NUTS 2 regions across 30 years and U.S. counties and MSAs across 50 years. The regional population distributions for these three datasets are characterized as lognormal distributions in the body with a power-law distribution in the tails.

A panel unit root test in the presence of spatial autoregressive error (SFIPS) is proposed. The critical values are tabulated using Monte Carlo simulations. The SFIPS tests and CIPS tests confirm Gibrat's law with strong and weak cross-sectional dependence for NUTS 2 regions and the U.S. MSAs.

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Overcoming marginality: grassroots redefinitions of urban futures in the late socialist Havana

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Abstract

The aim of this paper is to explore competing and uncertain urban futures of Havana constituted through small grass-roots initiatives and infrastructures, as well as large scale commercial-investments. Recent years have brought a proliferation of community projects that tend to be small grassroot initiatives aimed at helping marginalized communities and creating opportunities within the respective neighbourhoods for work, leisure and improving the quality of life.

On the basis of ethnographic fieldwork conducted in the course of 9 months between 2018 and 2020 I intend to answer the questions on how competing through grassroots initiatives and navigating the informal economies *habaneros* envision and create their futures. At that time I spoke to various community leaders and inhabitants of informal settlements regarding their everyday lives and opportunities, problems that the communities were facing etc. Rampant rise of inequalities and limited possibilities of accessing hard currency outside of the tourist economies forces many Cubans, especially younger ones to seek possibilities outside of Cuba and longing to emigrate in order to make a living. Others choose to work in the informal economies, also engaging in the illegal activities. This is where community projects come in with the intention of creating opportunities for other futures within Cuba.

The position of Havana as an economic, political, cultural and touristic hub of Cuba constitutes it as a city of contested futures. As a result of the need to readjust Cuban economy after the fall of its main trade partner, the Soviet Union, Havana has become a place of massive investments geared mostly towards improving tourist infrastructure. This shift along with nation-wide economic crisis led to massive migrations towards the Cuban capital that the neglected through decades urban infrastructure was not able to sustain, producing a rampant rise of informal housing, as well as informal economies, that were only reinforced by the dismantling of socialist economies in the 1990s.

At the same time, Havana is experiencing consequences of environmental decline with water reserves drying out, pollution of rivers, deforestation and rising amount of waste. Although the Cuban government was fast to jump on the bandwagon of environmental protection through actions of reforestation, promotion of alternative sources of energy, permaculture schemes etc. these discourses were not always put into practice. In many cases it is community projects and other non-state actors that fill the void created by the state and engage in urban gardening, environmental care and social help.

The paper takes a closer look about how such projects employ global and local discourses and practices of overcoming marginalization and fostering development into the broader ideological debate of defining socialist Cuba in a late socialist setting. This approach broadens the existing body of work that focused primarily on the emerging entrepreneurial markets by taking a closer look of construction of new “solidarities” and community work in the context of the absent state increasingly market-reliant Cuba.

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Predicting Neighbourhood Change: Challenges, Opportunities, and Possible New Directions

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Abstract

Gentrification and back to the city movements has gained traction in cities across the United States over the past several decades. However, recent disruptive events such as the COVID-19 pandemic may have changed residential location preferences and subsequently altered the neighbourhood change process. These shifting geographies can have important consequences for people's lives and is continuing to challenge long-term plans and investments of planners and local policy makers. Hence, understanding and predicting shifting residential sorting patterns and subsequent neighbourhood outcomes has become increasingly important. In this paper, we review the current state of knowledge on predicting neighbourhood change and stability. This is followed by a discussion of methodological and data challenges and opportunities in predicting neighbourhood change. Finally, we present a new approach based on text and attribute data from property advertisements and publicly available, frequently updated mortgage application data. The usefulness of this method is demonstrated in a case study on Charlotte, North Carolina, a rapidly growing city in the southeastern United States. We begin by classifying neighbourhoods into five classes of neighbourhoods based on who is applying for mortgages in the neighbourhood. We then use machine-learning techniques and information from property advertisements to predict the racial and socioeconomic composition of mortgage applicants at the neighbourhood scale. We examine common words used to market different types of neighbourhoods and the relative importance of various terms in discriminating neighbourhood types. Despite the small sample, we are able to achieve relatively high predictive power. We are also able to show that the inclusion of neighbourhood and street names increased the predictive strength, especially in the case of white and higher-income neighbourhoods where highly regarded neighbourhoods are marketed more heavily. We end the paper by discussing the potential and limitations of these data sources and methods in predicting neighbourhood change. As a proof of concept, the blending of these two datasets proves effective in identifying currently gentrifying neighbourhoods and show promise for revealing urban dynamics in more real time than relying on retrospective census surveys.

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Health Interventions in a Poor Region and Resilience in the Presence of a Pandemic

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Abstract

We focus on a poor region and analyse the connections between health interventions undertaken by a regional authority (RA) and this region's resilience in the presence of a pandemic such as Covid-19. First, we show how a health intervention by the RA stochastically impacts an appropriately defined health indicator for this region. Second, we compute the probability that the health status of this region's population falls below a minimum acceptable level in the presence of the health intervention. Third we solve an optimization problem in which the RA maximizes the likelihood that the health status of this region's population stays above a minimum acceptable level at a given economic cost. Finally, we discuss the nexus between a health intervention, our region's health status, and its resilience by presenting two applications of our theoretical framework.

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A Game-Theoretic Model of Water Theft during a Drought

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Abstract

We study water use by two geographically proximate farmers in a particular region during a drought. The two farmers each have an endowment of time that can be used either to produce water or to steal water. The price of water is exogenously given. The goal of the two farmers is to maximize their wealth from water production and water theft. In this setting, we perform three tasks. First, we determine the Nash equilibrium of the game-theoretic interaction between the two farmers. Second, we study how this equilibrium depends on the ease with which water can be stolen. Finally, we show how the preceding equilibrium is impacted when there is no water theft and then we determine the maximum amount that a farmer would be willing to pay to prevent theft.

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A Political-Economy Perspective on Mayoral Elections and Urban Crime

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Abstract

We provide a political-economy analysis of crime prevention in an arbitrary city in the United States. City residents (voters) elect mayors (politicians) and elected mayors determine the resources to be allocated to crime prevention. Between the two time periods, there is an election. Politicians are either honest or dishonest. The marginal cost of public monies ϕ measures how efficiently an elected mayor converts tax receipts into crime prevention. Voters have identical per period utility functions. We ascertain the equilibrium outcome and per period voter well-being. Second, we show that an increase in ϕ reduces the equilibrium allocation of resources to crime prevention and voter well-being. Third, a dishonest politician can delay the revelation of his dishonesty. A critical value of ϕ , ϕ^* exists such that a dishonest incumbent separates and loses the election if and only if $\phi > \phi^*$ and he pools and is re-elected otherwise. Finally, we note that an increase in ϕ can raise voter well-being when politicians are more likely to be dishonest.

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Does prior performance across SDGs relate to the success against COVID-19? A country-level analysis

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Abstract

The COVID-19 captured the whole world dragging into a crisis with major health, economic, and social dimensions since it is officially characterized as a pandemic by the World Health Organization. Not only do the countries of all suffer from COVID-19 related infections and deaths, but also they face a severe economic slowdown, unemployment, job losses, and food insecurity, among many other devastating effects of the pandemic. Besides, there is a great amount of uncertainty that makes the decision-making even harder for governments despite living with pandemics for more than a year. The 2020 sustainable development report by the United Nations points to the uneven effects of the COVID-19 for countries on achieving the sustainable development goals (SDGs) for 2030. Developing countries have already suffered severely from the pandemic, which is more unlikely for them to achieve sustainable development goals, and this may even worsen their positions across many individual SDGs. However, some developed countries with strong economies and high sustainability indices also do not appear to control the pandemics more effectively than others. Other characteristics such as the demographical structure, policy approaches, and the regional and contextual factors are likely to play a role in the battle towards the pandemic. Thus, we explore how the country's prior sustainability index and the individual SDGs might mitigate or facilitate its COVID-19 performance. We choose the members of G-20 due to their wide spatial distribution across all continents of the earth, the large share of the world population, and high representation of the overall GDP. We analyse the two-way relations between the sustainability index and various metrics of COVID-19 in four different quadrants. When countries with high sustainability index put high efforts towards combatting COVID-19, some get better outputs such as lower deaths related to COVID-19 while others do not. Our initial analyses result in clusters of G-20 countries that differ by their sustainability levels and various performance and effort measures of COVID-19. The interpretation of the clusters of countries will shed light on the regional, demographic, and country-specific characteristics that make their battle against the pandemic a success or failure. Moreover, the real test with a pandemic reveals the susceptibility of the existing sustainable development goals, resulting in more unmet SDGs for 2030 than expected. Policymakers, governments, international and local organizations, and other stakeholders can benefit from this study in revising and building policies in sustainable development.

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Production efficiency of advanced technology-generating industries in the EU: stochastic frontier analysis of industry-level panel data

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Abstract

This research aims to analyse how the R&D spending contributed to the production efficiency of advanced technology-generating industries in the European Union. We applied the stochastic frontier analysis model for industry-level panel data from 1995 to 2017, based on a Cobb-Douglas production function. Results revealed that R&D spending had a statistically significant impact on the production efficiency for the whole sample. However, there was no statistically significant impact of this contribution to efficiency growth in most advanced technology generating industries in the EU. Physical capital (gross fixed capital formation) remained the key input for higher production efficiency. Therefore, advanced technology up taking processes played an important role in the production efficiency growth in industries analysed.

The comparison of levels of production efficiency in different EU countries revealed that some small countries and catching up economies like Lithuania and Estonia had comparatively high-efficiency scores of using available

resources for an output generation. Therefore, this research contributed to the debate on previous findings that production efficiency is not necessarily lower in catching up economies. Higher investments in such countries' advanced technology-generating industries supposed to increase value-added considerably.

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Protests across Latin America: are urban and rural areas different?

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Abstract

The emerging literature on social discontent argues that left behind areas are more likely to vote for anti-system parties, with unemployment, education, wealth, and age playing a significant role. Latin America, however, is a special case. In the region, the rise of the middle class followed the growth of commodities' prices and international liquidity. The new middle class, largely located in urban areas, is generally fragile since part of it is unable to meet class transitions towards higher education levels or better job conditions, largely benefitting from public social programmes. With the end of the commodity boom and the contraction of the public spending, the mobilizations occurred essentially across this class. The aim of our paper is to i) examine if the share of people protesting varies across rural and urban areas and ii) which are the drivers of these protests. To reach this aim, we employ survey data for 2019 Latin American Public Opinion Project. Our preliminary results show that there are some shared factors affecting the probability to protest in urban and rural areas. Among these, we find that rising income, interest in politics, crime and internet use increase the probability of participating into protests. On the other hand, we also find evidence of drivers that differ between urban and rural areas. In the former, education, trust in public institutions, the intention to emigrate and the perception that government should implement strong policies to reduce income inequality motivate protests, while decreasing income is a driver only in the rural areas. These results may be useful to set appropriate policies to mitigate the rising discontent in the region.

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The Silver Economy in European Cities

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Abstract

In 2018, 101.1 million of EU citizens were over 65, nearly 20% of the total population that will become 28.5% in 2050. The ageing population poses challenges not only for welfare systems sustainability, but also in terms of suitability of goods and services, that should be adapted to the needs of older people, the so-called Silver Economy. This paper concerns the opportunities of the Silver Economy in European cities, investigating their readiness to host an increasing number of senior citizens with their needs, and the vast range of challenges and opportunities that the ageing population represents for European policy makers.

Using representative microdata coming from a recent "Perception Survey on the Quality of Life (QoL) in European Cities, 2019" by the Directorate-General for Regional and Urban Policy for 83 European cities, we assess their suitability for the elderly and which of the factors identified by mainstream literature contribute more to it. To achieve this aim, on the subset of over 65, we correlate to a dichotomous dependent variable identifying if a city is (or is not) a good place to live for elderly people a set of covariates falling into the following macro areas: i) development of an age-friendly built environment; ii) knowledge for an active and healthy lifestyle; iii) integrated care services and improved connectivity; iv) olderpreneurship. Finally, we assess the relative contribution of each regressor to the explained variance.

Our results have various policy implications. First, ranking cities according to their suitability to old people we can identify relevant patterns in Europe. Second, the recognition of the relative importance of each regressor, together with its significance and sign, provides a powerful tool to assess the relevance of each macro area, and of each component, allowing to identify the most appropriate policy interventions and the place to intervene.

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Long-term organization of urban growth in France (1800-2015). Which reality in time and space of stochastic processes "à la" Gibrat?

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Abstract

Globalization, migratory phenomena, and transformations of production systems reflect processes driving change and evolution in cities. However, despite these ongoing disturbances, urban hierarchies maintain a stable state over time (Duranton, 2007). This stable state of urban systems is studied through many works on a national scale (see among others: Davis and Weinstein, 2002, Bosker et al., 2008, Gonzalez-Val, 2010). These studies provide an interesting but reductive approach to the processes at work in these systems. Indeed, it is accepted that two laws summarizing their functioning govern national urban systems. Urban hierarchies converge towards a stable state in time (Zipf's Law) thanks to a stochastic process (Gibrat's Law) (Gabaix, 1999). Zipf's law assumes that the city size distribution (that is, the ranking of cities from largest to smallest) is linear and continuous^[1]. Gibrat's Law seeks to explain the linear and continuous shape of the city size distribution by describing urban growth processes (Gibrat, 1931). Gibrat's law is a stochastic process that implies that growth rates depend on a number of factors and that the effect of each of these factors is marginal growth. Simon (1955) and Ijiri and Simon (1977) conclude that Gibrat's law is confirmed if the long-term growth rate of cities is the same and does not depend on the size of urban areas.

This paper explores the reality of the stochastic processes "à la" Gibrat thanks to long-term censuses data of French municipalities from 1800 to 2015. Several assumptions are tested in this paper to improve our knowledge of the stochastic urban growth processes. In the literature, Gibrat's law is tested independently of the effects of time and space, yet there is no reason why some periods or places are not more sensitive than others to stochastic dynamics. All these hypotheses will allow us to nuance and better apprehend the stochastic processes at work in a European country with a very long urban history.

In the first assumption, we will test the validity of Gibrat's law over the two centuries studied. More precisely, we question the possible convergence of this Gibrat's law from the industrial revolution onwards. We also test a second assumption on the relevance of stochastic growth processes as a function of urban size. Is Gibrat's law more valid for small or large cities? Finally, we wonder whether the dynamics observed at the national scale are also valid at the regional scale. For that purpose, we compare the national dynamics to the regional dynamics so as to reveal the diversity of growth processes depending territorial and regional specificities. The linearity depicted at aggregate national scales actually obscures variation observed in a multi-scale regional analysis (Bessey, 2002).

^[1] Simply, it means that the size of the city of rank two is equal to half of the size of the city of rank one; the size of the city of rank three is equal to one-third of the size of the city of rank one, etc.

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Inequalities and sustainable development: towards the identification of a new interpretative model?

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Abstract

The ongoing COVID-19 Crisis is making manifest how the current development model driven by technological progress and market interactions may be structurally mis-specified with respect to the existence of societal needs that may trigger non-linear dynamics. Starting from these premises, this research deepens previous analyses framed within the broader international literature on the SSE, and on its interaction with private and public actors, particularly in the context of the implementation of the 2030 Agenda and of the activation of local

development of marginalized groups in peripheral territories. However, contrary to a generalized tendency to prefer qualitative over quantitative approaches, qualitative issues are reframed within a quantitative framework of analysis. The research lacks empirical support as it is mostly the result of a theoretical investigation into the neglected structural fallacies of economic models (i.e., the omission of distance costs and the related lack of concerns for proximity, the adoption of the *ceteris paribus* assumption and lack of interest for the “unobservables”, and the absence of qualitative considerations). It is worth noting how the critique to the mainstream approach is functional to the identification of a more complex (and flexible) theoretical model. Results may lead to develop an epistemologically unbiased theoretical construct able to foster a more articulated interpretation of the SDGs and of their targets. A more in-depth analysis of the structural properties of the model may suggest new ways of tackling the COVID-19 crisis.

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New Firm Formation during Uncertainty. A Regional Analysis of Romanian Newborn Firms during 2020

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Abstract

The paper investigates the regional dynamics of new firm formation in the Romanian counties during the 2020 year which was marked by the coronavirus pandemics. After an initial period of slowed down firm formation that ended with the sudden fall of the registration of newborn firms during the lockdown month of April, the new firm formation activity registered a significant increase in the months that followed until the end of the year 2020, at even a greater formation rate than that of same month of the previous year. We look at the economic activities by NACE code that attracted the most newborn firms during pandemics. Further on, we calculate a score of technological and knowledge intensity at county level based on the economic activity sector of newborn firms in 2020. Results show an average score of medium-low technological and knowledge intensity according to the main economic activity of the newborn firm in 2020 in Romania.

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Disparities and determinants of regional unemployment rate: empirical evidence from Morocco

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Abstract

Unemployment is one of the most important macroeconomic indicators of an economy. Its analysis, in Morocco, was carried out mainly by referring to national data while neglecting regional aspects. Although the unemployment rate at the regional level is considered as one of the socio-economic indicators of a region, the disparities in unemployment and its determinants are little debated in Morocco.

The objective of this paper is, first, to describe the spatial configuration of the unemployment rate. Then, we study the factors likely to explain the disparities in unemployment between the regions of the country.

There is a growing interest in studying unemployment in the literature. Thus, many studies are carried out in this field. While some analyse unemployment disparities between countries, others focus on unemployment disparities within a country (Marukawa, 2017; Dixon et al., 2001; Rios, 2017).

The theoretical literature puts forward several factors to analyse unemployment at the regional level. Thus, regional disparities in unemployment are due to regional problems and specificities. Furthermore, the variables used to explain unemployment disparities between countries are not valid for describing regional unemployment disparities. Indeed, the social security system and the tax system are mentioned as explanatory factors of the unemployment disparities between countries but have little or no value at the regional level because there are no large ones within the country. 'a country (Elhorst, 2003).

The estimation of the determinants of regional disparities in the unemployment rate will be made using the techniques of exploratory spatial data analysis. The models of spatial econometrics are needed to justify, through their lessons in terms of analysing spatial disparities, why geographic should be taken into account in the framework of the analysis of regional determinants of the unemployment rate (the participation in the labour market, the rate of the young population (aged between 15 and 24, the level of education, the rate of industrialization). It is important to point out that developing countries lack unemployment data by regions over several years. Morocco is no exception to this situation. In this study, we use the spatial data of the general census of population and habitat (RGPH) of 2014.

More precisely, it is a question of showing that the taking into account of spatial disparities renews the debate on the effectiveness of regional development policies. These inequalities cannot be neglected and they allow an improvement in the understanding of the process of convergence between the provinces.

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A Probabilistic Assessment of Economic Impacts Caused by Earthquakes by Using Seismic Risk Models and Spatial CGE Modelling

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Abstract

This paper presents a probabilistic approach to estimating economic losses caused by the propagation of catastrophe-induced disruptions through the economy of an entire country and its regions. Our proposal connects a spatial Computable General Equilibrium model (CGE) with a probabilistic model for seismic risk assessment both robust and well-known models, used worldwide in their respective fields. We use a spatial CGE model based on a bottom-up approach to describe economic relations that consider the geographic location of the economic components and to propagate losses caused by earthquakes throughout the economy. The seismic risk model is used to estimate the physical loss of all economic components during a seismic event and the frequency with which it occurs. We estimate the physical losses not only for a particular event but also for a vast collection of events that collectively describe the entire seismic hazard of a country. To integrate the models, the assumption is that physical losses are directly proportional to the reduction of capital stocks that make up the assets inventory of an economy. Our approach allow us to present for the first time a set of probabilistic risk indicators regarding losses of production, employment, GDP, gross regional product, export volume, inflation, tariff revenue, among others, due to earthquakes. All indicators are computed by using a systematic probabilistic approach, which considers a vast collection of earthquakes, each of which has a particular frequency of occurrence. We illustrate this novel approach with an example developed for Chile. Results reveal that the Average Annual Loss (AAL) of production, GDP and export volume in Chile are 583, 305 and 62 million dollars, while the employment AAL is 7,786 workers. Metropolitan Region of Santiago concentrates ~41% of the total production AAL while Region of Valparaíso is the riskiest, with a regional production AAL of 0.22%. We also present the loss exceedance curves for different components of the Chilean economy at country and regional levels.

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A Spatial Analysis of education inequality determinants: the case of Morocco

Jabrane Amaghous

Abstract

Since its independence, the Moroccan economy has been characterized by a fluctuation in growth rates (Agénor and El Aynaoui, 2015), despite the successive reforms adopted (Ben Ali and Cherkaoui, 2007). Dictated by the World Bank, Morocco has adopted a structural adjustment program aimed at maintaining its macroeconomic balance, the main guidelines of which are austerity affecting largely social investments (Ben Ali, 1998). The latter were assigned to so-called regions with high growth potential, neglecting the other regions of "useless Morocco", thus reinforcing territorial inequalities (Achy and Sekkat, 2008), including in the field of education. Indeed, the analysis of the performance of the Moroccan education system reveals asymmetries and territorial imbalances hiding disparities between regions. This problem manifests itself, in particular, by the existence of a large number of "poor" regions whose educational performance is low. It should also be noted that the Moroccan provinces are characterized by the persistence of a dual structure between the Kenitra-Settat axis, developed, and a periphery in difficulty.

From a theoretical point of view, there is a broad consensus that socio-economic determinants contribute substantially to the reinforcement of educational inequalities. Paradoxically, despite this reality and the challenges that individual, socio-economic and institutional factors may pose, very few theoretical and empirical studies have focused on the spatial dimension of observations. It is therefore not surprising to note that research on spatial inequalities in Morocco remains very marginal.

The estimation of the determinants of educational inequalities is carried out using the techniques of the exploratory analysis of spatial data. These are techniques that make it possible to visualize spatial distributions, to identify atypical locations and extreme observations, to detect patterns of spatial association and to suggest spatial regimes or other forms of spatial heterogeneity. Models of spatial econometrics are needed to justify, by their lessons in the analysis of spatial disparities, why the geographical should be taken into account in the context of the analysis of the determinants of educational inequalities. It is important to note that developing countries lack educational data by region over several years. Morocco is not immune to this situation. In this study, we use spatial data from the recent 2014 General Population and Housing Census (RGPH). More specifically, the aim is to show that taking into account spatial disparities renews the debate on the effectiveness of regional development policies. These inequalities can not be neglected and they allow an improvement in the understanding of the process of inequalities between the provinces. We seek to show that educational inequalities are related to patterns of distribution of poverty

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Spatialization of Migration in the Concept of Trans-localism

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Abstract

The concepts of space and displacement are in constant development in the globalizing world. Migration mobility that comes with globalization also increases the interaction between space and subject. Thus, it causes displacements to be visible from the outside. Today, migration is the movement of displacement that occurs in different forms all over the world. Reasons and results of migration are influenced by many other variables: sociological, economic, political, environmental, etc. Migration research has been carried out on many different concepts, such as identity, belonging, ethnicity, culture, and financial.

Along with these concepts, migration has a spatial/location dimension that is often overlooked. With the ideas of transnational migration and transnational migration space, discussions on migration have started. In the study context, the spatiality of migration is discussed within transnational spaces and translocal places. Within the framework of daily life practices put forward by Certau, migrants' positions in the city and their experiences until reaching the endpoint are deciphered. Also, the resistance and reactions of immigration mobility against the city are questioned. While migration is localized in a sense, on the other hand, it is the situation of being a non-places, as Auge mentioned.

The migration spaces caused by environmental interactions occurring in immigrant memory during the migration process are essential issues. The study discussed how migration space is affected by forced migration and how

migrants create solutions to these changes. However, the migration process is reconsidered in adaptation to the migrated location and dependence on the origin region. The study aims to propose a changing and developing place and place setup for potential immigrants or potential immigrants by creating an algorithm of migration and immigration. Here, physical preferences and social and the networks that come with digitalization, which has a game-changing effect today, will be included as an input, and the location selection criteria will be deciphered in depth.

Turkey, a “border gate” country between Europe and Asia, is strategically positioned geographically and symbolically. Turkey, which has evolved from the most immigrant country to a migrant country, has become the most desired European side country in recent years. In this context, Istanbul, which has been the most attractive city to migrants because of the cosmopolitan city, was chosen as a suitable case study for this study. In addition to the literature research, migration and spatial relations are deciphered through the migration route with the cognitive mapping method and in-depth interviews with immigrants in Turkey.

The study aims to create new perspectives on migration and evaluate migration as “multiple places” beyond the destination or origin. It also intends to increase added value regionally by transforming forced migration into an input that contributes to the labour market and social and social structure. Additionally, it enables the creation of urban and regional projections through the role of migration spaces that come with migration in creating trans-local spaces at the intersection of temporality and permanence.

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European regions, resilience and labour dislocation in the age of the fourth industrial revolution.

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Abstract

This paper aims at studying the resilience of the EURO area regions' labour markets to the 2007-2008 crisis from a structural change perspective. Building on the shift-and-share analysis and on the notion of adaptive resilience, and sourcing from the Eurostat regional database data on 150 NUTS 2 EURO regions over the period 1998-2019, we show that both Industrial Mix and Spatial Dependence played a key role in the asymmetric reaction of European regional labour markets to the crisis. Standard and spatial econometric analysis confirms that the pre-crisis structural composition of employment was instrumental in determining the size of the shock at regional level whereas the post-crisis recovery was mainly determined by the kind of structural change each region followed and by competition among regions in hosting Knowledge Intensive Services.

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Effect of Urban Railway Network Accessibility on Housing Prices

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Abstract

Urban railway is one of key public transits to effectively improve economic and physical accessibility. Along with an expansion of urban territory, easy access to multiple sub-centers becomes important for selection of residential location in real estate market: housing prices accounts for degree of inter-regional accessibility by urban railways in the polycentric housing market. The purpose of this study is to identify the impact of accessibility based on multimodal transport including urban railway network on housing prices in the polycentric city. In this study, the housing price is defined as an average selling prices of apartment complex traded for sale in 2019 in Seoul. To measure the accessibility, Origin-Destination time matrix of railways in 2019 in Seoul and walking time to nearest railway station from the apartments and the employment center of town are calculated.

Based on the time distances from the apartments to the employment centers, the accessibility using railways are measured with gravity-based accessibility reflecting the number of jobs by town. This paper reveals that the gravity-based accessibility index which take into account multiple work trips perform better than the physical and time distance from home to employment center. In addition, the accessibility to multiple employment centers has a positive effect on the housing price. This result provides public sectors and urban planners with new perspective to leads to stabilization of the housing price by improving accessibility of remote regions.

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Smart City – Resilient City: Synergies and Trade-Offs

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Abstract

According to the 2030 Agenda for Sustainable Development, making cities and human settlements „inclusive, safe, resilient and sustainable” (UN, 2015, p.26) represents one of the major goals, pointing out the close relationship between resilience and sustainability, which work together for the well-being of a system. City/urban resilience contributes to this paradigm „the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience” (100 Resilient Cities, 2019, p.1). It is already considered an increasingly relevant topic for international development and urban studies, becoming a “framework for thinking” and a background for planning, development and management “with regard to life and assets protection and maintaining continuity of functions through ‘any plausible shock or stress’” (UN Habitat, 2017, p.6). The resilient city concept is relating to other concepts like ‘sustainable city’, ‘smart city’, ‘eco city’, ‘liveable city’, etc. and systematic explorations of these connections and their significance for urban development policy and practice are still required. This paper aims to examine the smart city - resilient city nexus, seeking answers to the following questions: How do ‘resilient cities’ relate to ‘smart cities’? How can ‘smart solution’ address ‘resilience challenges’? What are the synergies and trade-offs between smart and resilient cities? Based on a starting point that acknowledges the diversity of urban resilience challenges, the role played by the contextual factors and the emphasis on innovation and smart solutions when it comes to solutions to resilience challenges, the paper proposes a three-step research methodology, using the database of the 100 Resilient Cities (100RC), as follows: first, the most frequent resilience challenges are identified and a taxonomy is created by means of hierarchical cluster analysis; second, the smart solutions proposed within the framework of the “Urban Resilience Strategies” for 74 cities participating in the 100RC are pointed out using the content analysis with ‘smart’ and ‘digital’ as search queries; third, the ‘smart solutions’ are connected to ‘resilience challenges’. The results have made it feasible to integrate the city resilience framework with the smart city framework, highlighting the synergies between the two concepts. At the same time, the trade-offs are discussed, emphasizing additional resilience challenges that can be brought in by smart cities and the fact that smart technologies can improve outcomes before, during, and aftershocks and stressors occur but “smart cities solutions are not a panacea for all urban sustainability and resilience issues” (Hurley, 2019).

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Countries clustering in the context of the pandemic COVID-19

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Abstract

As early as 2019, the Global Preparedness Monitor Board called for political action to be prepared for global health emergencies. Recommended actions were to build solid systems with high responsibility and community participation that generates confidence among population (GPMB, 2019). Nevertheless, the rapid growth of COVID-19 has revealed the state of underlying conditions of countries in terms of health system, sanitary infrastructure, income inequality and governance. Governments have managed the pandemic given such pre-existing conditions. Other than this, the response of governments in terms of regulations and actions to halt the spread of the pandemic was a decisive factor. Such responsiveness has been varied across governments. The measures ranged from travel restrictions to lockdown restrictions. Some countries acted more rapidly than others and not necessarily according to their level of development. Although it is expected that developed countries perform better in face to the COVID-19 pandemic, different dynamics are in play and developed countries are highly affected. In this respect, this study aims to classify countries in function of COVID-19 variables such as the lethality rate, the contagion growth and the number of days that elapsed until the country registered the first case with respect to China.

To determine the clusters, we use a set of 209 countries from all regions (24 from East Asia and Pacific, 59 from Europe and Central Asia, 42 from Latin America and The Caribbean, 22 from Middle East and North Africa, 6 from North America, 8 from South Asia and 48 from Sub-Saharan Africa) for two periods: 30 days and 150 days. The k-means partitioning method is used to conduct the clustering analysis. This approach consists in constructing partitions and evaluate their intra-class and inter-class similarity. The results show that the collection of observations is partitioned into 4 clusters. The first cluster corresponds to the countries that first presented confirmed COVID-19 cases after China and report lower contagion growth and lethality rates with respect to other countries. The second cluster is characterized by countries that experienced confirmed COVID-19 cases after the first cluster countries, the highest contagion growth rates and low lethality in the first 30 days but high lethality rate in the 150 days. The third cluster corresponds to countries with more days of the first confirmed COVID-19 cases with respect to China. These countries present low contagion growth and lethality rates. Finally, the fourth cluster is characterized by the largest period of time that elapsed until the first confirmed COVID-19 case with respect to China. These countries record a low contagion growth rate but high lethality rate at first and then a moderate level of the lethality rate. Based on these characteristics, we have named these four identified clusters as:

Very rapidly infected countries with moderate contagion and moderate lethality

Rapidly infected countries with severe contagion and increasing lethality

Slowly infected countries with low contagion and low lethality

Very slowly infected countries with low contagion and decreasing lethality

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Emerging Patterns of Urban Public Spaces in the Sharing Economy

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Abstract

The advance in digital and telecommunication technology has given rise to the sharing economy to utilize idling capacities of assets and resources. For urban areas where resources are agglomerated and shared, the concept of sharing economy is highly relevant, especially in urban public spaces. This is particularly significant in many cities of the developing world, where the provision of quality public spaces is a goal for improving quality of life and urban sustainability for all.

Using Bangkok as a case study representing a city in the emerging economy, this study aims to characterize urban public spaces in two key dimensions, accessibility and ownership, in order to better understand the current usages of these shared urban public spaces. The study also reviews several case studies of sharing public space platform from cities around the world and explore the patterns of activities and spaces in Bangkok with potentials for a pilot area of sharing public space platform. By using extensive questionnaire surveys and in-depth interviews with community leaders, urban dwellers' needs for public spaces and their online platform

engagement for outdoor activities are identified. Together with the interviews with major land/space owners, event-organizers, and urban advocates, the results of the study show the greater needs of urban dwellers for accessibilities to public spaces and identify the urban spaces with high development potentials. Opportunities and challenges in deploying sharing economy system to provide additional urban public spaces for the city are highlighted as a policy recommendation toward more efficient usages of public spaces and an inclusive society that could lead to urban sustainability.

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Emissions impact of port activities on air quality and public health: Evidence and implications for environmental justice

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Abstract

Over the past decade, many studies have explored various spatial dimensions of long-term emission impacts by pollutants and discovered associations to public health. However, there has been lack of scholarly attention on the environmental justice in those studies. Using the case of the Port Authority of New York and New Jersey, this paper aims to identify the spatial footprints of long-term emissions from port industrial activities on the ambient air quality of near-port communities, their expected outcomes on the public health, and implications for environmental justice.

Assuming a general higher preference to a cleaner environment for a higher quality of life, it is hypothesized that the residents living around the port areas of New York and New Jersey are those whose income levels are below average compared to other neighbourhoods. Ports, as public infrastructure, are accountable for upholding principles of environmental justice and to protect marginalized and vulnerable groups of people for their fundamental right to live in a clean and healthy environment. While emission contributions vary by pollutants and locations within the states, PANYNJ's biggest contribution in local air pollution comes from its nitrogen dioxide emission in the Union county, NJ, accounting for 16 percent of the entire local air emissions in the New York and New Jersey area. Hypothetically, it is explained by the port truck operations from the three biggest terminals within the Union county. However, can the inference be scientifically proven? How can the trajectory of long-term emissions be spatially illustrated? What are the implications for the health outcomes of local communities? What does the spatial distribution of long-term port emission explain about environmental justice?

In terms of its research methodology, the paper conducts spatial analyses to test the hypotheses using the following multiple maps: 1) air pollution concentration map, 2) socioeconomic demographic map, and 3) respiratory diseases map. Data is combined from three sources: the C-PORT model, a web-based screening tool to estimate the long-term near-port air quality by four main air pollutants (NO_x, PM_{2.5}, SO₂, CO) in census tracts scale, socio-economic data for near-port residents in New York and New Jersey from the U.S. Census Bureau of 2019, respiratory illnesses from the Centers for Disease Control and Prevention (CDC) for Chronic Obstructive Pulmonary Disease (COPD) prevalence. By spatially joining the three datasets, the paper attempts to validate the hypotheses on the port emission impact of air quality and public health of the near port residents.

Contributions from the study will include recommendations for local environmental policies specifically targeting the identified pollutant sources matched to the demographic profile and respiratory diseases to stir up more local dialogues between municipalities and communities. Furthermore, the study contributes to port hinterland studies which have been neglected in a scholarly context, by providing evidence of ports industrial risks and environmental justice across countries, and suggesting future guidelines for the developing countries with similar motivations. Lastly, the research will give a preliminary result for larger research questions on the sustainability of freight movements for both local communities and economic development.

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Geography matters for small advanced economies: The implications for an economic strategy

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Abstract

Paper to be presented in the special session SS42 "Regional and urban resilience in a turbulent world: perspectives from Aotearoa New Zealand". New Zealand is a small advanced economy (SAE) in the South Pacific Ocean. Policy advisers often compare New Zealand's economic performance with those of other SAEs: Austria; Belgium; Denmark; Finland; Hong Kong; Ireland; Israel; Netherlands; Norway, Singapore; Sweden; and Switzerland. These comparisons generally recognise that among SAEs, New Zealand is uniquely distant from the world's largest and highest income markets. Nevertheless, it has become commonplace for policy advisers to say "Geography is not destiny: New Zealand can do better" (the heading of a section in a 2020 New Zealand Productivity Commission draft report). This paper draws on standard regional economic development analysis to conclude that geography matters for economic strategies. It frames that analysis with the insights of endogenous growth theory to lay foundations for an economic strategy relevant to the New Zealand region of the South Pacific Ocean in the global economy.

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Bangkokian's Commuting Mode Choice Behaviour: Ready for a Shift towards Shared Mobility?

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Abstract

The economy has transitioned from owning to sharing underutilized goods and services to improve efficiency. Vehicles cause negative externalities – too many of them are on the streets. Shared mobility encourages private idling vehicles to be used to its full capacity, decrease the overcrowded modes of public transportation, and improve accessibility and connectivity to public transportation.

We aim to understand the mode choice behaviour of commuters in Bangkok when shared mobility is present and the metro system is extended through the revealed preference (RP) questionnaire and stated preference (SP) experiment. The aim of this paper is not to gain the most efficient design of the SP experiment, though we did not overlook the importance of the experimental design and intend to achieve robust results with least complexity in addition to the reliability supported by the RP data. Random designs are empirically evidenced to be no less robust than other designs such as the abundant use of orthogonal designs and the emerging use of efficient designs. Hence, we carefully design our experiment by eliminating dominant alternatives and ensuring utility-balance and attribute level-balance. Also, using real data from the Bangkok Household Travel Survey (2017) to set the attribute levels.

Commuter's choice is dependent on their captivity and nested into single-mode and multi-modes transport from origin to destination for their current travel behaviour. For the choice experiments, the modes considered are private vehicle (car, motorcycle), public transport (bus, metro), shared mobility (ride-hailing, shared-taxi), and multi-modes (a transit from the motorcycle taxi or shared taxi to the metro system). The travel time is used as a factor linkage. Other mode-specific attributes cover ride fare, fuel cost, toll fee, parking fee, and the crowdedness of public transport and shared taxi. Descriptive statistics are presented to find the socioeconomic and travel characteristics of commuters that are likely to use shared mobility modes. The logistic regression analysis will be performed in the next stage to confirm the results with this stage and estimate the value of time saved, including the mode alternative travel attributes that are important for mode-shifting decisions.

Bangkokians commonly live in a 2-person household and typically value the travel time, convenience, and safeness rather than privacy or comfortability. Travel cost is more important to public transit (mainly bus) users than to private vehicle users. This supports using shared mobility since owning a private car is inefficient for small families and commuters care less about riding alone. However, affordable ecocars and the relatively costly public transports other than the low-quality bus encourages Bangkokians to drive alone in their own car, even

when they are commuting within inner Bangkok, where various modes exist. In order to encourage shifts toward more sustainable modes, we suggest increasing private vehicle ownership and usage cost such as congestion and parking pricing.

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Regional Innovation Policy for Innovation Upgrading of Local SEMs

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Abstract

This paper addresses the following two new perspectives on the innovation ecosystem in a region; (i) focusing not only on innovation, but also on upgrading innovation; and (ii) empirically analysing the effectiveness of local innovation policy aiming promotion of innovation in regional SMEs. This analysis attempts to identify how policy affects internal innovation capability which creates innovation. Thus, the RQs are summarized: RQ1: What are factors inside the firm to promote innovation upgrading?; RQ2: Whether and how local innovation policy is effective to innovation upgrading?

This study is based on a questionnaire survey to 1,324 SMEs conducted in 2014 in the *Hanshin* area, Japan. The stage of innovation upgrading was classified into four depending on whether technology used and market targeted are existing or new. This study defines the stages of upgrading as follows: Stage 1: Develop products with existing technologies for existing markets; Stage 2: Develop products with new technology for existing market; Stage 3: Develop products with existing technologies for new markets; Stage 4: Develop products using new technologies for new markets.

Since the outcome variable is defined as four categories, an ordered probit model was employed for empirical analysis. The explanatory variables consist of firm's characteristics such as the number of employments, R&D investment ratio to sales, and practicing open innovation, and factors promoting innovation contains sources of ideas, problem solving ability, HRD, business development strategies.

This study also analyses the effect of six policies of Hyogo prefectural government for upgrading; 1) Hyogo Manufacturing Academy; 2) Hyogo Industrial Cooperation Coordinator Council; 3) Industrial location Support System; 4) Hyogo Prefecture COE Program Promotion Project; 5) Financing System for SMEs; and 6) Support SMEs via the Internet.

An ordered probit model obtained the following factors and questions were significant to upgrading: Sources of idea; Invented inside the firm based on market trends; Problem solving; Ask advice or conduct joint R&D to universities or public research institutions.; HRD; Provides higher jobs to workers and aims to elevate their potential; Business development strategy; Emphasizing areas utilizing experiences of technology and R&D.

For policy evaluation, two cross terms became significant, which are (i) "Hyogo Manufacturing Academy*Arrange the environment which provides higher jobs to workers and aims to elevate their potential" and (ii) "Hyogo Industrial Cooperation Coordinator Council*Arrange the environment which provides higher works to workers and aims to elevate their potential." Thus, the policies enhance upgrading via the HRD of SMEs.

The Hyogo Manufacturing Academy has training courses to nurture workers of the next generation by succession of technical skills. SMEs also stress on HRD which includes various schemes combining OJT and OFFJT. The Academy provides OFFJT programs which are complimentary to the HRD schemes inside SMEs. This is a reason why the Academy plays an important role.

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Livelihood Resilience and Coping Strategies of Selected Rural Households in Bangladesh during the COVID-19 Pandemic

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Abstract

The paper intends to explore the impact of COVID-19 on the livelihood of different types of rural households in Bangladesh and their livelihood resilience by employing the Resilience Index Measurement and Analysis II (RIMA-II) model. It has also explored the coping strategies that are adapted by the rural households during the pandemic. Data were collected through telephone surveys using the structured questionnaire and checklist. Convenience sampling was used to select 157 rural households from 102 sub-districts in eight divisions of Bangladesh. The study revealed that mixed (having both agricultural and non-agricultural livelihood capitals) households are the most resilient, and non-agricultural households are the least resilient during the pandemic. This study reveals that COVID-19 has not affected employment status that much in rural areas. However, business activities have been affected the most compared to farming and service activities. In general, all rural households have low livelihood resilience, which indicates that rural households are not capable enough to cope with the adverse effects of the COVID-19 pandemic. To minimize livelihood risk agricultural households mostly rely on external coping strategies, whereas non-agricultural and mixed households depend on internal coping strategies. The main drivers of resilience capacity include having basic education and skills to shift livelihood strategy, a stable income source, and access to financial help when needed.

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Services Value Added in Exports: A Comparative Analysis between Brazil and the United Kingdom from 2000 to 2014

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Abstract

In almost all countries, the services sector has been growing and, this expansion has been accompanied by an increase in international services transactions, also the share of services exports in total exports is rising faster than the share of goods exports. This increase is linked with economic growth and economic development, furthermore, the services trade is related to exports diversification and the role of the sector as inputs to goods' production. One aspect of the observed increase in services international transactions is the production fragmentation process, which inflates the presence of the services in manufacturing production as the outsourcing fragmentation provides an increase in the demand of the firms' sector. In this way, there are more services been traded than the gross exports statistics show. Hence, the analysis in terms of value added for services trade is important and highlights the interdependence among sectors.

In line with this, it is observed that the share of the service sector in international trade is more evident when we analyse the transactions in terms of value added. An advantage of this type of analysis is that it is possible to measure the services embedded in the trade of goods, once most of services are exported indirectly. Moreover, we can measure how much of value added of services are embedded in services sector exports.

As a way to contribute to the literature which discuss the trade in service sector, the main objective of this study is to identify, in a systemic way, the main characteristics of the trade of services sector for Brazil and the United Kingdom. Moreover, measure the services value added, the total employment, and the employees' compensation embedded in exports to achieve it.

The methodology used is based on the approach proposed by many authors that measure the domestic and foreign value added embedded in exports. From this methodology, it is possible to measure the value added, the employment, and the employees' compensation embedded in exports intra and inter-sectors. The database includes the National Input-Output Tables for Brazil and the United Kingdom, besides employee compensation and the number of employees in each sector. The source for the first one is the World Input-Output Database (WIOD), and for the last two is the World Input-Output Database – Social Economic Accounts (WIOD – SEA). The period regarded in the analysis runs from 2000 to 2014, and we work with 56 disaggregated activities of the economic sectors.

The preliminary results indicates a clear difference among the countries analysed with regard to exports in the service sector, while for Brazil the sector can be considered as an intermediate input for exports from the non-service sectors; to the United Kingdom, as final exported product. Also, we saw that the service sector has been gaining space and importance for the Brazilian economy, indicating a latent potential of the sector in promoting the country's economic growth.

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Inter-organizational connectivity in the creative sector through the lens of proximity

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Abstract

In our globalized world, connectivity is realized on different dimensions as in interpersonal relations and relations between organizations both within national boundaries or crossing borders throughout the world. Different two-partner relations or even multi-party networks and chains are formed where the segments are linked in several ways to each other. Partnerships and networks of enterprises and organizations are basic ways of economic development; economic actors cooperate and collaborate with other economic and non-economic organizations in order to be integrated into and be part of the international business life. Several forms of partnerships have been formed with different objectives and diverse ways of realization, on the other hand, lot of factors appear as influencing elements regarding these partnerships. This number is multiplied if international partnerships are involved since culture has a core determinative role on the inter-organizational relations. The study focuses on the business and non-business type of international partnerships of economic actors functioning in the creative industry. First, the theoretical overview of inter-organizational relations will be introduced by studying the objectives, the types, the forms and the levels of these relations. The special attributes of the creative industry will also be reviewed, since industrial belonging and characteristics of enterprises have been demonstrated by previous studies to be important. Secondly, the study will summarize the different dimensions of proximity which have influencing impact on these connections. The theoretical parts of the study will be continued by presenting an empirical research carried out by online questionnaires. The survey method was used to ask creative enterprises settled down in the Western- and Central-Transdanubian regions in Hungary during fall 2020 to be able to explore their inter-organizational relations on the international level. The research findings show that their relations is limited to the close geographically situated countries, e.g. neighbouring countries to the regions, and the business-related partner types (relations with suppliers and buyers) are highly evaluated than non-business partnerships (e.g. ties to higher educational or research institutions or EDOs). The other core findings of the survey are that continuous geographical proximity is not necessary in these international partnerships and could be bridged by different virtual platforms and means, although ad hoc face-to-face meetings are needed to maintain and strengthen the relations. Communication can be implemented by different virtual channels but there are some partner types and forms of cooperation where it is not enough. Cultural proximity which integrates the culturally determined soft factors (as organizational culture and structure, shared norms and values, trust) also plays a supportive role when geographical proximity cannot be ensured between partners.

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Services international trade and economic development: 2004 to 2014

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Abstract

The production fragmentation process, outsourcing and offshoring, concerns the links between the globalization of markets and the regionalization of productive structures, been responsible for the creation of new interaction

channels between manufacturing industry and service sector. Consequently, it is observed a rise of service sector in countries and, it is possible to see that this expansion has been accompanied by an increase in international service transactions.

This growth happened mostly in more developed economies, in such way that a few authors say that this countries has become services economies. The main reason of this expansion in the service sector is, among other factors, the outsourcing fragmentation process is one of those responsible for this rising in the representativeness of services in the economy, once this is one of the factors which provide an increase in demand in this sector by firms.

The study of trade in services stands out, since the fragmentation of productions allows less developed countries to participate more actively in international trade. Emerging economies now have space for them to developed specialized services and commercialize them in the international market.

Our aim is to seek to establish relations between services trade and development conditions in countries. To achieve the objective, trade flow data from 41 countries obtained from World Input-Output Database (WIOD) for the years 2004 to 2014 (release 2016) is used. Additionally, variables capable of represent the development conditions of countries, information about education and health, GDP *per capita*, energy consumption *per capita* and data about internet access. The methodology used to obtain the expected results is based on a spatial crossed regressive model, using a matrix of spatial weights of inverse distance. To estimate the equations we use the Poisson Pseudo-Maximum Likelihood (PPML) estimator, a non-linear estimator capable of providing consistent and efficient coefficients.

The preliminary results indicate that, in general, there is a positive relation between trade of services in value added and economic development. Besides, this results shows a possible negative relation between the level of industrialization and the volume of services traded for the country. Also, the relation between the internet access and the trade of services is not as clear and well defined, and this variable seems to be more relevant to oriented-business and technology- knowledge-intensive services. Finally, the spatially results shows that the condition of development in neighbouring countries are, in short, statistically significant to determine the bilateral flow of services.

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Cluster Analysis of Online Vacancies based on Attribute Associations

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Abstract

This paper develops a new smoothing procedure for contingency tables which is based on models of partial association (Álvarez de Toledo et al. 2018, 2020). Our methodology is tested on a database of online job offers published on selected Polish job portals in the period 2017-2019. First, we build a contingency table by cross-classifying some descriptive variables of the job vacancies (for example, region, occupation and activity). Second, we use our methodological proposal to smooth the contingency table, correcting in this way the sparsity problem which affects highly segmented tables. Third, we use the smoothed table as an input to generate a table of association factors between rows and columns that can be clustered on both sides giving rise to a bicluster "heatmap". Our application allows to contrast the existence of polarisation in the Polish labour market by using data on online job offers, an interesting proposal given that most of the studies on the polarisation hypothesis are based on employment data. We also pay attention to the regional perspective in the analysis.

The study reveals that a cluster of semi-transversal skills –self-organisational, technical, interpersonal and availability skills– constitutes an important requirement in most of job offers. Since these skills are mainly developed within the educational system, these results put even more pressure on this system, which is not sufficiently effective in providing skills in line with labour market needs. We also show that office skills do not offer a particular advantage in the labour market, in accordance with the polarisation hypothesis, while ICT skills and communication skills seem to have a positive effect on employability in times of accelerating automation.

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Between Path Dependence and Innovations: Determinants of Technological Entrepreneurship in the Russian Regions.

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Abstract

High-tech startups provide organic implementation of technological innovations in the contemporary economics. Through startups entrepreneurial ecosystems are adapting to the changes caused by technological progress. For the Russian Federation startup activity has brought an important opportunity to reduce regional socio-economic disparities and negative effects of resource extraction dependency. The coronavirus pandemic has made the importance of startup activity even more vital for future economic recovery.

Spatial patterns of high-tech startups in Russia show a tendency for a significant concentration in particular regions. The analysis of entrepreneurial statistics for the last decade shows us that technological entrepreneurship is partially related on factors typical for the majority of SMEs (local market volume, purchasing power, characteristics of entrepreneurial ecosystems) and partially for the high-tech economics (localization of other high-tech SMEs and special human capital). Some particular tendencies resemble more comprehensive specifics of Russian startups.

The paper aims to study the aspects of regional differentiation of startup activity in Russia and reasons which have formed its contemporary conditions. We use econometric analysis of quantity of new high-tech companies in combination with 24 statistical indicators representing different sides of regional socio-economic situation. It helps us to shed light on complex interrelationships among them and extinguish the factors of the most importance for the new high-tech firms, which include attractiveness for investors, levels of human capital development and availability of banking facilities, majorly corresponding with the phenomenon of "path dependence" of regional development trajectories. Nevertheless, RnD intensity of regional economy and availability of funding support have turned less significant.

According to the findings and the context of socio-economic disparities among Russian regions, we provide recommendations for the regional authorities in order to make the local conditions more suitable for technological entrepreneurs and increase the startup activity levels.

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Evaluation of the complex indicators of Smart Cities

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Abstract

As the popularity of smart city research is increasing, the measurement of smartness became also a popular research topic. This is in accordance with the demand of the planners and project financing institutions for the success indicators, and with the observable tendency of new and newest indicators for describing the settlements from the point of view of the quality of life, liveability, creativity, environmental issues, social capital, development and many other research aspects of modern societies. Today, the pure list of this indicators would be a very long reading. Other motivation for new indices is the publication possibilities: a new index (with a rotund naming) can be created and published with changing only a minor part of a previous index.

The paper deals with the problem of creating composite index numbers for the evaluation of Smart city projects and for the comparison of smartness of different cities, both at a theoretical-methodological level and at empirical level. Creating complex indicators can be very useful, when it is based on new original (primer) statistics, and when it is used for critical and contextual analysis, evaluation. However, different types of problems may arise: poor data quality, rapid temporal change in the field of digitalization, use of inadequate (very traditional) indicators (nothing to do with digitalization or smart technologies), spatially different data content, conceptually problematic indicators (higher or lower level of the indicator is more advantageous?) and so on. The complex indicators are popular tools of technocrats, but the transformation of a multi-indicator system into a one-dimensional metric scale is a highly questionable practice.

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Factors of small business development in Russia

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Abstract

The unpredictability and non-linearity of macroeconomic processes are growing, driving the world into technological changes, social and economic crises, increased natural and other risks. Entrepreneurship is considered one of the adaptation tools, but the 2020 crisis associated with the pandemic has had the greatest negative impact on small and medium-sized enterprises.

The goal of the research is to identify regional factors, significant for the development of micro- and small enterprises in Russia, in order to assess possible effects of the crisis on the SME sector and to verify the essential support measures.

The econometric results show that declining household incomes, limited international and interregional markets, decreasing capital availability and crime risks can be the most negative factors in Russia. The rate of digitalization became a survival factor for small firms. State support in the form of tax breaks and subsidies may have a positive effect, but their impact is small and delayed.

Accordingly, modern tendencies can lead to a drop in the number of small enterprises in Russia in 2020 by 3.5-4%. In fact, the decline in the number of small businesses in Russia in 2020 was 4.2%, according to the Federal Tax Service, which is close to our estimates. It had the greatest impact on the North Caucasus and Crimea, where more than half are employed in the SME sector, and digitalization rate is low. However, some large metropolitan areas with developed offline services also suffered.

The identified factors can be used to verify the measures taken by the government. To stimulate small businesses development during the crisis, it is advisable to pursue a demand support policy and to maintain financial stability. The Russian government has provided additional subsidies to the most vulnerable citizens, supporting demand for local products and services, and has launched a separate subsidy and credit program for the hardest hit SME sectors. During a pandemic, the digitalization of all public services becomes relevant, including the online access to tax payments, subsidies, access to public procurement, etc.

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The subnational crowding out effect of mining windfalls on local tax effort: Does the level of local provision of public goods matter?

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Abstract

Although the resource curse offers evidence for the national crowding out generated by resource windfalls from mining, subnational crowding is not fully understood. This knowledge gap is problematic because these windfalls

should cover the negative externalities that exist in host zones. Additionally, these communities have different fiscal responsibilities due to the mining industry's environmental, economic, and social costs. This article estimates the subnational crowd out of mining windfalls on local tax collection by considering different levels of fiscal responsibility. We employ panel data for 322 Chilean municipalities between 2008 to 2019 using an exogenous rule for assigning mining windfalls in order to attribute causality. Our results confirm the crowding out hypothesis. First, a US\$1.0 increase in mining windfalls results in a US\$0.2 decrease in the property tax collected. Second, subnational crowding out is twice as high in municipalities with a high level of fiscal responsibility; a US\$1.0 increase in windfalls crowds out US\$0.4 in non-resource revenue. Third, considering the influence of nearby neighbourhoods and the spatial interdependence, crowding out is four times higher than non-spatial estimations. These results call for local policies that consider the fiscal capacity of a municipality in order to disincentivize undesirable behaviour from extra resource revenues.

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Are there Marshallian Industrial Districts in Portugal? Revisiting the Canello and Pavone Algorithm

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Abstract

Mapping and classifying Industrial Districts is an important instrument of analysis of industrial activity and regional competitiveness, which allows identifying the nature of the specialization of the manufacturing activity, as well as the current state of industrialization of the regions. In this line of analysis, the present study makes an attempt to map, identify and classify the Industrial Districts in Portugal, making use of an adaptation of the Canello & Pavone (2016) algorithm, which allow finding that only 20 of the municipalities in Portugal show an organization model of the Industrial District type, among which, 13 are located in the North region, 6 in the Centre region and, only, 1 is in the Alentejo region. The evidence obtained reveals that the manufacturing activity with higher specialization focuses on the clothing industry. In turn, the transformative activity that denotes, in average terms, a greater concentration of employed population and production units, is that of the leather industry. These results unveil weak and dispersed industrialization of the Portuguese industry, still focused on activities of low value-added, based on a passive outsourcing mode targeted to international corporate clients, which constrains the competitive scale and internationalization capacity to the national companies distributed, in a very unbalanced way, in the Portuguese regional space.

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Remote working as driver for individual and organizational resilience in pandemic context

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Abstract

Global pandemic is exerting extreme pressure on the economy, and on our view of life by bringing to the fore goals that we did not choose but simply we had to adhere to. An important change was felt at the labour market, at the individual and organizational level. Resilience and work adaptability are increasingly relevant for employees and employers, in the context in which the working frame has moved from a clearly defined place and with a specific structure, as a program and as a set of actions, to working from home, remote, (teleworking).

In this paper, we analysed the ability of employees to adapt to pandemic context, by identifying the drivers of individual resiliency. We explored their capacity of coping with adversity or opportunity through the condition of remote working. In addition, part of research is focus on shocks and risks as disrupts the proper functioning of certain production processes in labour market.

The study was conducted using the quantitative research method. The research method consist in questioner based survey for collecting empirical data. The questionnaire was applied online among employees with full-time jobs in private and public organizations, using a non-probabilistic sample.

A more resilient employees and organization have to shift to sustainable practices and to adapt to the context. We argued that remote working process helps achieving goals, prioritizing activities, get the target results, cope with change, maintain a work-life balance, and ensure individual and organizational resilience.

Acknowledgement: This work was supported by a grant of the Ministry of Research and Innovation, CNCS - UEFISCDI, project number PN-III-P4-ID-PCCF-2016-0166, within the PNCDI III project "ReGrowEU - Advancing ground-breaking research in regional growth and development theories, through a resilience approach: towards a convergent, balanced and sustainable European Union".

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Competition for Illicit Payments on Road Networks of West Africa 1988-2016

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Abstract

At a regional scale across multiple countries in West Africa there is a spatial market for illicit payments (IP)s along roadways that is distinct from the market for any specific commodity traded. Efforts over five decades to promote intra-African trade from the Manu River Union in 1973 to the 2019 African Continental Free Trade Area have had slower success than anticipated. In part this is due to non-tariff barriers related to IPs demanded at roadblocks by soldiers, police, political party authorities, private collection agents and customs officials. The dynamics of this IP market play a crucial role in creating the spatial structure of economic activity, conflict, trafficking and migration pressure in West Africa.

In 1997 I pessimistically concluded in conference presentations and an unpublished working paper that given road infrastructure at the time and without increased competition in the IP market, even if legal taxes are eliminated, transport losses are reduced and producer efficiency is increased dramatically through rural development programs, IPs on a regional basis would increase to choke off expected development benefits. This paper re-examines this question using my 1990s framing and empirical results in combination with more recent findings of others on competition in this regional IP market.

This is the first time findings are compared from empirical analyses based on two micro-datasets of IPs for 1988-1997 and 2012-2016 developed with support from US Agency for International Development (USAID) country programs. Improvements in data collection and digital archiving that make IP time-series data publicly available has enabled more analyses and refinement of empirical hypothesis testing. The manifestations of competition in IP markets are examined using characteristics of three distinct scenarios: 1. independent monopolists, 2. joint monopolists and 3. competitive agents. Evidence of changes in these basic manifestations over time and space are used as an indication of shifts in competition in the IP market. Related institutional contextual understanding draws from decades of work of many analysts on the political economy of IPs, how they constrain regional integration, governance for broader anti-corruption efforts and costs IPs impose on commodity-specific crop and livestock trade.

Since the 1990s researchers and policy makers have continued to highlight the persistence of bribery in West Africa. Foltz & Li (2020) reiterated my 1997 call for corrupted officials to face increasingly competitive markets as a necessary condition to reduce the socio-economic costs of IPs. Over recent decades there has been an evolution in governance and an increase in the number of alternative transport routes. These changes have the potential to lower total IPs or reduce volatility in the economic welfare costs they impose. But we still know little about the actual impact of more competition for IPs, the topic of this paper and needed future research.

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Rethinking Cultural Policy: The Role of the Cultural Industry and Small Manufacturing Companies

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Abstract

The use of cultural policy as part of economic development and urban regeneration strategies is increasingly an uncontested issue. However, this consensus masks serious dilemmas regarding strategic choices and their implementation in economic and cultural development. Indeed, policy-makers have always considered the cultural economy either as an appendix to the knowledge or creative economy or as a means of improving consumption (Evans, 2009) which implies that art and culture objects are consumer goods that enhance the attractiveness and image of the city. This has led to an increasing polarization and bifurcation of cities culturally and economically around knowledge industries. These focus on high-skilled workers (Allmendinger, 2002; Cullingworth and Caves, 2014) leaving traditional craft skills and the self-employed to the margins (Girard, 2006). This has led to a kind of opposition between the knowledge economy and the material economy (Hudson, 2012).

Moreover, while these policies, too focused on knowledge-based industries, seek to rid cities of the manufacturing heritage and land use, there is a real revival of interest in custom manufacturing, artisanal production, and additive manufacturing (Jakob, 2012; Thomas et al., 2013; Luckman, 2013; 2015; Anderson, 2012). This renewed interest is further supported by an awareness of the vulnerability of consumer-oriented development and the questioning of its sustainability.

In response, we consider that reorienting cultural policy by focusing on the promotion of cultural production is an important opportunity that can reconcile the city with its industrial heritage. This allows cultural policy to reinvent itself and to overcome the limits of a cultural development based on consumption. Thus we are interested in the articulation between the cultural economy and the cultural industry. We show that cities can develop more equitably and sustainably if they consider and recognize their industrial and cultural heritage in their cultural and urban policy. Such a heritage can only flourish in perfect symbiosis with place (Scott, 2004). Indeed, new research supports the growing importance of small firms and small, flexible manufacturers and specific at the place (Mistry & Byron, 2011, Bryson & Ronayne, 2014). From this perspective and based on the analysis of small manufacturing firms in Tunisia, we show that they offer important possibilities for rethinking cultural policy.

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A Spatial Mismatch Analysis for Curitiba Metropolitan Area based on Accessibility to Formal Jobs Indexes

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Abstract

Curitiba is a state capital city located in the South of Brazil which is internationally recognized for its mobility infrastructure and environmental policies. This city has been considered a good reference in relation to 1) its transport system, which innovated in providing a BRT (Bus Rapid Transit) infrastructure enhancing speed to the commuters and sought integration with the cities in the metropolitan area; 2) urban expansion through strict land-use planning, which aimed to optimize the occupation of its space-based on Transit Oriented Development policies. Given this, the present study aims to investigate the Spatial Mismatch Hypothesis (SMH) for the Metropolitan Area of Curitiba (MAC), using a rich set of its geographical characteristics, motivated by the seek for understanding aspects that promote economic inequality among its residents.

We tested the hypothesis that greater access to formal job opportunities increases the wage income of workers in this region, segmenting between users of private and public transport modes, and assuming that this accessibility increases the chances of knowledge about job openings and transmit effects of agglomeration economics. To observe this, we used data from the Destination Origin Survey and formal jobs for 2017. We created Accessibility Indexes for measuring formal job opportunities based on a gravitational approach, which served as gauges of the

respective levels of accessibility in the 955 sub-regions of the total study area. The accessibility indexes were incorporated as explanatory variables into a Mincerian equation to evaluate if and the extent to which the SMH applies to the Metropolitan Area of Curitiba. We treat the simultaneity problem between wages and the accessibility indexes by using an instrumental variable which was built considering the distances from the centroid of each of the 955 sub-regions to the CBD of Curitiba through the network of rivers in the region. This approach is similar to that used in the study of Haddad and Barufi (2017) for the Metropolitan Area of Sao Paulo (MASP), which allows exploring similarities or differences about the size of the mismatch effect in the metropolitan area of Curitiba and Sao Paulo.

The econometric results indicated that increases of 10% in the accessibility indexes due to the sub-area of work raises wages by 12.6% for individuals using private transport and 11.2% for individuals using public transport. The magnitude found for the mismatch effect in Curitiba is very lower compared to the results obtained for the metropolitan area of Sao Paulo by Haddad and Barufi (2017). At least two relevant implications emerge from this study. First, despite being observed some degree of mismatch effect in the MAC, urban mobility infrastructure improves the accessibility to employment opportunities and contributes to reducing inequality for the residents in the MAC compared to the residents in the MASP. Second, differences related to the urban density and scale between these two metropolitan areas would be a possible source explaining the differences in the size of mismatch effect by channels affecting the efficiency of the mobility infrastructure provision.

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The sandwich of Russian space: How different spaces differentiate themes in regional science

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Abstract

The paper shows the inseparable connection between the topics of the main centres of Russian regional science and the properties of the space that they are studying. The diversity of the thematic structure of research centres is derived from differences in economic geographical and geopolitical position, sectoral structure of the economy, age of economic development of the studied areas of the Russian space. However, the most important factor differentiating Russian space is the density of economic activity, which determines the level of development of the territory. Within the Russian space, significant undeveloped territories of the North, the Arctic, Siberia, and the Far East are of particular interest, in which extensive buffer zones are distinguished between the main settlement zone and low-density periphery. They constitute the essential specificity of the Russian space. Another feature is the presence of colossal “ownerless” spaces that are outside the influence of any nearby major centre and therefore are forced to focus on the federal capital, Moscow.

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Networked regional urban systems, communities of interest or place? Investigating regional approaches and decentralization in renewable energy transitions of urban cities

Christina Hoicka, Jessica Conroy

York University, Canada

Abstract

Renewable energy transitions are associated with major land use and landscape changes and new actors, leading to increasing investigation of regional approaches and decentralization. This study considers how 47 urban and highly populated cities, “urban cities”, are pursuing goals of carbon neutral and 100% renewable energy cities to shed light on how the largest demand centres propose to influence spatial patterns of energy production and consumption. The main findings that this preliminary analysis offers is that there are a number of dense urban cities pursuing large shares of renewable energy, and that these involve a range of stakeholders, RETs and

innovations. The full range of stakeholders, RETs and innovations were not specified by location as on-site, district/neighbourhood scale, with the city's boundaries, or imported into the city. Despite this, the findings demonstrated that urban cities are employing a range of spatial strategies with different approaches to decentralization, reflected in four categories: 1) relying on incumbent actors in centralized approaches, consistent with a hierarchical regional urban system (n=13); 2) a local focus, in which urban citizens and firms invest locally as communities of place, and some municipally owned utilities source energy (n=5); 3) local focus combined with coordinating with the region, in a networked regional urban system, and neighbouring communities, as communities of interest (n=12); 4) a diversified approach combining all three strategies (n=5). Future investigation can compare strategies for effectiveness, and examine how geographic and governance aspects affect their emergence. For the urban cities with more decentralized plans, further analysis of the benefits to citizens and firms in the urban city and surrounding region could be compared to the benefits in a centralized or less regional approach. These benefits could, for example, include labour and equity considerations, increased revenue to communities and firms and sectoral growth, affordability and reliability of energy.

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COVID-19 and Guests' Preferences in Short-Term Rentals: Evidence from Madrid

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Abstract

This paper aims to test whether and how guests' preferences shifted towards social distancing attributes when they chose short-term rentals (Airbnb) in the first COVID-19 summer season. For our purpose, we make use of a semi-parametric hedonic modeling framework to check whether the implicit prices of what we identify as social distancing attributes changed between August 2019 and August 2020 in the city of Madrid. Our main variables of interest are accommodation size, the presence of a fully equipped kitchen, and room type (shared/private room vs entire apartment) as proxies of the capacity of the listing to allow social distancing. As for size, we expect that a reduction in the size of travel groups may lead to a shift in guests' preferences towards smaller listings. Besides, the availability of kitchen amenities may help to make for a more pleasant stay without the risk of eating out.

We find that guests preferred smaller, well-equipped listings to preserve social distancing during this time. Listings that have kitchen amenities had a premium price of around 20.4% in August 2020, up 15.2 percentage points compared with August 2019. Moreover, the implicit price for size-related variables decreased 2.7 percentage points, which indicates a preference for smaller accommodations. However, we do not have statistical evidence that guests are less willing to pay for shared and private rooms after COVID-19. Ultimately, we consider that Madrid is a suitable setting to study the effect of COVID-19 on the change of guests' preferences, since it is a major tourist destination that has been severely affected by the COVID-19 outbreak.

To answer our research question, we adopt a Generalized Additive Model (GAM) that allows controlling for non-linearities in both price determinants and spatial dependence of the error term. GAMs are suitable for detecting the non-linear relationship between prices and the urban environment, as the latter strongly influences accommodation prices.

Our results are robust under different model specifications, including simple OLS. Additionally, we rule out the possibility that results depend on time and geography by performing several robustness checks. First, we reproduce our analysis on a different time frame, comparing August 2019 and August 2018, and we do not find any specific change in how social distancing attributes had been priced. Then, we show that results are similar if we choose a different case study by replicating the analysis for Barcelona, a city that, like Madrid, is of touristic interest and was an epicenter of the outbreak.

To the best of our knowledge, this is the first contribution that provides evidence of a shift in guests' tastes for attributes that help preserve social distancing in the aftermath of the COVID-19 crisis. We argue that our findings are relevant well beyond the evolution of the ongoing pandemic, since we may reasonably expect long-lasting effects after a reorganization of travel patterns to better cope with future pandemics.

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The regional socio-economic outlook of Mexico: inequalities during the pandemic lockdown, 2020

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Abstract

This work intended to provide, particularly to scholars from abroad, a general outlook of Mexico's economy and regional socio-economic inequalities throughout this country. Once being understood these, it is expected to understand why is it that the high numbers of contagious cases cannot still be lowered, and Mexico is today one of the nations among the worst numbers of Covid-19 contagious and deaths in the world.

The COVID-19 Pandemic has hit social life and economic activities worldwide. However, the impacts caused in the LDCs have probably been harder than in the more developed nations. This paper proposes that backward states' institutions like Mexico, governing a territory and people with many shortages in infrastructure of several types and with enormous gaps between rich and poor people, then, have faced the Pandemic and measures adopted with many problems in their implementation to combat and control it.

In this paper, we propose that Covid-19 has hit harder in those agglomeration urban centres and mostly within the peripheral urban settlements in them due to problems such as poverty overcrowding housing, scarce basic infrastructure, and services there, and their need to commuting every day. The delays in trying to lower the contagious tendency became even harder due to people's ignorance and discredit for their governments and politicians, and negative reactions upon the State's measures to avoid further contagious.

Once all this outlook has been understood, this paper will look at the South-Eastern part of Mexico as one focus to alleviate inequalities and purposes for better integration of backward regions to the whole country's recovery.

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Accessibility and Social Networks in Family Adhesion to Social Housing: Evidence from a Brazilian Housing Lottery Case

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Abstract

We investigate how accessibility, measured by the difference of job market Hansen indexes, and social networks, measured by the geographical approximation across different age-bands densities, are related to the final decision of accepting the benefit by the poorest participants of Brazilian housing program "Programa Minha Casa Minha Vida" (PMCMV) in the city of São José do Rio Preto (São Paulo state), where potential beneficiaries were randomly drawn for the year of 2013. From the lists of municipal draws, identified Cadastro Único (Brazilian national register for federal social programs), identified RAIS (Brazilian national register for formal labour activity) and beneficiaries' information disclosed by state bank Caixa Econômica Federal, we estimate different specifications of Probit models using the difference of job market Hansen indexes between PMCMV households and origin family addresses. Also, we use the 2000's and 2010's National Census at the census tract level to create IV-Probit models using the first Census local age densities-bands as instruments for our social networks model. Our results indicate that worse accessibility prospects are related to non-compliance decisions, and we do not reject the null hypothesis for the effect of age-based social networks on compliance besides showing that neighbourhoods might affect different age-compositions households differently. From the public policy perspective, these results show that the program might not reach an important part of low-income families' locational preferences.

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The 'Good Night' program: an innovative model for the solution of truck congestion in Israel.

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Abstract

Avoiding truck congestion and peaks in landside activity is one of the challenges to all transportation problems as well as container terminals. This paper presents an innovative model of economic incentives combined with state regulation that motivated 7.9% of the customers of Haifa sea port to shift to night hours for transportation to the port instead of peak hours during the day.

Efficient terminals seek a balance between ship-to-shore, yard and landside operations in order to create an integrated system without bottlenecks (Notteboom, 2006; Vernimmen et al., 2007, Bentolila et al 2016) and peaks in landside activity, particularly at the level of trucks arriving at the terminal to pick-up or drop containers.

We started analysing the congestion problems in Haifa port a decade ago. The first step was to elaborate a pilot program called " Good Night" that overcame some of the night issues, by opening empty containers terminals during night. The program included a state resolution to pay monetary incentives to customers shifting to night hours.

A deeper field study of the Good Night pilot project has been conducted in 2013, including 14,149 trucks, in order to face three critical issues of the program: what are the constraints of the customers during the night that we have to overcome in order to motivate them to shift to night hours, what is the level of the monetary incentive that is cost effective to pay for every truck or container and what are the effective hours to pay this incentive.

An economic transportation congestion model has been developed in order to define the market utility depending of different hours. The incentives hours of night went from 20:00 until 06:00 and the incentive payment varies from 80 to 100 IS (about \$28) for one full container arriving or leaving the port.

In Israel, as in many other countries, the problem of traffic congestion is becoming more and more crucial over the years. So, a further pilot program has been launched in 2019, in which the night incentives hours have been enlarged to 12 hours daily, starting at 18:00 until 06:00 and then reduced gradually again to eight hours daily.

The idea is to follow carefully the actual pilot and suggest further steps that will elevate the level of night transportation to 20% and even 25%.

Further research will be directed to the examination of the impact of night transportation on decongestion of traffic problems.

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Economic crisis and responses of the Mexican states under the COVID-19 pandemic

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Abstract

Due to the extraordinary measures that the Federal Government undertook in Mexico to mitigate the spread of infections caused by the COVID-19 pandemic, productive and social activities considered non-essential were suspended, which had an impact on the contraction of economic activity. Although estimates have been prepared that offer an idea of the decline of the economy at the national level, based on aggregate indicators, there is no perspective that accounts for the magnitude of the impact in the different regions of the country. In this work, a methodological proposal is applied to understand the economic performance of the gross domestic product (GDP)

of the states of Mexico and their productive sectors during the period of greatest restrictions imposed by the health emergency COVID-19 during 2020.

The main purpose of this paper is to estimate the degrees of impact on the economic activities of the states of Mexico during the stage of greater social confinement and productive inactivity in 2020. It is not a projection, but an exercise of *ex ante* measurement that allows explaining the levels reached by the regional economic contraction. Although some of the sectors and businesses have been able to reactivate one year after the pandemic began, a period of greater inactivity was recorded during the second quarter of 2020, a period in which the government's confinement provisions were accentuated, social distancing and regulation of non-essential activities. Likewise, the measures implemented by the state governments in order to cushion the adverse effects caused by this situation are analysed.

The results show heterogeneous impacts on the performance of the economic activity of the Mexican states level associated with their productive structure and the proportion of their branches subject to greater government regulations. For their part, the actions of the state governments were mainly oriented towards temporary and reactive measures to favour affected social and economic sectors, but also those that present conditions of high vulnerability. Public policies in subnational government scale show that were mainly aimed at poor population, the unemployed, as well as small businesses.

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Towards sustainable and smart regional development: the case of Lithuanian regional policy

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Abstract

Regional policy is a multi-layered policy area. It can only be effective if there is concord between all of the policy areas it requires and the entities that shape them. The White Paper on Lithuanian Regional Policy therefore aims to formulate guidelines for a harmonious regional policy that, rather than reflecting the goals and ideas of individual entities, would become a coherent vision, with institutions of national and local government as well as social and economic partners working together. The essence of regional policy is best described by the objective of territorial cohesion – ensuring that everyone is able to make the best of the opportunities offered by their place of residence, their country, the European Union and the global world, while also contributing to the sustainable and equitable development of their state.

The Lithuanian regional policy review should create preconditions for an effective regional policy by reinforcing responsible self-governance focused on economic development, empowering Lithuania's regions and developing them in a targeted manner, and ensuring coherent and consistent local, regional and state development. Its ambition is to create an effective mechanism for sustainable development that would be adapted to the specifics of each region of Lithuania and contribute effectively to increased economic development and improvement of the living environment throughout the country.

Despite technological progress and the accelerating pace, every Lithuanian resident is settled in a specific place, studying, working and using the public services first and foremost of the municipality (or several municipalities). It is at the municipality that we learn our first lessons in democracy, feel the relationship with the state (through institutions of self-governance and municipal services: kindergartens, schools, clinics, libraries), establish a rapport with our first business partners and clients, and perceive the benefits of community. The goal is to help municipalities plan and perform their functions better, extend their financial independence, increase incentives to reduce inequality by developing educational opportunities, attract investments, effectively manage services and the infrastructure and provide all of the tools necessary for this – investment aid and fast and efficient management and provision of information about land plots, buildings, services and employees – and liberalise the rules for the lease of state-owned land for investment projects.

Concerning its methodology, this article provides an analysis principally based on the law analysis and specific case studies.

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Faraway, So Close! The interregional trade between Spain and Morocco

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Abstract

For the first time, this paper analyses the methodology and results of a new database on the region-to-region trade flows between Spain and Morocco. Following the experience of previous estimates of region-to-region flows within the EU, the new dataset combines the most updated statistics available in Spain about region -to-region (Nuts 3) freight flows (tons) by different transport modes (road, ship, air) between the two countries, and the official and solid information about the Spanish trade (tons and Euros), split at the province-to-country level (Nuts3-Nuts1), covering all transport modes and the period 2010-2018. Once the estimation of this database is completed, the flows are analysed in the context of the gravity equation, studying the robustness of the figures obtained, exploring the spatial and sectoral dimension. Due to geographical proximity, Spain remains Morocco's main trading partner, and it is the top destination for Spanish exports in Africa and the Arabic world, with more than 20,000 Spanish companies operating in the country. In 2019, 45.5% of Spanish exports to Africa were destined to Morocco. In 2020, the rate increased to 47.5%. It is also interesting to look that Morocco has developed strong value chains linkages over last 20 years. The European Union is an important GVC partner of Morocco, in fact, this integration in the global value chain has become the dominant paradigm in the trade relations and strengthens the ability to compete in a global marketplace.

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Regional Economic Impacts in Mexico Caused by Floods on Agriculture: An Integrated Approach Via Spatial and CGE Modelling

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Abstract

This paper aims to address global and regional economic impacts in Mexico caused by productivity reductions on agriculture sector as consequence of floods occurred in 2020 on the Mexican States of Chiapas and Tabasco. We present a strategy in two integrated steps. In the first part, we developed a spatial analysis to measure the direct impacts of floods on the cropland areas based on open and freely available datasets provided by GADAS-USDA, LandScan and Copernicus. In the second stage, we access the indirect effects by translated the cropland losses in falling productivity of the primary factors used in the agricultural sector through the Mexican interregional Computable General Equilibrium (CGE) model – BMMX. The results show a national GDP contraction of 0.002044%, equivalent to 873 million USD dollars and 18,365 employed lost. As expected, the greater losses in terms of production, employment, income and consumption were concentrated in Chiapas and Tabasco but also they propagated to other southern States of Mexico. In addition, positive economic effects were observed in the States of northern Mexican showing economic gains from substitution effects triggered by productivity reductions on agricultural sector of Chiapas and Tabasco. Our results show in detail the spillover effects that agriculture losses, caused by natural disasters, a flood event in our case, can have into both the regional economies and the national economy of Mexico. A quantification of these impacts can contribute to design better and holistic strategies for risk management and the adoption of public policies at both regional and national level.

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The Role of NGO's in Shaping Indonesia's Climate Change Policies

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Abstract

This paper explores the involvement of Non-Government Organisations (NGOs) in the development of Indonesia's climate mitigation policies. It analyses how NGOs both domestic and international influence and shape the national climate change policy process. Further, it also analyses the influence of international institutions and international norms in Indonesia's climate change landscape. This study uses grounded theory method as a research approach, based on in-depth interviews with 29 Indonesia's key stakeholders between August 2016-July 2018. It shows interesting results that both domestic and international NGOs play a significant role in shaping Indonesia's climate change policies. It also finds that international organisations are influential in the development of climate policies in Indonesia. Overall, this paper contributes to academic knowledge especially the influence of NGOs in the policy process in Indonesia. This contribution is significant because studies about the role of NGO's in the climate mitigation policy process in developing countries are still limited. The study also provides new insights for policy makers to make them aware more of the NGO's involvement in the policy process.

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Equal opportunities to access the university in Chile? An application with a spatial Heckman probit model

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Abstract

The aim of this study is to contribute to the debate of the accessibility of higher education in Chile, focusing on both socio-economic and geo-spatial dimensions of access to university education. The central question we address in this paper is the following: Does geography (physical distance, neighbourhood effects) play a significant role in determining accessibility of higher education in Chile? We use Heckman-type (Heckprobit) models to adjust for selection in the process of completing the trajectory towards higher education – that is, pre-selection, application for university place, and, ultimately, admission (or refusal) of participation in higher education.

The results shows that the geo-spatial have a significant effect on the postulation and accessibility of the student on Chilean universities.

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Fiscal Policy for Combatting Climate Change: Evidence from Indonesia

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Abstract

Climate change has become the center debate of sustainable economic development in recent decades. Since the enactment of Kyoto Protocol, every countries has responsibilities to reduce its greenhouse gases according to the stated target in the protocol. Indonesia as one of the biggest greenhouse gases emitter especially from the forestry sector has move forward with some policy actions to solve this problem. However, as a development country, Indonesian fiscal policy still have many constraints and challenges since the needs for development from other

important sectors such as education, health, social protection as well as infrastructure development raised more attention from the policy maker. This paper examines how Indonesian fiscal policy has a significant role in achieving climate change and greenhouse gases ambitious target. This paper employs qualitative approach through analysis of the recent government's policy and regulation to develop an understanding of how fiscal policy play its role in achieving the target. This research resulted in providing appropriate strategies of the fiscal policy actions to combat climate change and greenhouse gases emission in Indonesia.

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A Study of Promoting Mobile Broadband Adoption in African Developing Countries for Achieving SDGs.

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Abstract

This paper makes a study for achieving SDGs in promoting mobile broadband (=3G+4G+5G) adoption, by employing the granger causality test in African Developing Countries.

United Nations advocates the SDGs, which categorizes 17 Goals such as "No Poverty (Goal 1)," "Quality Education (Goal 4)," and "Partnerships (Goal 17)" by 2030 (United Nations, 2019). The 17 Goals are all interconnected and particularly "Partnership (Goals 17)" directly describes the importance of "information and communications technologies (ICTs)." United Nations also pointed out that The Internet is important for Goal 17 but "Almost half of the world's population is not connected to the internet, particularly in poor countries" (United Nations, 2019). We must find out the ways to promote The Internet adoption especially for those countries.

The Internet consists of fixed broadband and mobile broadband, and this paper focuses on the latter.

Shinohara, Morikawa and Tsuji (2015) examined factors promoting mobile broadband adoption by OECD 34 countries data, and obtained the following factors: (i) the launch of Android and iPhone handsets; (ii) network externality; (iii) availability of trunk lines between mobile base stations; and (iv) competition of mobile carriers. Policy cannot directly handle (i) and (ii), and regarding (iii) policy does not either provide enough budget to build up trunk lines between mobile base stations. But policy can handle "(iv) competition of mobile carriers," by allowing licenses to new entrants, for example, implying it is important to study the role of competition.

This paper estimates mobile broadband adoption in African countries and more than 200 countries. The dataset of this study contains the following characteristics: (i) quarterly data from 2000 to 2018; (ii) more than 200 countries; (iii) adoption ratios of mobile broadband; and (iv) market shares of mobile carriers.

This paper tests Granger causality between mobile broadband adoption and HHI. HHI is the reverse proxy of the competition of mobile broadband, calculated by the market shares of mobile carriers. The tentative result obtained is such that the null hypothesis "low HHI has no Granger causality for mobile broadband adoption ratio" is rejected (the number of countries: 219, the number of observations: 6705, F-Statistic: 5.428, Prob: 0.03%). In other words, this result indicates "low HHI promotes mobile broadband adoption."

This paper will attempt to conduct the same estimation, focusing on developing countries in Africa.

The results of this paper suggest important theoretical basis of national broadband policy in each country for Achieving SDGs.

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The Connection of Rental and House Price Affordability Measures in New Zealand

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Abstract

The aim of this paper is to examine the cointegration and long-run relation between affordability measures of house ownership prices and house rental prices in New Zealand. Using the approaches by Westerlund (2007) and Dumitrescu and Hurlin (2012), the study shows that there is an existence of cointegration and unidirectional causality effects between house price affordability (HPA) and rental price affordability (RPA) across 11 regions. Auckland, Wellington and Canterbury are the three regions in which the results detect the most extreme effects among HPA and RPA compared to other places in the country.

We extend our study by examining the lead-lag correlation between those two affordability measures. Our extended empirical work shows interesting results that the lead-lag effects of HPA and RPA on each other and mortgage rate have been discovered in New Zealand using GLS approach and for each of 11 regions via OLS model. Those effects are consistent for both methods but are changed at individual lead-lag variables and among different regions. The study empirically provides useful insight for both academia and practitioners in examining the long-run effects and cointegration between house price and rental price affordability.

Application of the bootstrap robust Westerlund technique confirms the presence of strong cointegration between these two housing affordability indicators. Application of Dumitrescu and Hurlin's (2012) Granger non-causality panel tests reveal that the statistically optimal lag length is equal to one quarter with house price affordability Granger-causing rental price affordability over the period 2000q1 to 2017q4. Application of Dumitrescu and Hurlin's (2012) Granger non-causality test results to individual regions suggest that house price affordability Granger-causes rental price affordability in Wellington, Auckland, Canterbury, Nelson and Hawkes Bay and that rental price affordability Granger-causes house price affordability in Wellington only.

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Structural transformation, land use and agglomeration: sectoral impact GM soy introduction in Brazil

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Abstract

Our papers studies the relation between agricultural productivity and manufacturing employment, focusing on impact heterogeneity and its determinants. We build a three-sector model of an open economy with factor-biased shocks on agriculture and agglomeration economies to manufacturing and analyse how these interact, focusing on a labour-augmenting shock in agricultural production; moreover, we look at the role of land supply flexibility in shaping the impact of such a shock. In our model, a shock on agricultural labour productivity might decrease agricultural employment if land and labour are strong enough complements, which may increase manufacturing employment; agglomeration economies lead to or a smaller positive effect of the shock on manufacturing employment, as its direct effect on lowering agricultural employment dampen the impact of the shock on the sector. Furthermore, when we allow for flexible land supply, the labour-saving effect of the shock on agriculture may be counteracted by undeveloped land being put to use and attracting labour as it becomes profitable after the shock increases agricultural rents.

We empirically test the model using the introduction of genetically modified (GM) soy in Brazil after 2003 as a labour productivity shock; FAO-GAEZ data shows the potential benefit of changing soy production from low to high-inputs by municipality, which determines how the speed in which a municipality introduces the genetically modified seeds - faster where the potential change is larger. Using 1996 and 2006 Agricultural Census and 1991, 2000 and 2010 Demographic Census data, we look at the impact of the shock on sectoral employment. To test the agglomeration impact we interact agglomeration variables with the shock. Consistent with our model, the shock leads to lower agricultural employment and larger manufacturing employment - and regions with an initially

larger manufacturing base present a smaller effect, while a more general measure of agglomeration, population, positively correlates with the shock effect: larger cities benefit more from the shock in terms of manufacturing employment growth, but more industrialized cities don't. To look at the role of land supply, we split the sample by Brazilian macrorregions, focusing on the two main soy-producing regions, South (where soy substitute's labour-intensive agriculture and land availability is roughly fixed) and Center-West (where soy expands on previously undeveloped or underdeveloped land), finding that reaction of agricultural employment to the shock differs markedly. In the South the behaviour is consistent with the baseline model: GM soy introduction leads to a fall in agricultural employment and growth in manufacturing employment; in the Center-West, however, there is no fall in agricultural labour, pointing to the importance of land use in determining the shock's impact. Moreover, in the more economically developed south the shock boosts manufacturing employment as a whole, while in the less developed Center-West only soy-related manufacturing employment is significantly boosted.

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From Sharing Economy to Peer-to-peer Accommodations: A Case Study of Thailand

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Abstract

Sharing economy has recently shaped a new direction of economic activities. Sharing economy is broadly defined as the value created from underutilized assets in a form of peer-to-peer (P2P) exchanges. Since sharing economy enable these assets to be accessible to others, it leads to reduced needs for ownership of these assets. Particularly, accommodation industries have been transformed in the sharing economy, from hotels/hostels to P2P accommodations, which can offer unique experiences or socializing opportunities, yet affordable, for consumers. For P2P accommodations, exchanges for stay can vary diversely; Exchanges medium can be monetary or non-monetary. In addition, an emergence of digital technologies enables sharing economy to expand beyond its localized territories. Globally known P2P accommodations platforms includes Airbnb, Couchsurfing, and Onefinestay, while there are also regional P2P platforms such as Agoda Home or Favstay in the Southeast Asian region.

With over 38 million foreign visitors in 2019, Thailand has been one of the world's tourist destinations for its rich history and culture, culinary, tropic climate, and affordability. Accommodations in Thailand ranges from luxury hotels to affordable hostels. Since 2012, Airbnb has entered P2P accommodations in Thailand. In 2019, there were over 99,000 accommodations listed on Airbnb in Thailand. Yet, little has known about the impacts of global sharing economy platforms for accommodations on local economy and communities as well as on the localized legal challenges.

The objective of this study is to explore the P2P accommodation industry in Thailand to better understand its localized characteristics and implications on the housing industry. The analysis uses both listing and host information on Airbnb website because it holds the largest market share in Thailand. The data are drawn from many tourist's destination cities in Thailand, including Bangkok, Pattaya, Chiang Mai, Phuket, Cha Am, and Hat Yai. The results show that there are great variations in P2P accommodation characteristics and pricing in these cities. The results also suggest that P2P accommodation has become a new model for hospitality businesses in Thailand, rather than a pure sharing economy as the P2P accommodations first emerged.

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The distributional implications of COVID-19 in Aotearoa New Zealand

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Abstract

Aotearoa New Zealand has experienced the re-emergence of COVID-19 in the community, prompting an initial 3-day shift to Level 3 restrictions for Auckland and Level 2 for the rest of the country from 23:59 on Sunday 14 February 2021. At the time of writing the country returned to these alert levels at 06:00 on Sunday 28 February, for at least 7 days, continuing the goal of eliminating the Auckland's second COVID-19 cluster since the re-emergence of COVID-19 in August 2020.

While the New Zealand Government continues its drive to eliminate COVID-19, the economic and societal impacts of lockdown are becoming apparent. The new-found sense of community experienced during the March 2020 lockdown must continue to ensure vulnerable populations are not further marginalized.

In this paper, we explore the socio-spatial distributions of COVID-19 testing and cases in NZ. We also investigate the geography of those most impacted by the prioritization of the COVID19 vaccination rollout, in addition to healthcare during lockdown and the economic realities of a new life after lockdown.

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Covid-19 and the silence in the street: regional economic impacts of a Brazil without carnival

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Abstract

The outbreak of pathogenic viruses and their interactions with humans and animals have resulted in severe acute respiratory syndromes over time. The emergence and rapid spread of Corona virus disease (COVID-19) has posed a major public health and governance challenges worldwide. The new SARSCoV-2 infection was first reported in Wuhan (China) but quickly reached a global pandemic status due to its high transmissibility characteristic. The COVID-19 pandemic has led to numerous sanitary restrictions that affected both the economy and individuals. The primary measure commonly adopted to prevent the transmission of the virus involves social distancing. The tourism sector has been by far the hardest hit, with postponements and cancellations of previously scheduled travels and public events in an attempt to avoid large gatherings of people. The negative effects on tourism activities are set to persist more than those on other economic activities since recovery will require a massive vaccination. In developing economies like Brazil, the total supply of tourism activities results from a mix of formal and informal activities and workers, which help shield important economic and social indicators. This research aims to estimate the regional economic impact of a Brazil without Carnival due to COVID-19 in 2021. Carnival is the most important and well-known tourist event in Brazil. This popular cultural celebration occurs annually and attracts people from different regions, promoting various economic gains from taxes collection and employment creation, for instance. The last Carnival before the first case of COVID-19 generated approximately US\$1.5 billion from tourism activities such as restaurants, accommodation, transportation, artistic and leisure activities, and travel agencies. Those are the activities supposedly most affected by the silence of the streets during Carnival this year. The analysis is focused on the six main Carnival states, namely Rio de Janeiro, São Paulo, Bahia, Minas Gerais, Pernambuco and Ceará. Using an unprecedented interregional input-output modelling for the population arrangements of each state, we simulated the contraction in touristic demand of each region under scrutiny to estimate the effects of cancelling Carnival. To account for such contraction, we use the relative share of each tourism activity in total earnings from Carnival 2020. With the method of total hypothetical extraction, we also identify the underlying relevance of the value chain linked to carnival tourism in creating both formal and informal jobs. The implications of this employment variation differ among the regions. Preliminary results show that more than 190 thousand jobs would have been created in Brazil if Carnival had not been cancelled in those states. Moreover, the government could have collected approximately US\$102 million of taxes. This Carnival chain represents, on average, 18.6% of job creation in these states. Given the substantial economic relevance of Carnival, public policies should encourage similar touristic events in the post-COVID context as a measure to stimulate both sectoral and overall economic recovery through employment generation and taxes collection.

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The Lithium Issue: What Happened - What Happens - What Shall Happen?

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Abstract

Initial Remark

These three aspects about time establish the three parts of the present paper. The stress is placed on time, not on space. Yet not because we exclude space but only to have it subordinated to time aspects, which means they will only be considered in so far as time dilucidation shall require some pointing to underlined a territorial trait or set of traits therein involved.

Let us recognize since the beginning that -as a matter of fact- quite a number of steps are almost everywhere underway in Latin America, yet we will focus on those impacting upon our Latin-American regions, mostly: (A) some of Mexico, and then (B) some other countries, particularly upon Bolivia, Argentina and Chile –even when some potential is actually present in some others which will just eventually be referred to.

FIRST PART: WHAT HAS HAPPENED

A. In Mexico.

There exists a bordering region between Sonora and Chihuahua states, in the extreme North of Mexico, which it is called Bacadéhuachi. It became known because it started to be referred as having a high lithium potential. Indeed for some people, one amongst the highest at world level. Yet as we will see later, the the initially amount assumed of 243 million tons has been seen as a blunt exaggeration. Of course, the main characteristic traits will be dealt with along the paper itself.

B. In Latin America.

The most important lithium area in the rest of Latin America is settled in a place called ‘Salar de Uyuni’. It is shared among the following three countries: Bolivia, Argentina and Chile. This has been subjected to a much more systematic and careful exploration. It has reported a detailed established amount of 24million tons. The paper will give some of its key specificities.

SECOND PART: WHAT NOW HAPPENS

In general terms, it should be said that, partly due to Covid-19, and partly to putting off the initial somehow imaginative enthusiasm; now it seems clear that the lithium potential in the whole of Latin America is not one of the highest global levels, but rather a much more modest and below among the general levels at world scale. Yet not much more has been contributed so far. As a matter of fact, we witness a stagnant situation Covid intervening.

THIRD PART: WHAT SHALL HAPPEN?

This is obviously the toughest (?) question. However some broad trends should be made explicit: (a) the urgency of a gradual and progressive general move towards cleaner sources of renewable energies, (b) the increasing technological developments related to the production of clean or hybrid vehicles for transportation as well as industry machinery; (c) the awareness that a post-covid epoch will be sooner or later approaching, which in some aspects will pushing forward an ever higher interest in extra terrestrial positive and/or more risky facts and threats.

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The Brumadinho dam rupture disaster in Minas Gerais (Brazil) and the productivity: regional economic impacts using a computable general equilibrium approach

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Abstract

On 25 January 2019, the Brazilian village of Brumadinho, in the mining-heavy state of Minas Gerais, was taken by the tailings of Córrego do Feijão's dam. This dam rupture is arguably one of the worst human and environmental disasters, leaving over 250 people dead, and spreading a large number of ore tailing into Paraopeba River and the surrounding area. The toxic waste of the mine dispersed towards the villages along the Doce River basin and reached the Atlantic coast. As a typical case of negative externalities, this type of disaster leaves behind large-scale environmental and economic damages at local but also regional levels. The share of the extractive sector in the Brazilian GDP is 2.5%, but Minas Gerais alone is responsible for 23.6% of that production. Characterised by an intensive use of capital and natural resources, the mining production is particularly oriented for international markets. From the economic point of view, public policies are urged in order to help with the regional recovery. This raises the question of what local and regional economic effects generated by the Brumadinho dam collapse are, but also how direct and indirect impacts are distributed among population arrangements. The objective of this study is to evaluate how pollution from this natural disaster affects the economy, whether driven by soil or water contamination, as it increases health problems and reduces the quality of inputs for several economic sectors. Consequently, there are changes in labour productivity, which translate into economic impacts. In this sense, the paper is intended to translate environmental effects into economic phenomenon in an attempt to identify where interdependencies lies on and provide insights to help formulate impact mitigation policy for the long-term. The occurrence of interdependencies in the absorption of negative impacts by the surrounding areas is likely. To that end, we apply a stylized computable general equilibrium (CGE) model for Brazil based on the comparative-static B-Maria model. B-Maria is a Brazilian Regional and Interregional Analysis model developed at NEREUS in the University of São Paulo. It contains detailed information of interregional monetary flows, whereby the origin and destiny of imports and exports of each state are identified. The version of this paper has been adapted for the case of Minas Gerais, the BMaria-MG model. BMaria-MG divides Brazil into four distinct regions: the municipality of Belo Horizonte, the rest of the population arrangement of Belo Horizonte, the rest of Minas Gerais and the rest of Brazil. This interregional system is calibrated with data of 2015 and 22 productive sectors are specified in each region. The model is run using GEMPACK. Preliminary results indicate a small impact on GDP in all regions. This is due to the low significance of labour productivity in the sectors. Among all regions, the most affected is the rest of Minas Gerais. The largest negative impact is observed for the consumption of households. Despite the small effects at aggregate level, observed impacts are substantial and sector-specific in all regions.

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Walking distance in tropical-climate central business district during lunch time: A case study of Bangkok

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Abstract

During a working day, going out for a meal at "lunch break" is a routine of most workers and, in fact, it represents the longest break within a working day and allows freedom to them for their desire activities. This research focuses on office workers' walking distance during their "lunch break", in CBDs of the tropical climate of Bangkok. The study areas are three major business areas in the inner area of Bangkok: Silom-Sathorn, Ploenchit, and Asoke. The result shows that the average walking distance is approximately 300 meters. However, workers significantly perceived their walking distance to be much error than the actual distance with the average of approximately 175 m. Using cluster analysis, the result shows the patterns of how office workers perceived their walking distance in relation to physical environment of their walking routes: thermal comfort, pavement condition, sidewalk obstruction, traffic safety, grade change, and walking distance itself.

The constant hot climate of Bangkok is expected to be the most concerned when people go out for their lunch time. Instead of thermal comfort that people in Bangkok always complain, a sidewalk obstruction is the most important factor that alters how workers perceived their walking distance in the CBD of Bangkok. Walking distance, pavement condition, and grade change also play important roles in their walking perception. However, traffic safety is less of the concern due to the crowded Bangkok's CBDs during lunch hours. The results can be used to assess the walkability index and as guidelines for improving urban conditions of the CBD making the more pleasant CBD for better lunchtime spending.

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'Jugaad' and Social Network of Bengali-speaking Muslim migrant workers in Mumbai

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Abstract

The paper explores how a poor-landless Muslim community of Bengali-speaking migrant workers, who are originally from the state of Assam, migrate to the financial capital city of Mumbai. At home, they face hostility and communal persecution from the mainstream Assamese-speaking Hindu community based on the suspicion that this poor landless Bengali-speaking Muslim community is of Bangladeshi origin, and that they are illegal immigrants in the state of Assam. In reality, this community lives near the riverine areas of Brahmaputra. In Mumbai, most of these migrant workers' work in the informal sector as contractual labourers.

The paper investigates how the network mediates via the use of technology with the private/public agents to provide jobs by determining the demand and supply of information in the labour market. This information, which is provided via mobile phones, helps migrants to make alternative arrangements—*jugaad*—for themselves and their kin, thus making it possible for other potential labourers to also migrate. The peculiar kind of *jugaad* is embedded in the network, and it creates social capital for the members within it.

This new form of technology mediation has further their mobility by lending these urban spaces for them to practice the everyday urban experiences of the marginalized migrant workers who make efforts to claim the city amidst their precarious existence at its fringes. The network functions as the reservoir of their cultural identity and memory and compensates for the loss of social capital in the present climate of heightened xenophobia. Based on Bourdieu's social capital theory, the significance of social capital shapes migrants' agency to use, maintain, and reproduce their network. The essence of *jugaad* is to manifest their bargaining power to resist the powerful bureaucratic institutions and reclaim their right to the city.

Borrowing insights from the African context, De Sardan's idea of 'corruption complex' fits in the study. Engaging with the context of brokerage among Dalits in North India, the concept of technological mediation into state falls in the purview of my study, and it is important to look at how the moral economy of corruption takes place due to the struggle over state's resources.

Methodologically, the paper will adopt a bottom-up framework to understand the hierarchies within the migrant networks located in two Muslim neighbourhoods in South Mumbai, namely- Crawford Market and Masjid Bandar.

An ethnographic analysis will be conducted to understand the process of mobility in the city. These methods will be helpful in exploring migrant networks how they have been seen to expand over the years.

To this end, the paper investigates how the city creates a space for them, wherein the reproduction of networks is symbolic of their identity and is vital for the existence of their community.

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Spatial Distancing, Spatial Interaction and Regional Economic Damages

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Abstract

We develop a spatial computable general equilibrium model of South Korea to assess effects of spatial distancing (SD) intervention on regional economies. This paper focuses on calibration of economic losses from the outbreaks in 2020. It examines how each element involved in SD (self-isolation, school closures, public events banned, and complete lockdown) affects the travel behaviour of consumers and producers. The overall contribution of SD measures is assessed on national and regional economies in terms of efficiency and welfare. The model measures economic losses from COVID-19, including human health costs in cities and counties based on profit maximization of regional producers on the supply side and utility maximization of regional households on the demand side. We find that if the spatial interaction is regulated such that the travel time (cost) increases by 10%, the national gross domestic product (GDP) drops by between 0.815% and 0.864%. This outcome can be decomposed into -0.729% in agglomeration-loss, -0.080% to -0.130% in social costs associated with medical treatment and premature mortality, and -0.005% in reaction effects. The results of models and simulations shed light on the epidemiological effects of social distancing interventions. This ex-ante evaluation of the effectiveness of social distancing provides guidance for national, urban, and rural policy decisions with respect to changes in regional economic outcomes and spatial distribution of infected and confirmed cases of COVID-19.

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Gender Based Political Violence against Women in Mexico: A Multidisciplinary Research Model Proposal

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Abstract

Gender Based Political Violence against Women is one of the main forms of political discrimination. It violently affects women, obstructing social justice for all and hindering parity democracy. In Mexico, the Constitution and the legal framework has been greatly reformed over the past two decades in order to enable women to fully exercise their political rights and have formal power in the political arena. Results are visible, if we consider that Mexico went from having 14 to 49 per cent of female representation in federal chambers from 1995 until 2018. In April 2020, the federal law of Gender Based Political Violence against Women was approved.

On September 7th, 2020 and until June 6th, 2021, in the midst of the Covid-19 pandemic, the biggest and most complex electoral process in Mexico began. IT will be the first electoral process under the federal law sanctioning Gender Based Political Violence against Women. It includes 95 million registered voters with 21,368 elected positions in dispute and elections on almost half of the states that make up the republic. For the first time in history, gender parity has been established by a strict quota system at municipal, state and federal level. This has exacerbated all forms of political violence, political violence against women and gender based political violence against women.

Gender Based Political Violence against Women is one of the least researched emerging topics in the social sciences, and it is mostly absent in regional science debates. It is relevant to consider that the 2017-18 electoral process was the most violent in Mexican history (in terms of total aggressions and homicides), narcopolitics have become a defining feature of Mexican politics, and the present Covid-19 crisis has exacerbated long-lasting inequalities and intersectional violence. It follows an in-depth study of Gender Based Political Violence against Women in Mexican history, encompassing a research team of over twenty academics primarily developed and led by the presenting author. The paper seeks to discuss a triangulated multidisciplinary research methodology proposal, with quantitative and qualitative indicators, to research the prevalence and impact of Gender Based Political Violence against Women in the 2020-21 electoral process with a transversal social justice and regional lens, presenting some preliminary research findings.

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The role of the cohesion policy for sustaining the resilience of European regional labour markets during different crises

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Abstract

For this paper we assembled a novel panel-time series dataset to study the resilience of the European regional labour markets during the major economic shocks registered over the past three decades. Our analysis suggests that employment resistance varies across regions and economic crises. We also study the role of European cohesion policy for sustaining employment resilience during shocks in the European regions at Nuts2 level, by applying a heterogeneous coefficient modelling framework to new time series data on the EU funds. We find the presence of region- and crisis-specific patterns when looking at the impact of the cohesion policy in the short-run, even if there is a prevalence of cases with a positive impact of cohesion policy in crisis resistance. We finally discuss the policy implications of our study, which are of relevance for the current discussion on the recalibration of the cohesion policy after Covid-19 crisis.

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Space, Face, and Netnography: The Visibility of Everyday Violence in Urban Spaces faced by the Pan-Northeastern Community in Bangalore

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Abstract

This research is grounded on understanding the concept of shared space and fragmented identity in Bangalore city. For pan north-eastern communities residing here, life is far from ideal. Facing discrimination and forms of everyday violence has become a part of urban space. It hampered with the progress of placemaking, and influenced the community's access to resources (in state, private, and local bodies). As of today there are several online communities representing both singular and commonly shared goals. But does this online space eventually impact the overall safety and future sustainability of the pan north-eastern populace towards making a "home" in Bangalore city?

This study adopts a qualitative and ethnographic framework, as a tool to map spaces of safety and uncertainty, through the lens of north-eastern migrants. In-depth interviews and netnography are utilised to examine patterns of social interaction and networking among the online north-eastern community- especially to cite how the strength of weak ties (Granovetter 1973) can push this community forward.

Significant elements to this analysis are: (1) The engagement of state-led regulatory mechanisms to tackle discrimination with the north-eastern community, (2) Local law forums and citizen groups to create accessible networks between state mechanisms and the north-eastern community. While there are several state-led mechanisms which are initiated to help reduce discrimination in urban spaces, they are not easily accessible, available, and understood. For example, while several police stations have private online "WhatsApp" groups for north-eastern communities, assistance is required at ground level, where migrants face problems in language (conveying), cultural differences, and internalised biases held by state bodies towards the community. This is dealt by local law forums and north-eastern community groups, who intervene to provide agency.

One of the expected outcomes of this paper was to map how people navigate through the city as a geo-political space. The need to find trustworthy connections was important to the pan north-eastern community and it was enabled by networking and online social capital. Enabling and engaging with social media networks is definitely a boon for vocalising their needs, however does it have the capacity to introduce a sense of security and allay concerns held by the people?

The need to understand this shared identity stems from abject failure of the state to incorporate tertiary systems into consideration: in terms of shared cultural heritage, artefacts, and a common history. A few subjects this study

touches upon deals with shared cultural identity and fragmented ethnic identities. A topic which heavily influences certain north-eastern communities is the role of Christian theology it's influencing agendas and goals. Lastly, the gendered nature of discrimination between men and women in urban spaces is also an essential factor to be discussed in future research.

By ethnographically mapping urban minority representation this paper attempted to ascertain the patterns of recurring insecurities among pan-north-eastern migrants living in Bangalore. Their importance today foreshadows the current political debates around racism, discrimination, and the failures of state mechanisms globally, thereby perpetuating everyday violence as a normative aspect of urban spaces

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The Effects of Sectoral Shutdown on the Western Mediterranean Region Economy of Turkey

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Abstract

Antalya, a province in the Western Mediterranean Region (TR61) in Turkey, has great importance in Turkey's tourism and agriculture industries in terms of production value and creating income. The output value of the tourism industry in the region approaches 40% of Turkey's tourism. Fisheries and agriculture are the other prominent industries in the regional economy, with shares of approximately 11% and 8% respectively in the regional GDP. In addition, the tourism industry triggers the demand in many service industries including accommodation and catering services, travel agencies, creative arts, performing arts and entertainment services, sports services and entertainment and leisure services, and air transport. Thus, it can be said that the importance of the tourism industry increases even more when its direct and indirect effects on income and employment are considered.

The negative effects of the Covid-19 pandemic started to be felt as of March 2020 and continued to intensify. The measures taken against the pandemic have been implemented as partial and/or complete shutdown, especially in the service industries. The shutdown indicates the emergence of a simultaneous contraction in both supply and demand sides in the economy.

From this perspective, this study focuses on the effects of the Covid-19 pandemic on TR61's economy and the reflection of the regional economic contraction on the Turkish economy.

The 2017 TR61 Regional 74-industry Input-Output matrix is used in the analyses. Demand-side scenarios are run to see the impacts of contraction in final demand components and the hypothetical extraction method is used to see impacts of the shutdown. The latter allowed observing the relative importance of each industry.

The contribution of the study is twofold. Firstly, the "real" value of the industries in the regional economy in terms of the total impact on other industries is derived by using the hypothetical extraction method. Secondly, the overall economic damage in the region and in the rest of Turkey that occurs through the tourism industry is revealed. Various multipliers and linkage coefficients derived from the I-O matrix are also used to further interpret the effects of the pandemic.

According to the findings, with a complete shutdown of the tourism sector, the production loss in the whole economy is 31.47%. The fisheries industry ranked first with a contraction of 48.81% among the others negatively affected by the tourism's shutdown. The fishing industry is followed by transportation and logistics with 22.26%, manufacturing of rubber and plastic products with 21.92%, and trade with 21.31%. The average contraction experienced in the industries corresponds to 16.37% with the complete shutdown of the tourism industry.

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Onslaught of Urbanization and Anthropogenic activities on Kamwari River: Dying Rivers in the Global south

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Abstract

The Global South is undergoing an urban revolution. Not only major cities are experiencing significant rise in population, but thousands of new towns are born every year. This city making process is expanding the built-up area and severely damaging the natural environment, specifically water bodies. The ponds, lakes and other wetlands, on which the communities were traditionally dependent for freshwater and food supply, are being reclaimed for settlement building. This is mainly due to unchecked human induced activities happening in the name of development at the banks of rivers. Study of Rivers has become very vital as unpredictable unexpected anthropogenic activities are occurring habitually. The present study is basically focused on impact of population leading to disappearance of the water bodies with reference to religious, cultural, municipal activities and present status and future strategy for conservation of Kamwari River in Bhiwandi. Bhiwandi being a power loom Industry, how these Power loom and dyeing industries in the vicinity have been discharging chemical effluents into the river resulting in its deterioration. The direct release of untreated effluents from these sources along with untreated sewage water in the river has worsened the situation. The present study is mostly based on primary survey and interviews conducted in the vicinity. The study intends to understand the current pollution status of Kamwari River and other water bodies. The rivers which used to be lifeline for lakes, ponds, wetlands and used to wash out the pollutants with their flows have become special victims of this urbanization process. The rivers are not only being destroyed through land filling for expanding settlements and other infrastructure but also town garbage (both solid and liquid wastes) are being discharged indiscriminately into the same. Rivers initially nurture the cities and towns with their water, but now the same cities and towns are eating up and destroying the water bodies. This paper examines the interrelationship between urbanization disappearing rivers, water shortage and water environment changes in cities in the global South. The case of Kamwari River in Bhiwandi for demonstration of argument it was concluded that the sewage textile industries discharge causes pollution to the water bodies and serious problem for living being and ecological environment. Therefore, the urbanization should be planned and the effluent water to be discharged by these industries must be adequately treated before discharge.

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Does Social-Distancing Save Lives? The Impact of Social Distancing Measures on People Mobility and COVID-19 Cases in Indonesia

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Abstract

As unprecedented event, Covid-19 pandemic has forced government across the world to rely more on non-pharmaceutical intervention since no specific medication nor vaccine were ready to counter the spread of this particular disease. Both social and mobility restriction were among the chosen policies implemented. Indonesian government took two substantial interventions at the onset of Covid-19 pandemic. Those interventions are school closure and voluntary social distancing which then was followed by Large Scale Social Restriction (PSBB). Voluntary social distancing encourages businesses and worship places to implement health protocol and there were legal punishment given to those who neglected the advice. On the other hand, PSBB had stricter measures in its implementation since only essential businesses could remain open during its period. It also required worship places closure and limited activities on public facilities as well as transportation. In addition, the government provided the legal basis in its implementation so that any disobedience would lead to legal consequences.

We evaluated the impact of these interventions on people mobility and the growth rate of confirmed COVID-19 cases. People mobility data were obtained from Google Mobility Report. Meanwhile, the cases growth rate data were obtained from official case counts which cover 34 provinces across Indonesia in between February 16, 2020 and May 7, 2020. We employ both synthetic control design and an event-study design adapted for continuous treatment to determine the impact of these non-pharmaceutical intervention on people mobility and cases growth rate.

We find that both interventions could reduce 30 % of average workplace mobility, and on the other hand, increased 15 % of average residential mobility. Using synthetic control method, we found that PSBB alone in DKI Jakarta decrease further its workplace mobility by 10%, but the impacts are more subtle in both West Sumatera and Gorontalo. Both school closure-voluntary social distancing and PSBB interventions have significant impact towards the growth of positive COVID-19 cases. During school closure-voluntary social distancing period, 1% increase in residential activity leads to decrease of COVID-19 cases growth by 1.03 percentage point in the first week and stagnant at 1.48 percentage point for the following periods. Holding residential mobility at pre-COVID-19 period, COVID-19 positive cases in Indonesia would have reached 17.450 cases instead of the actual observed cases at 12.754 or correspond to 37% higher on May 7, 2020. Furthermore, with a stricter social distancing that is PSBB, our simulation displays that the observed cases could further be reduced. These findings imply that containment policy at the early onset of Covid-19 outbreak is very important to flatten the curve and save more lives.

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Co-evolution of Food Delivery Services and Restaurants in the Sharing Economy: A Case Study of Bangkok, Thailand

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Abstract

Technological advances have made it easier to build settlements and cities, protect ourselves from disasters and diseases, farm and harvest, produce and work, and put foods on our tables for thousands of years. However, for the past 25 years, technology has changed immensely, especially in information and communication technology. The internet and smartphones have facilitated us to access information and services easier and faster. In previous years, the food delivery service has been one of the most popular businesses before and during the COVID-19 pandemic. In Thailand, the market value of the service has increased from around 24 billion Bahts in 2014 to around 70 billion Bahts in 2020. The service has not only changed customer behaviours and operations of restaurants, but also urban sustainability. This study focuses on the development and roles of food delivery service in the context of the urban economy in Thailand as well as the impacts of the service on customers, restaurants, and food deliverers in Bangkok. In addition, the study aims to provide guidelines in physical and socioeconomic contexts of sustainable urban development.

The results from the studies of customers, food deliverers, and restaurants show that people are likely to order food deliveries rather than have dining services at restaurants due to the increasing number of available delivery services of restaurants on delivery platforms and their public health issues during the COVID-19 pandemic. The food deliveries reveal that the average number of delivery trips has been much higher since 2020, and the ranges of food delivery service have been wider due to the higher demands of foods from popular restaurants. In addition, the number of food deliveries has been dramatically increasing during the pandemic. On the other hand, the number of restaurants has been decreasing due to the impact of the pandemic. The restaurants have had to adapt themselves to delivery services. For example, some restaurants no longer have storefronts and seats to operate their services. Cooking and delivery services in "ghost kitchens" can be operated anywhere in urban areas. The changes in food delivery service and restaurant supply chains will have impacts on the urban economy in terms of consumption behaviours, employment, and public safety of the city.

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Regional Inequalities in Croatia vs. CEE Countries – What to Expect After the Corona Crisis

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Abstract

Croatia remarks significant regional inequalities that refer to different level of socio-economic development. In this paper inequalities are presented within national economy and within CEE countries. This paper presents the results of research on measuring inequalities in Croatia and CEE countries before the corona crisis and expectations in the movement of inequalities in the post-corona period.

Amongst CEE as well as on the national level, inequalities can be noticed on different levels. Some of the following indicators are used to present (in)equalities - population density, median age of the population, area in square km, GDP per capita, population at educational attainment level, patent application, development index, county economic strength index, etc. All mentioned is interpreted in accordance with current economic and social conditions within Croatia and other CEE countries.

Within the national level inequalities are presented in more detail, on the NUTS 2 and NUTS 3 level of the Croatian economy for the period before the start of pandemic COVID-19. The NUTS 3 level in Croatia presents administrative division (21 counties) and the NUTS 2 level presents non-administrative one (4 statistical units). Since all mentioned data refer to the period before the corona crises, based on chosen relevant data, certain expected values of indicators for Croatian NUTS 2 and NUTS 3 level is calculated. Based on mentioned, adequate suggestions are drawn out and elaborated. All suggestions are presented considering new division of NUTS 2 level in Croatia. Furthermore, certain expectation can be created, on the institutional as well as on the economic and social level.

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Resilience and Convergence: Short vs. Long-Run. Regional Effects of Economic Crises and Macroeconomic Policies

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Abstract

Within-country disparities in advanced economies have increased substantially during the past decades. They have become a major concern for policymakers since, beyond the direct social welfare and equity consequences of this rising trend, there is growing evidence that regional disparities may have important implications for economic outcomes.

Before the outbreak of the Great Recession, considerable attention was devoted to what makes a region successful, and why some regions grow faster than others, but researchers often overlooked how regions react to shocks and why this happens in a heterogeneous way. Furthermore, the classic literature on regional inequalities has mainly focused on the long-term relationship between economic growth and regional disparities and on the role of labour mobility, sometimes also as a mechanism of adjustment to labour demand idiosyncratic shocks. This literature trend has reversed since 2008, when investigation of the heterogeneous impact of shocks across areas became prominent in regional studies through the analysis of regional resilience. Moreover, the discussion on the asymmetric effects of macroeconomic policies, which was not a major concern in recent decades, has suddenly re-emerged.

This paper surveys the recent approaches adopted to study regional disparities as related not only to the process of economic growth but also to economic downturns. The investigation focuses initially on the relationship between national business cycles and idiosyncratic regional shocks and then moves on considering explicitly the role of macroeconomic policies and dynamics in affecting, through the impact on specific local assets, the process of (unequal) long-run regional growth as well as short-run resilience to economic shocks.

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Making communities resilient during the COVID-19 Pandemic. Who Complies with Social-Distancing rules? An analysis on the Metropolitan Area of Cluj-Napoca

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Abstract

During the COVID-19 pandemic authorities have relied on the adherence of citizens to the social-distancing and mask wearing rules in order to limit the spread of the virus. Nevertheless, it was soon evident that not all citizens are willing to comply with the rules imposed by authorities. It is highly important to identify the factors that influence the extent to which people adhere to the social-distancing rules, as it can make the difference between resilient and non-resilient communities during the pandemic. However, only a limited number of studies examined these factors. As such, the present paper seeks to identify the factors that predict the extent to which people comply with the social-distancing rules in the metropolitan area of Cluj-Napoca. In doing so we make use of a representative survey conducted in December 2019 on a sample of 705. More specifically, we investigate the extent to which the following factors predict the declared level of compliance with the social-distancing rules: trust in authorities, perception regarding the way authorities communicated with the public, the media sources individuals used to keep informed, and other socio-demographic variables.

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Resilience, Development Regions and Local Revenue Collection Levels in Romania

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Abstract

This paper explores if location in a development region influences local revenue collection levels (public revenue mobilization conceptualized as the ratio between the amounts collected at the local budget during one year divided by the amounts that were supposed to be collected during that budgetary year) in the case of Romania. As such, the revenue collection levels of 3227 (almost all) Romanian territorial-administrative units are analysed for the 2008 to 2011 budgetary years according to the eight development regions (NUTS 2 level) created and maintained since 1998 in order to facilitate regional development, progress towards European Union accession and manage post-accession funding. The data analysis consists of descriptive and exploratory techniques (such as Tukey Boxplots, central tendency analyses and One Way ANOVA with Post Hoc).

The research provides corroborated evidence that Romanian development regions have a statistically significant effect on the levels of revenue collection at the local level. The results show that local administrative institutions from the North-West (with collection levels between 85.54% and 90.61%), West (with collection levels between 81.69% and 87.55%) and Bucharest (with collection levels between 84.27% and 88.29%) development regions constantly attained higher levels of local revenue mobilization between 2008 and 2011, while the North-East (with collection levels between 74.43% and 82.25%), South (with collection levels between 73.88% and 83.43%) and South-East (with collection levels between 78.68% and 81.89%) regions under-performed in regard to local revenue collection/mobilization. No clear pattern seems to emerge in the case of the remaining two regions (Center and South West) as they constitute an intermediary level between the aforementioned two categories.

Policy implications, especially for sustainable development, are discussed both in for the current administrative framework and in view of a potential administrative re-organization.

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Modelling and experimentation of olive cake thin-layer vacuum drying process

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Abstract

The aim of this work is to study the effect of layer thickness (5, 10, 15mm), of pressure under the layer (-130, -200, 250 mbar) and of drying time (20, 60, 100 mn) on the olive pomace vacuum drying kinetics, as well as the estimation of the moisture diffusivity coefficient and the activation energy of olive pomace during vacuum drying. Results clearly show the predominance of the depression under the olive pomace thin layer on the drying process with a contribution of 46% followed by the thickness of the thin layer (29%) and the drying time (26%). The results obtained show that the optimal combination minimizing the water content of the olive cake is a 5mm thick layer of pomace, a drying time of 100 min and a depression of -130 mbar, which identified as the most influential factor. The results of the numerical simulation show that the model can be used to improve the functioning of vacuum dryers. However, there is a slight disparity between experimental values and the results of the numerical simulation. This disparity is the consequence of the use of simplification hypotheses, and errors committed during the experiment.

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Assessing transport accessibility of islands for economic resilience: empirical findings from Croatian islands

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Abstract

Great volatility and uncertainty during last decades has been characterized by highly heterogeneous territorial impacts and promoting the resilience concept for understanding the factors behind these fluctuations.

Most of the studies have been driven by dominant narrative of urban economics and focusing and promoting large and dynamic metropolitan areas. However, recent studies underlined lack of urban dominance over rural regions; especially during periods of crisis (Giannakis. & Bruggeman, 2019).

While transport infrastructure and accessibility can contribute to production of heterogeneous socio-economic effects among territories (Van Wee, 2016; Guzman et al, 2017), past studies have given almost no attention to the role of transportation accessibility on building resilient regional economy (Chacon-Hurtado et al, 2020). This has been especially the case for spatial units heavily defined by transport accessibility - islands. (Karampela et al, 2014). Under the discontinuous space context, constraints of scale economies, micro-climate, and spatial reach of networks, accessibility has unique role for the island communities (Karampela et al, 2014; Birgilito et al, 2018).

In this paper, we fill this gap by exploring the relationship between regional resilience and the degree of transportation accessibility for the islands. By focusing on the resistance and recovery phase of resilience among islands in Croatia in period 2007-2017, we provide profound foundation for development and policy discussion.

Our empirical findings indicate higher level of resilience for less isolated islands, especially as a result of faster recovery after economic downturns. However, degree of transportation accessibility doesn't play important role for resistance among our spatial units.

Finally, study provide clear insights for policy makers in delivering more effective development policy measures during turbulent periods for unique spatial units – islands.

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How different patterns of urbanization affect regional innovation? Evidence from Russia

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Abstract

The present paper assesses the impact of general urbanization and urbanization patterns (the number of cities of a certain size in the region) on different phases of the regional innovation process: knowledge creation, implementation, and production of innovation production. Knowledge creation is measured by patent statistics, knowledge implementation – by the share of innovative organisations, innovation production – by the volume of innovation production produced by industrial organisations.

We apply the dynamic panel data model technique by using data from the period of 1998 to 2016. Our results suggest that general urbanization has a positive influence on every stage of the innovation process, while the impact of different urbanization patterns varies depending on its stage. Million plus cities affect knowledge creation in the region but have no considerable impact on knowledge implementation and innovation production. At the same time, the presence of cities with a population from 500 000 to 1 000 000 people in the region positively influences more mature stages of the innovation process: knowledge implementation and manufacturing of innovation production.

So far as the effective innovation development demands complete innovation cycle, not only million plus cities should be considered as the main drivers of innovation, but cities of lower size (at least with population from 500 000 to 1 000 000 people) as well should attend the innovation agenda.

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Analysis on the Relationship between Human Capital Expansion and Export Product Diversification: Evidence from Chinese Industrial Enterprise

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Abstract

The export product diversification is an important way to realize the "going-out" strategy and the strategic objective of trade power. In this paper, the effect and mechanism of human capital expansion on export product diversification are studied by using difference-in-difference (DID) method with the implementation of "university enrolment expansion" policy in 1999 as the quasi-natural experiment. The results show that the human capital expansion caused by "university enrolment expansion" can significantly promote the export product diversification; at the same time, the heterogeneity of human capital expansion makes its promotion effect most significant in eastern region, followed by central region and western region, and on the other hand, compared with state-owned and foreign-owned enterprises, human capital expansion plays a more significant role in the export product diversification of private enterprises; total factor productivity (TFP) as a possible channel for the impact of human capital expansion on the export product diversification specifically depends on the increase in the types of export products and the reduction of the withdrawal of enterprise products from the market.

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The role of shared workspaces as an anchor of community resilience for low-income urban populations

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Abstract

In the last decade shared workspaces are widely spread world-wide with thousands of public and private sectors shared work-spaces. This study investigates the role of shared workspaces as an anchor of community resilience for low-income urban populations. To date, studies explored the role of shared workspaces from the employee and regional innovation perspective, while the effect on the community empowerment remains unravelled.

This study focuses on a new municipality owned multi-functional shared workspace serving the variety of uses and is geared towards empowering the residents and promoting low-income young adults. Besides providing a workspace, the following activities are initiated by the management staff (all residents) in order to answer community needs: ii) lectures and community events, iii) university exam preparation courses, women empowerment, entrepreneurship events and networking opportunities; iv) a hub for learning support.

Interviews were conducted with the management staff (ten employees) and with a sample of thirty 18-21 years-old attending the workspace. We identified processes leading to behavioural change among the young adults attending the workspace. We looked at the change processes via the lens of the Trans-Theoretical model positing five stages of behavioural change: observation, preparation, change action, maintenance and assimilation, including successes and backsliding. Additionally, via the existence-relatedness-growth model we identified the layers of human need that this venue meets.

The changes undergone by attendees who spend time and engage in activities at the facility foster personal and community resilience in Jaffa. According to the management staff, 60% of the young adults assisted by the facility enrol to universities, compared to 20% enrolment rate in the surrounding neighbourhood. The venue creates anchors for young people and is a major springboard in areas of crucial importance: education and employment. The facility activities are aimed at all the five stages of behavioural change. Need awareness is promoted through school visits and collaboration, through word-of-mouth by creating a neighbourhood "buzz", and through community activities and lectures by community and industrial leaders. Preparation is facilitated by courses and information. Action change is supported with personal help in scholarship submissions, networking and internship programs. Maintenance and long term assimilation is supported by the staff involvement over time. The workspace contributes to the young adults in three main areas. Firstly, the facility alleviates functional barriers by providing university preparation courses, language and academic writing courses, and information about university, enrolment, scholarships, and student aid programs. Obstacles are addressed by the helpful, attentive, and closely-involved staff, who create a sense of personal connection. Secondly, the facility promotes social inclusion by providing a meeting-place and giving its users a homelike, familial atmosphere and sense of belonging. Thirdly, the facility plays a substantial role in strengthening the confidence and self-image of young Jaffa residents by offering them an experience of success helping them leave their comfort zone. All of these things help the venue's young clients achieve success in self-management.

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Urban Poverty and Vulnerability in Global South: Issues of Underestimation, Concentration and Targeting

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Abstract

The mainstream conceptualization of poverty and vulnerability has inadequacies in dealing with urban problems, in general, and that of the global south, in particular. The dynamics of urban poverty and vulnerability plays out differently in the Global South which is host to more than three-fourths of the world urban population with ever increasing proportion living in mega-urbanized settings. The inordinate impact of the COVID-19 pandemic on the poor and marginalized urban dwellers and migrants in this region has led to a shift in the locus in the contemporary discourse on poverty and vulnerability towards urban centres, which hitherto had a rural bias in the Global South. The existing literature in this field insinuate at the problem large-scale underestimation of urban poverty, the problem of poverty concentration and rising and persistent inequality. However, there are limited empirical work in this field with a focus on global south.

It is in this backdrop, the current paper focuses on the following objectives: (a) to develop an alternative multidimensional poverty index (MPI), on the basis of a normative analysis of urban poverty with specific

reference to the challenges posed by COVID-19 in urban centers in Global South; (b) to test the stability of the alternative index; (c) to review the mainstream approaches for measuring urban poverty and assess the scale of the bias, if any, with reference to the benchmark; (d) to analyse the problem of poverty concentration in the urban areas; (e) to review the poverty targeting practices in the urban centres in Global South. The Alkire-Foster Multidimensional Poverty Index identification and aggregation procedure is adopted in the study as the broad approach. For developing the alternative MPI, recent DHS (The Demographic and Health Survey) dataset for India is considered suitable for this analysis. The focus on India for an in-depth exploration assumes significance due to the following reasons. First, the poverty headcount ratio in urban India as per the official and mainstream sources is around 10 per cent barring exceptions. However, literature in the field indicate problems of underestimation. Second, the unidimensional and multidimensional approaches use the same dimension(s) and indicator(s) for rural and urban areas. Third, the poverty targeting for major central and state government schemes in rural India is now on the basis of Socio-Economic and Caste Census (SECC), 2011 data. However, SECC has not been the basis for indicator-based poverty targeting in urban India so far and disparate practices are being followed in different regions. Finally, the course of growing mega-urbanization in India insinuate at the deepening of these problems and the COVID-19 pandemic has revealed it in gory details. Based on the empirical analysis for India and review and case studies for countries in Global South, the paper reflects on the emerging situation of poverty and vulnerability in the region. It highlights the larger issue of urban and regional planning and best practices in poverty targeting in the region.

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Radical Innovations and Industrial Structure of Regions: Insights from Russia

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Abstract

Radical innovations as a key driving force for long-term socio-economic progress are one of the vivid topics in regional science. The paper aims to shed light on the structure-specific factors of regional economies that favor the increase of a firm's radical innovations, considering the case of Russia. We use data from national innovation survey and measure radical innovations as the sales of new-to-the-market and new-to-the-firm innovative goods and services. The ordinal regression is applied to quantify the effects of independent variables on radical innovations. These indicators reflect how much the industrial structure of a firm's home region is diversified or specialized, and the shares of knowledge-intensive business services (KIBS) and creative & cultural industries (CCI) in a region's economy. We control regional market size, expenditures on technological innovations, and a firm's location in a region with a city of over 1 million population. The results show that, apart from expenditures, the industrial structure of regional economies affected the likelihood of higher sales of radical market novelties introduced by the firms located therein. More sales were detected in the firms, operating in the specialization industries of their home regions that were identified with cluster mapping of related industries. The shares of KIBS in the industrial structure of regions had greater impact on radical innovations, while the influence of CCI was not significant.

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The Influence of the Pandemic of Coronavirus Disease 2019 on the Use and Management of an Urban Park: A Case Study of the "Forest and Park for the 21st Century" in Matsudo, Chiba Prefecture

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Abstract

In Japan, due to the pandemic of coronavirus disease 2019 (COVID-19), the state of emergency was declared on April 7, 2020. Urban parks were closed due to the state of emergency. The purpose of this study is to clarify the influence of the COVID-19 pandemic and the effects of the park management by analysing the actual conditions of the management and use of urban parks in 2020. The study site was "Forest and Park for the 21st Century," a large-scale urban park in Matsudo, Chiba Prefecture. Matsudo City is a bedroom community located within 20 km of central Tokyo. Therefore, it is considered that the actual conditions of the management and use of "Forest and Park for the 21st Century" reflect the effects of school closures and increased telecommuting due to the state of emergency. A survey was conducted by interviewing the park management office about the actual status of management and operation and the recognition of the management. In addition, data on the number of visitors to the park and use of the facilities were obtained from the park management office and analysed. The analysis was conducted by dividing the year 2020 into four periods: before the state of emergency (January 1 to April 6, 2020), during the state of emergency (April 7 to May 25), after the lifting of the state of emergency (May 26 to July 14), and after the deregulation period (July 15 to December 31). The results were as follows: The number of visitors on weekdays increased throughout the year, and urban parks served as a place for citizens to relax during the COVID-19 pandemic. In particular, during the state of emergency when commercial facilities were closed, schools were closed, and telecommuting was recommended, the rate of increase was 49%, which was remarkable. On the other hand, the number of visitors decreased throughout the year on holidays, because the gathering of people was prevented by the cancellation of events and courses. Specifically, during the state of emergency, the decrease in the number of visitors was extraordinary at 53%. The survey also found that people used parks on weekdays and in the early morning when there were few visitors. Therefore, it is considered necessary to take measures to avoid congestion during such times.

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Regional and global patterns of participation in value chains: evidence from Brazil

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Abstract

The main objective of this paper is to verify Brazil's role in global value chains considering its participation in global and regional trade blocs. The hypothesis is that Brazil has different roles in global value chains and regional value chains. Brazil carries out international trade with several countries, regions and trade blocs. However, the country's trade with the other Mercosur members has a different pattern compared to other countries and trade blocs. Thus, this paper intends to verify the trade pattern differences between Brazil and South America and Brazil and other regions and trade blocs. We also seek to verify the role of Brazil as a reference center for conducting international trade in South American countries, that is, the role of Brazil as a regional hub in international trade. To achieve these stated goals, we perform a spatial decomposition of foreign value-added content, by taking into account the upstream and downstream segments of value chains. The regional and global participation patterns in the value chains are analysed through the geographic extension of the stages of production. These patterns are assessed using indicators of global and regional fragmentation of global value chains. To measure the linkages of global value chains, the value-added content is decomposed using the inter-country input-output model over the period from 1990 to 2015. We use the full Eora Global Supply Chain Database's multiregional input-output table (MRIO), which contains data for 190 countries and specifies 26 activity sectors. The chosen period of investigation allows us to evaluate Brazil's participation in global value chains relative to different scenarios and changes in its commercial and industrial policies. Thus, we assess if Brazil's integration process with internationally fragmented production chains follows a worldwide trend or presents a pattern distinct from other economies. Our findings suggest that between 1990 and 2015 Brazil's production became more fragmented internationally and consequently its participation in global value chains increased. However, its regional insertion increased more than its global insertion. Although South America has a small share in value-added trade, it was found that Brazil operates both as a regional hub and serves as a reference for international trade in that region. In the global context, Brazil has the role of supplier of intermediate inputs, while in the regional context, Brazil plays the role of an important production center. This regional production center proved to be well integrated with the principal hubs of the global value chains.

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Negative Externalities from Port Development: Evidence from Marine Pollution in Indonesia

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Abstract

Developing transport infrastructure must involve a comprehensive cost-benefit analysis, and accounting for environmental quality changes associated with such infrastructure is one important aspect that can help complete this picture. In this study, we used difference-in-difference to estimate the marine pollution changes related to port development in Indonesia over the last decade. Using unique MODIS-derived monthly data of marine pollution, we found that local port presence causes a 1.7% increase in chlorophyll-a in coastal areas within 6 kilometers of the port. The effects are concentrated in the first two months of operation, and there is evidence for anticipation effects associated with the construction period. We found a greater effect in Indonesia's eastern regions, which rely on small ports for their local activities. Nevertheless, we argue that the effect can be substantial and potentially capable of creating an algal bloom in a larger port.

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Related Variety: A Meta-analysis

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Abstract

The concept of related variety allowed a more precise understanding of Jacobs's effects, allowing the analysis of positive externalities from unrelated and related sectors. It took off with Frenken, van Oort & Verburg (2005) but was quickly followed by dozens of other papers. This literature finds many contradictory effects, depending on the place and time analysed, the setup of the related variety variables, and other study characteristics. We employ meta-analysis to trace these contradictions back to the sources of variation.

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Improving Vaccination Rate through Community Awareness

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Abstract

The novel coronavirus 2019 (Covid 19) outbreak has devastated public health in general and a significant economic threat worldwide, including in Indonesia. The existence of vaccines has become the possible source of the decline in Covid 19 additional cases per day in various countries. Indonesia has started the vaccination program on January 13, 2021, which costs are estimated to be around Rp. 73 Trillion or equal to 500 million US dollars. However, there's a widespread concern that the vaccination program may not rapidly implement. On average, there are only 66 thousand people vaccinated per day in Indonesia. Those numbers are small compared to other countries such as the United States, which can vaccinate up to 1 million people per day. This paper investigates whether the vaccination acceleration plan can improve Indonesia's vaccination implementation by employing machine learning tools. Using the dataset from SUSENAS 2018-2019 and the Ministry of Finance, we

estimate the proportion of health workers, the elderly, and the community aged 18-59 years who have morbidity symptoms and receive outpatient and inpatient health services proxy to health access. This study comes up with five simulations to estimate the result of vaccination programs under five different scenarios. In the first simulation, people go to government health facilities to get vaccinated. In the second simulation, we add to the first simulation with the assumption that the vaccines are given for free. In the third simulation, we add to the second simulation by expanding health facilities such as private hospitals, clinics, doctor and midwife practitioners. Since Indonesia also has a community access problem to health facilities, we add free transportation in the fourth simulation. Finally, in the fifth simulation, we try to integrate community awareness into the vaccination program. Community awareness is when one head of the household persuades and escorts at least one person to the vaccination facility. In the first and second simulations, we obtain the vaccination rate, which is around 66 thousand people per day, similar to what occurs nowadays. At this rate, there will be only 27 million people in Indonesia get vaccinated in March 2022, far below 181 million people as targeted by the government. The vaccination rate reaches 175 thousand people/day under the third simulation and 177 thousand people/day under the fourth simulation. However, under the fifth simulation, the vaccination rate can reach a staggering 1 million people/day. These results show that besides the availability of health facilities, health practitioners, and transportation assistance, community awareness plays a prominent role.

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Determinants of manufacturing micro firms' productivity in Ecuador. Do industry and canton where they operate matter?

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Abstract

This study aims to identify the productivity determinants of manufacturing micro firms, emphasizing on regional and industrial factors. A cross-classified multilevel model is employed using the Economic Census of 2010 from Ecuador. Results evidence that the heterogeneity of the total factor productivity of micro formal firms of the manufacturing sector is mainly due to differences across firms in 90.1%. The remaining variation of the TFP is explained to a larger extent by the industrial context (5.8%) than the geographical context (4.1%). Among firm characteristics, information and communication technologies, credit and training are important drivers of productivity. Despite of this, very few micro firms use internet, have credit access or engage in training in Ecuador. Moreover, micro firms benefit from agglomeration economies derived from specialization, diversity and density that they themselves generate.

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Analysis of Non-Technical Innovation, Knowledge Production and Proximity Theory in the Success of Turkish Series

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Abstract

For TV series exports, Turkey was in second place after the United States in 2018. Turkey's exports were 350 million \$ while it was only 10 million \$ in 2008 (AA, 2018).

In addition to factors such as content structure, type, star cast, high budget, creative and innovative perspective, the feedback provided by the audience through various network tools such as social media was also determinant in this success (García, 2016). Cultural, geographical, cognitive, and technological proximity types have been effective in the creation of information in this process where information dissemination is effective (Boschma, 2005). Especially in geographical proximity, it plays an important role in information sharing, transfer, and technological development (Huber, 2012) and the main point here is tacit knowledge (Gertler, 2003).

The TV series sector in Turkey brings the question of the effect of non-technical innovation to this success to the mind. In this study, different from previous studies, the role of non-technical innovation (marketing and organizational innovations) (OECD et al., 2006) in the success of Turkish TV series will be estimated within the framework of a probit model (Long & Freese, 2001) within the scope of knowledge production and proximity theories.

The dependent variable is a dummy indicating if the series is exported or not. The explanatory variables are IMDB score, type of series, a dummy for the director representing tacit knowledge, a dummy indicating the type of scenario, the distance between Turkey and the top importer representing the geographical proximity, and the number of influencer comments as an indicator of non-technical innovation.

The empirical results indicate that non-technical innovation, tacit knowledge, and product innovation increase the probability of export of a series while the distance has a negative impact.

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Aspects of ethnic social capital in traditional communities of babassu coconut-breaking women in the legal Amazon: a study on socially oriented economic action

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Abstract

It has been almost three decades since the theme of social capital began to occupy the agendas of governments and institutions in promoting development local and/or regional. A large plurality of studies addressed this issue during this period. However, despite the extensive bibliography there are still few studies that deal with the social capital of formed by ethnic bases. This work originates from a research conducted in the period from 2017 to 2020 in traditional communities of women Quebradeiras de Coco, located in the region of Bico do Papagaio, Tocantins, in the eastern part of the legal Amazon. As a theoretical premise we assume that people who interact in the economy, based on reflexive action, the various social roles played by them. In this perspective, social norms and sociability developed in groups are important moral sources to guide and influence economic action. The aim of this article is to demonstrate the possibilities of ethnically based social capital to constitute a mechanism of social transformation and local community development. This is an ethnographic study. The data presented here were obtained through participant observation, the application of questionnaires and interviews. It is concluded that ethnic social capital is an important resource for the development of communities in the region, since it contributes to a plural expansion of the themes that are involved in development policies and projects, enables the inclusion/integration of a larger contingent of social actors in local development management processes, reducing inequalities in terms of social status, and expanding the field of economic opportunities.

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The formation mechanism of spatial agglomeration of urban cultural industry—case study on Chengdu City

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Abstract

Based on the theory of professional division of labour, spatial location theory and Marshall Externality theory, this paper studies the spatial agglomeration of cultural industry, and measures the location entropy of the spatial agglomeration of cultural industry in Chengdu. From three aspects of economic factors, cultural factors and location factors, combined with the policy factors of the government, this paper constructs a mathematical model of the influencing factors of cultural industry spatial agglomeration, the empirical test of spatial econometrics is carried out. Research practice has proved that the cultural industry spatial agglomeration is the result of the

interaction of cultural factors, location factors and economic factors, and the government's policy support and financial investment play a direct role in promoting and stimulating the spatial agglomeration of cultural industry. Finally, based on the research results, the corresponding policy recommendations has been given.

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Human capital and social capital as antecedent of the Green Deal. An analysis on waste separation across Italian provinces

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Abstract

Sustainable practices must entice and include a significant part of the population to achieve a significant impact. In this sense, pro-environmental practices start with waste management, which in turn presupposes a wide involvement of consumer households in waste separation. The behaviour of individuals is influenced by the level of human capital (HC) and social capital (SC) which should indicate the degree of environmental awareness, knowledge of best practices and understanding of the moral and legal norms they should induce. We study the role of HC and SC in waste separation practices in the 103 Italian provinces controlling for other factors influencing the waste management. Policy implication are derived.

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Place-based and participative approaches: reflections for policy designs in rural development

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Abstract

Across the European Union the so-called "Community-Led Local Development" (CLLD) is a well-established policy design. It all started with LEADER in rural areas 25 years ago and now counts 2,600 Local Action Groups (LAGs).

LEADER is a place-based and participatory approach where a Local Action Group (LAG) composed of stakeholders from local government, civil society and economy steers the implementation of its local development strategy. LAGs each have a budget at their disposal (~3 Mio. €) to support project implementation within a funding period (time for implementation is around five years). A set of LEADER principles describes the characteristics of LEADER: territorial approach, bottom-up, public-private partnerships, integrated and multi-sectoral approach, innovation, cooperation with other regions and networking.

The aim of this contribution is to discuss different options for the policy design of the LEADER implementation regarding different steering options of this place-based and participatory approach.

To examine the performance of LEADER, we utilise results from the 2014-2020 funding period, especially structural data of 115 LAGs in Germany. Main material was collected by three surveys using written questionnaires (mainly executed as online surveys):

LAG member survey: members of the LAGs' decision-making bodies in all examined federal states („Länder“) in 2017/2018 (requested persons N=3308, answering persons n=1999, response rate: 60 percent). Usually, a six-point Likert scale was used to classify personal estimations of the LAG members.

LAG management survey: one manager per LAG was surveyed in 2018 (N=115, n=114, response rate 99 percent) with a mixture of general questions about the situation in the region, open questions to grasp more detailed assessments about specific problems, again using Likert scales and open questions.

Survey of beneficiaries: questions regarding LEADER projects (for the implementation of local development strategies, measure 19.2), (N=1267, n=1079, response rate: 85 percent), the respondents were asked for

estimations about project development, funding procedures and the results of their project, again using Likert scales and open questions.

The results are related to single variables of the LEADER implementation and their impact on LEADER performance. Due to complex relations of different aspects, we mainly elaborate findings on simplified output indicators.

Regarding a suitable policy design, the results offer several insights: one being that a higher staff capacity in LAG managements in the different LEADER regions fosters a higher share of innovative projects. This supports a policy recommendation to predefine minimum targets for staff capacity as a prior condition for funding the LAGs as a crucial element to foster innovation and participation of local actors.

In the context of place delimitation, results show that a suitable region design/delimitation is not dependent on the population size of the various LEADER regions. The satisfaction of the LAG members surveyed is generally high with no significantly strong impacts due to the different population sizes ranging from 30,000 to 150,000 inhabitants although there are some differences in detail.

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The efficiency of the Education Sector Budget: Evidence from Indonesia

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Abstract

The decentralization of education in Indonesia has been going on for two decades. As mandated by the law, starting in 2010, the education budget has been allocated 20 percent of total state expenditure. In the last 10 years, the education budget in Indonesia has more than doubled. However, the high budget allocation for education has not yet matched its performance. This article wants to find out how efficient the use of budgets at the provincial level in Indonesia is. The descriptive analysis method is used to see the description between budget allocation and education performance in each province. To see the efficiency of the use of the budget on the performance of the education sector, a Data Envelopment Analysis (DEA) analysis is used. The data is sourced from the Ministry of Education, compiled from 510 data at the district/city level spread across 34 provinces in Indonesia. As input used the education budget allocation (national and regional levels), school conditions, teacher quality, accreditation, student-teacher ratios in each province. Meanwhile, the education output uses the net enrolment rate and the school graduation rate. From the analysis, it can be concluded which districts/cities are the most efficient in allocating resources. With a reference to the efficiency of resource use, efficiency in the use of the budget can be made.

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School Integration and Education Outcomes in Indonesia: Global Information System, Micro Simulation and CGE Analysis

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Abstract

Indonesia estimated age population at the primary and secondary education levels are reaching 70 million, and spread over more than 500 districts / cities. In 2020/2021 the number of elementary school graduates decreased by 200 thousand students compared to 2016/2017. In the same period, the number of junior high school graduates fell by 40 thousand. We investigate possibility of school integration in Indonesia to improve access to education using Global Information System (GIS), Micro Simulation and Computable General Equilibrium (CGE).

We utilize many different data sources, including school location; National Socioeconomic Survey (SUSENAS); and Village Potential (PODES) for the year 2011, 2014, and 2018. Schools Integration is unitin three levels of education into one environment, so that primary school (SD), Junior High School (SMP), and Senior High School (SMU) can be implemented in the same location. Although there is no junior high school and senior high school on a village, but it more likely has primary school. Our findings indicate the integration brings closer the distance to the school by these school age students. At least three school integration benefits are identified: the existence of integration can solve the problem of school supply, in this case the distance is too far to get to school. The second benefit of school integration is the efficiency of the cost of running the school. The next benefit is the ultimate goal of education policy, namely to reduce inequality in access to education and increase the average length of education through increasing school enrollment rates in disadvantaged and isolated areas. Papua Island and Kalimantan Island are the islands that benefit from the largest change in distance compared to other island averages. School integration can lead to a reduction in the distance to schools on the island of Kalimantan by up to 40 km with an average reduction of the distance to the nearest school by 20 km. This is bigger for Papua Island, which can save up to 64 km of mileage with an average mileage of 50 km. Micro simulation suggest school integration related to increase the level of education of children in Papua Province by 0.06 years, the largest compared to other regions, followed by Southeast Sulawesi, Bengkulu, Aceh, North Maluku and Maluku Provinces. The education of children in Central Java and South Sumatra Provinces will increase by 0.01 years if integrated schools are implemented. Furthermore, our early finding exhibits school integration could lead to total savings in school operational budgets is estimated at 2.42 trillion rupiahs per year compared to if three separate schools were formed. Savings on school integration options include no need to acquire new land for school land, savings in maintenance costs and service subscriptions. Finally, CGE simulates school integration could improve Indonesia economic growth in the long run through labour productivity improvement. However, school integration may not be effective for areas on scattered small islands due to limited transportation links between islands even though the distance is getting closer to school integration.

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Patterns of Mediterranean agricultural water impacts in the context of the second globalization

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Abstract

During the twentieth century, the Mediterranean basin experienced an intense integration in global markets, becoming one of the largest agricultural and food suppliers in the world. This expansion was particularly intense during the second wave of globalization, and was possible thanks to the increasing consumption of water resources, hand-in-hand with irrigation development and modernization.

This study aims to evaluate the impacts that the Mediterranean agri-food trade specialization exerted on water resources between 1975 and 2015, focusing on the second globalization. Concretely, we would like to approach to the economic, technological, productive and commercial factors behind the growing pressures on Mediterranean water resources. Likewise, we would like to focus on the divergences between northern, eastern and southern Mediterranean countries, stablishing regional patterns in terms of the socioeconomic drivers of this process. To that aim, we will use bilateral trade time series with a high product disaggregation detail, which combined with decomposition analysis, make up the methodological setting of the study.

Some preliminary results show that most (over 85% of the total growth between 1975 and 2015) of the growth of Mediterranean water consumption associated with agricultural and food exports happened from the beginning of the twentieth century. This expansion was mostly driven by the great increase in extra Mediterranean exports, mainly from southern and eastern areas. These divergences also appear when evaluating the determinants of the flows. In northern European Mediterranean countries, the trade expansion, and a considerable structural change towards the production and trade of water-intensive agri-food products, were essential to explain the consumption of water resources. On the contrary, the pattern in southern and eastern regions was more erratic. We observe a clear scale effect, an increase in the water intensity of exports that would point to a decreasing efficiency in these trade flows, and also, to a strong origin effect, indicating that exports come from the most water-intensive countries in the region.

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Kigali and the secondary cities as a polycentric green structure for Rwanda

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Abstract

The last decades have shown an African rapid urbanization's rate culminated with the appearance of extraordinary growing metropolises, a process that inevitably raises the need of preventing the cities' collapse and implosion re-thinking their urban future. In the East African Region, Kigali, the capital city of Rwanda, first responded to this issue through the adoption of a national and urban sustainable plan primarily directed to the achievement of the 11th Sustainable Development Goals (SDG). In fact, the country is structured according to a system of secondary cities – Musanze, Huye, Muhanga, Rubavu, Rusizi, Nyagatare, revolving around Kigali revealing the adherence to a polycentric planning model scaled at different levels.

Starting from the assumption that the city builds and shapes itself over time, Kigali is experiencing an urban rebirth boosted by a series of master plans, 2007, 2013 and 2020, that are tracing its transition to a sustainable satellite city composed of green settlements. After the analysis of the transition to green architecture and an *excursus* on the adopted policies it is described the geographical and historical background and context. Furthermore, it is studied the use of a well-known urban development plan, the satellite city combined with the needs of “make cities inclusive, safe, resilient and sustainable” where tradition and modernity have to find the way to establish an architectural dialogue. The satellite city model was applied in the development plans of regional cities in adherence to the local environment providing interesting case studies for contemporary projects in the same area. Three settlements in the capital city – Kigali 2020, Kigali Vision and Green City Kigali are explored as urban examples of the green strategy together with the proposed master plans for the secondary cities. Therefore, the research explores both the capital city and national urban development as sustainable steps towards a green future, for a harmony between the natural and artificial environment, demonstrating the need of an adequate political action in order to guide the achievement of the Sustainable Development Goals.

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Rural development and rural tourism: evidence from Madeira

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Abstract

The economic survival of rural and peripheral areas is still a matter of concern in most western countries. Depopulation, low density of business activities and the emigration of the younger and most entrepreneurial minded individuals are a good indicator of the problems faced by rural spots. In this regard, rural tourism has long been understood as an effective catalyst of change in depressed areas based on the exploitation of a unique set of amenities. Most peripheral areas are now relatively well endowed with accommodation facilities after decades on investment in brand new road systems and other amenities. Nevertheless, the tourism lead approach produced mixed results due to low levels of demand in some areas, a high level of leakage and the lack of a cooperative behaviour amongst providers to maximize the opportunities offered by the wide range of attractions. In a number of instances, results have been disappointing until recently. In this paper, we analysed the recent evolution of the tourism sector in rural spots in Madeira in order to detect similarities and dissimilarities in terms of the overall growth dynamics, based on times-series analysis. This paper provides an empirical investigation of the evolution the rural tourism sector, from 1995 onwards, and an overview of the Madeiran economy. This research is theoretically based on the literature on tourism-led growth growth and the methodology adopted is that of the integration, cointegration and multivariate Granger causality tests. This paper provides an opportunity to provided data on the likely impact of the ongoing round of investment in the rural hinterland. This paper also provides unique insights about the impact of the development of amenities in rural areas in a tourist destination still learning how to best promote alternative market niches. Madeira Islands, one of the oldest tourism

destinations in Europe can operate as a labouratory to test and analyse new solutions in terms of development of peripheral areas.

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Determinants of attendees' expenditure: an analysis from a local economy point of view

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Abstract

This study aims at investigating the determinants of expenditure participating in a number of well-known events staged in Madeira. In order to identify the most important variables we run a number traditional of econometric approaches, based on a database containing information on 3200 attendants to a portfolio of events. The results suggest that the benefits accruing to the local community will be enhanced by promoting in a synergistic way a number of initiatives and resources aiming at a specific market niches, namely the senior market. The events under analysis share to a certain extent a number of commonalities and similarities such as being rooted in the cultural traditions of the island and a similar average background in terms of visitors' profile. Events are expected to contribute to urban regeneration, commercial development, generation of income and creation of employment. Therefore, besides taking a prominent role in the overall tourism development strategy, events must also take a noticeable place the overall economic development strategy. Therefore, in this study we discuss in a tentatively manner a number of steps aiming at linking the tourism development strategy with initiatives aiming at developing the local economy.

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Riots in Mumbai: Complex Interaction of Vulnerable Communities

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Abstract

Varshney (2002) argues that about 95% of Hindu-Muslim riots in India till 1995 have been in Urban Centres, especially major urban centres of the country. Mumbai has been one of the Western Indian megacities which has faced highest numbers of Hindu-Muslim communal violence with devastating consequences. These violence in the city have been analysed through various lens including Hindus and Muslims as two opposing blocks pervaded by political interests. However, the complex relations between Hindu lower castes and Muslims have not been examined in detail as has been done elsewhere specifically in the case of Gujarat riot in 2002 (Shah 2002). The present study, therefore, attempts to examine the complex relations which have unfolded between the lower caste Hindus and Muslims in the city and how does that translate in turning the lower caste Hindus into 'foot soldiers' to attack Muslims. This is important in the backdrop of the fact that Hindu lower castes and Muslims have largely have similar lower level of development be it education, employment, housing, or household asset base. Many scholars and political parties have attempted to draw possibility of class-based alliances between them and occasionally these alliances have worked as in Gujarat during 1970s and 1980s, in Uttar Pradesh during 1980s and 1990s or in Bihar for a long time from 1970s to till date.

The question then is what prompts them to cannibalise their own class? Whether religion-based identity become a stronger marker during riots than class identities? How are the caste barriers overcome during these riots and ideologies of a sections of upper castes is accepted by the lower caste Hindus, who otherwise are in conflict with them to secure their own social space within the caste hierarchy? How and why everyday normal social transaction between lower marginalised caste Hindus and Muslims breaks down during the riots? How are the spaces occupied by the Hindus and Muslims get designated during the violence and bodies inhabiting these spaces get marked and identified?

The present paper is structured along these important questions. The data for the paper are drawn from relevant studies on Hindu-Muslim riots in the city since 1901 till date. However, special focus has been on the Hindu-Muslim riots during 1992-93 in the city, which was one of the most violent riots city experienced after the independence. The study has used the ethnography and in-depth interviews with Hindus and Muslims in different localities of the city (specially in Dharavi and Byculla, the two localities which witnessed massive violence but are inhabited by the marginalised sections of the population from both the Hindu and Muslims) to understand the spatial interactions/conflicts and boundary formations during the communal riots.

The study employs various theoretical postulates to explain the causes of the riots and that range from electoral return theory of Wilkinson (2002), civic association theory of Varshney (2002), essentialism, constructivism, instrumentalism, and institutionalism (Upadhyay and Robinson 2012) to 'aspiration for a broader identity and a larger political role' theory by Engineer (1994).

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Exploring New Deep Learning Architectures for Building Footprint Extraction

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Abstract

Mapping the building footprints can play a crucial role in urban dynamics monitoring, disaster management and transportation planning. Available free building footprints, like OpenStreetMap, provide manually annotated building footprint information for some urban areas, however, most frequently it doesn't cover entirely urban areas in many parts of the world and is not always available. Therefore, high-resolution Remote Sensing imagery, with a huge potential for meaningful ground information extraction, can be considered as an alternative and a reliable source of data for building footprint generation.

Therefore, the aim of the study is to explore the use of satellite imagery data and some of the state-of-the-art deep learning tools to fully automate building footprint extraction. To better understand the usability and generalization ability of those approaches, this study proposes a comparative analysis of the performances and characteristics of one of the most recent deep learning models such as Attention-Unet for building footprint generation.

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Prioritization Cities in Bangladesh for Bus Rapid Transit (BRT) Development

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Abstract

In Bangladesh 30 district/divisional cities, apart from the capital Dhaka, have population above 100,000. None of these cities have a good, high capacity public transport system. But considering their socio-economic, demographic and urban characteristics and comparing with other cities in the world having Bus Rapid Transit (BRT) system, it is thought that in some of them BRT should be introduced. But a simple and least data requiring methodology - without going to detailed traffic and transportation surveys - to identify and prioritize cities for BRT development is absent. The study has developed a methodology based on available data. At first 27 criteria, having implications in operation of BRT in different cities of the world, had been identified. In consultation with experts and considering local context the number of criteria was reduced to 15 and they were divided in 5 broad categories. In the 2nd round the same experts were requested to put weightage to each broad category and factors in each category. Using AHP the priority of each category and factors were calculated. The respective priority scores for the five categories and factors within each category are as follows: economy 0.262 (Inverse of

Poverty rate in the district 0.166, No. of Non-agricultural establishment 0.096); regional/ surrounding context of the city 0.215 (Number of 'A' & 'B' type municipalities 0.091, number of Growth Centers on or within 500 meter of RHD/Upazila road 0.124); major Activity center/ land use 0.193 (number of EPZ and Economic Zone in the district 0.046, number of universities/tertiary education & Vocational centers 0.051, number of specialized hospitals, 0.095); transport related factors 0.173 (presence of airport in the district 0.056, number of upazilas/sub-districts having railway station 0.047, motorized passenger traffic volume in the RHD road 0.019, average commercial vehicle per day in the Upazila road 0.029, total number of registered motor vehicles in the district for the last 10 years 0.021); and demography 0.157 (average population density of 'A' type municipalities 0.040, share of population engaged in industrial activity 0.074, growth rate of population engaged in non-agricultural activity 0.043, number of 'A' & 'B' type municipalities 0.091). Based on these criteria and weightages composite weighted index for 30 cities were made. It has been found that in one city – Chattogram, BRT is an overdue, while among the rest six cities currently require BRT, 13 cities require in near future and 10 cities yet to require.

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Jaipur: An emerging entrepreneurial metropolitan region of the Global South

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Abstract

Jaipur metropolitan region, in northern India, is famous for the splendour of its palaces, the beauty of its architecture and the skills of its craftsmen producing semiprecious stones, colourful textiles, carved furniture, and painted miniature. From this prestigious past, the city and its region have been able to integrate into globalization with an impressive concentration of prestigious heritage hotels welcoming international tourists, large number of gems, jewels, cloths and handicrafts industries exporting all around the world, not forgetting dynamic computer companies in which successful engineers works in day to day with technopoles in the US and elsewhere.

The region demonstrates significant churning out around learning and human skills and is fast becoming integrated through leisure and knowledge-based economy, technology, and entrepreneurship. Where the historical evolution and inter-generational transfer of knowledge of entrepreneurship adds to the regional advantage, in recent years with globalization and adaptation of digital technologies, there has been constant adaptation to the new trends in production, business, and trade.

The proposed paper aims to analyse the process of learning, adaptation, and innovation in this rising Indian city and in its surrounding, foregrounding the links between a thriving regional culture and a set of strong business communities. Going beyond the debate on the genesis of global productive networks, the research within the framework of learning region (Hirsch et al. 2001) and regional innovation system (Asheim, Smith and Oughton 2011), attempts to explore the case of Jaipur within the framework of entrepreneurial and innovative metropolitan region as an area of established business groups, specific resources, and effective knowledge with global economic networks and processes. Such entrepreneurial metropolitan regions are rising in the global South and have now started to compete at the world level.

There are three key questions around which the paper is structured. What are cultural capitals of the region which enhance its advantage in entrepreneurship? This question seems unclear to me. Do you mean cultural factors? What are the nodes around which human interaction get organized for mutual learning and adaptations to the new business environment? How external knowledge (proposition) to the regions are inserted and adapted to make the regional innovation dynamic and entrepreneurship competitive?

The paper as such also implicates not only the human interaction but how also the role of new technologies and the networks of globalised market system.

The data for the paper are drawn from both the government and non-government statistics on enterprises, innovations, businesses, trade and networks, and in-depth structured and semi-structured interviews with senior business group officials and entrepreneurs. For the regional history, the paper learns from other relevant literature.

The paper draws methods from previous studies related to the network analysis of business firms (Godesiabois 2015) and frameworks of 'learning region' and 'regional innovation systems'.

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Sustainable urban mobility infrastructure in cities of the Global South: Evidence from Mumbai Metropolitan Region

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Abstract

The Global South is undergoing an urban revolution in terms amassing people in cities and also massive building of cities (Datta and Shaban 2016). However, this urban revolution is characterized by what Albert O Hirschman (1958: 89) called 'disorderly' and 'compulsive' development as this amassing of the population in cities is not preceded by the infrastructure development, rather its following of the demand in gradual and piecemeal way, be it housing, water supply, educational or health infrastructure. Among these, the congestion and unplanned development of the cities, accompanied by the lack of resource allocation and sustainable policies of urbanization, have created enormous issues to urban transport infrastructure and mobility. Indian cities are typical example of this symptom and can be called as architypes of this problem.

The present paper examines the urban mobility policies, modal transportation and development in Mumbai Metropolitan Region (MMR). The paper demonstrates that Mumbai, the financial capital of India and the core of the MMR, could not keep pace with the infrastructural requirements for the urban mobility and in recent years it has become more exclusionary and 'disorderly'. The paper is based on review of the policy for urban mobility in Mumbai Metropolitan Region, specifically the Mumbai Municipal Corporation, and data on the commuters and means of transportations from various departments of the Government. The factors determining the urban mobility will be identified from the existing literature on urban mobility which will be used to select indicators like "passenger-carrying capacity, public-private carrying capacity ratio, vehicle density by area, vehicle density by population, energy intensity of travel"(Reddy & Balachandra 2011) to measure the pattern of urban mobility. Interview schedule will be used to collect data about the users of different modes of transport and their opinion about the available transport facilities. Samples will be drawn from different age groups and gender as well as from different occupational background. Also, in-depth interviews of the people using various mode of transportation like suburban railways, metro rails, city buses, autorickshaws, motorbikes, cycles, and pedestrians in the MMR will be conducted. The mobility of the population from one area to different area will be assessed from the information collected from local transport authorities like BEST, Mumbai Suburban Railways, Autorickshaws and taxi organisation. Data will be also collected from pollution monitoring bodies. The data obtained will be analysed using suitable statistical techniques like Cluster Analysis and Principal Components and Factor Analysis.

The paper demonstrates the 'disorderly' nature of development of urban mobility infrastructure in the city. The disorderly here means delayed supply following the demand. The paper contributes to the existing literature on urban mobility in the Global South and demonstrates that sustainable urbanization in the Global South is seriously challenged by appropriate development of urban mobility infrastructure.

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Evolution of Regional Inequalities in Education, Science and Innovation Indicators in Brazil: a proposal for temporal systematization

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Abstract

For historical reasons due to its colonization process, but also institutional ones, including economic policy strategy, Brazil concentrated its industrial production base in the Southeast, followed by the South. These regions have different patterns of urban infrastructure; high industrial and service diversification, with a greater degree of integration and complementarity with each other, as well as greater technical progress and, consequently, greater productivity in average terms of the factors of production, including higher average salary. In contrast, the Northeast and North regions went through a process of delayed and incomplete industrialization. The average technology is less homogeneous among the productive sectors, with a lower degree of verticalization, interdependence and complementarity. The wage is relatively lower, as well. Furthermore, these regions concentrate greater deficits in the provision of public and semi-public services and urban and industrial infrastructure. A consequence of this process was a concentration of the higher education system and of the country's research, science and technology institutions in the Southeast and South regions of the country, with repercussions, also, in the geographic distribution of innovations and patents in the country, being possible to state that there are marked differences between the State and Regional Innovation Systems in the context of the National Innovation System. Thus, from the calculation of dispersion measures and spatial concentration indicators, this article presents elements that attempt to create a temporal systematization in the evolution of regional inequalities in the indicators of Higher Education, Science, Technology and Innovation in the country, which characterize the differences between the State / Regional Innovation Systems in the country. Considering these indicators, it can be said that the country has four very different moments. The first moment goes back to the beginning of the formation process of Higher Education, C, T & I institutions in the country, lasting until the beginning of the 1990s, where the concentration of these indicators in the Southeast and South regions is clear. It begins, still, in the beginning of the decade of 1990 and goes until the year 2000, with a sharp drop in the spatial inequality of these indicators between the Brazilian regions. A third moment, located between the first half of the 2000s and the years 2013 and 2014. With the maintenance of deconcentration, now more slowly. And the last phase, starting in 2014, which seems to point to a new reconcentration, still, how small.

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Informal Entrepreneurism in the Global South Cities: Case Study of Street Vendors in Mumbai

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Abstract

The concept of urbanization and economic growth are mostly discussed together in the literature. Entrepreneurship is an important component for economic growth because it creates new business/job opportunities and fosters economic growth through increased productivity. Compared to the cities of the North, Global south cities like Mumbai in India, Dhaka in Bangladesh represent modern urban spaces with distinctive remnants of a traditional structure. The presence of informal workspaces like street vendors, daily wage or contractual labourers represent this duality; they are often considered the residuals of a traditional backward economy and society. The recent literature has started to give importance to entrepreneurship which does not have the ideal characteristics. This includes entrepreneurship in the informal sector. Street vending can be also considered as a form of 'street entrepreneurship', whereby vendor's start-up a business venture/manage or own a business. This study, on street vendors, in three popular market places of Mumbai shows an interesting mix of vendors: some who are working on a subsistence basis and others who have turned their business into a profitable enterprise, willingly choose to work in an informal set-up and can be termed as commercial vendors.

What stands out is compared to the Global North, cities in India still do not recognize street vending as a legal occupation. Recently, the Street Vendors Act, 2014 was an attempt to legalize this occupation. However, it has added to the chaos and not resolved the question of effective rights, rents, and orderly and sustainable development of the city. In spite of the Street Vendors Act, 2014, the discrepancies and discrimination still continue. The social networks and relations of the vendors, thus, form an important part of their entrepreneurship and livelihood. Their daily negotiations with customers, local leaders and each other, influences their business environment. However, it is a fact that common spaces, especially the streets and pavements, in the city in the want to effective government policies are turning into tragedy of commons. They are facing increased occupation by the marginalised sections due to compulsive subsistence and survival questions. The lack of effective context-based urban planning to provide the spaces for hawkers, which form substantial share of

population in the city, results into this tragedy of commons. The better-off vendors enjoy the free riding behind the poor and marginal vendors. The lack of effective rent even from the better off vendors results in lack of maintenance of the pavements which adds to the disorderliness of common spaces and walkways. The paper, thus, also engages with the question of this tragedy both through the policy analysis and vending politics through collective organization of vendors.

Developing cases based on qualitative interviews and in-depth discussions with vendors, the paper attempts to show not all vendors are subsistent in nature, and how the nature and culture of entrepreneurship varies among the vendors which in turn gives rise to inequalities and a heterogeneity in the business environment of the vendors.

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The Role of Supply and Demand on Children Education in Developing Country: Evidence from Indonesia

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Abstract

Despite the interaction of supply and demand factors for attaining years of schooling, existing literature are mostly focusing only on one side. This study is to investigate both, supply and demand factors that have relationship with education attainment in a developing country with Indonesia as a case. This is to be the first contribution of this study to the existing literature.

The second contribution of this study is that it includes more detailed aspects of geographical setting as one of the supply-side contributor to schooling. In the existing studies, access to education mostly represented by the distance to the nearest school. In this study, besides distance to school, we introduce the spatial characteristics of the percentage of villages with hillside topography, and the percentage of villages with road transportation. This is important for a country like Indonesia, in which we situate our study. The country is the largest archipelago countries in the world with almost 17,500 island sprawls across it's' region. With a fairly large variation in geographic conditions, inequality in access to education between regions is one of the primary obstacles in improving schooling.

The third contribution of this study is that from the demand side, it revisits the demand factors on education attainment. This is essential since the demand landscape of schooling has been changing. For example, from the gender aspect, the schooling gap between women and men is narrowing. There is also a lack of consensus on other aspects from the demand side such as the effect of religion on years of schooling.

This study employs three-period representative data that cover more than 124 million observations for individual and household characteristics, its neighbourhoods and their interactions. We find parents income and education are essential for children education. The educated household head might have stronger preference and schooling decision on their children education since higher children education as household head education pass senior high school compare to those household spouse. Education gap between girls and boys are explain by children labour participation. When children require more time to work, then they have to give up more time on schooling. Boys are more likely to work, then they less likely has a higher education than girls. Additionally, household with larger family size, the more slum settlements and rural areas hamper children's education

To understand the schooling barriers in the countryside, we use distance to nearest school, road transportation and topography. An increase in the distance of 1 km from the village to the nearest school is associated with a reduction in the level of education of children by 0.02 years. The existence of land transportation in an area is an important factor affecting the level of education of students. The 1 per cent increase in villages that have land transportation is associated with increasing 0.035 years of student education. Children who are living on the hillside are less likely to have higher education as well.

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Trade with China: trade basket and economic growth in Latin America

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Abstract

The entry of China as a member of the World Trade Organization (WTO) in November 2001 deepened the Latin American (LATAM)-China trade relationship, based on the exchange of Latin American commodities for manufactured goods from China. On the other hand, China's presence in the U.S. market has also increased, generating a substitution effect of Latin American goods for Chinese goods in the U.S. market. This paper presents two objectives. The first is to analyse the impact of the composition of the LATAM-China trade basket on the economic growth of Latin American countries. The second is to verify the effect of China's share of global imports from the United States on the economic growth of Latin American countries. Based on a Cobb-Douglas production function, productivity is expressed as a function of exports to China, imports from China, China's share of overall U.S. imports, and other control variables. Exports destined for China are disaggregated into: (1) commodities, (2) low-tech manufactures and, (3) medium and high-tech manufactures while imports from China were broken down into: (1) consumer goods, (2) intermediate goods and, (3) capital goods. Non-exporting GDP to China is used as the dependent variable to remove the effect of exports on the national accounts. Regression analysis techniques are applied with panel data on 23 Latin American countries for the period 2002 - 2017. Considering the structural differences between countries in the region, the exercises are applied in two separate panels, one corresponding to South American countries (SA) and the second to Mexico, Central American and Caribbean countries (MCC). The results indicate that: (1) exports destined to China and imports from China exert negative and positive effects, respectively, on LATAM economic growth. The negative effects of exports to China are attributed to the commodity sector and low-tech manufactures while the positive effects of imports correspond to the three types of imported goods. The effects according to the composition of the trade basket are heterogeneous between SA and MCC, (2) the competition effect with China generates negative effects on SA's economic growth. The Latin American region needs to concentrate efforts to increase the share of medium and high technology manufactures in its export portfolio, in order to face the changes in international trade patterns both as a trading partner and as a competitor.

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Migrants, Media and Urban Spaces in the Global South: Exploring Representation and Marginality

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Abstract

The urban turn in Global South and its neoliberal transformations are clearly predicated on the labour of millions of rural-urban migrant workers. This migrant work is intimately connected to varied dimensions of urban spatiality like gated residential societies, public spaces, consumerist everyday lifestyle, urban mobility, etc. Yet, in complete contrast, the migrant life and circumstances are dictated by layered human interaction where moments of inclusion and exclusion, security and insecurity, and legality and illegality are played out in a nuanced manner. Within these complex interactions and lived experiences, the media representations and imaginaries of the emerging neo-liberal urban landscapes and lifestyles, the labour migrants remain largely marginal. In such a context, the representations of the migrant in the city are not just a media practice but are strongly intertwined with urban spatiality and social practices. How do media discourses on urban space locate migrant visibility/invisibility? How do these discourses position the migrant's claim to the city? How does this affect the structuring/transformation of urban space?

To probe the media representation of migrants in urban space, the content analysis of media texts in India will be done. The news texts (N=300) are selected from English language newspapers and relate to three events/themes:

the redevelopment of the slum settlements in Mumbai (period: 2015-2020), dumping ground fire incident in Mumbai (2018), and the COVID linked migrant flight in India (2020).

The key constructs for analysis include 'migrant salience' and 'effects on the migrant in urban space' in media discourse. Migrant salience or migrant assimilation in urban space is an aggregation of variables like migrant voice, migrant attributes/labels, migrant role in urban development, and migrant actions in city space. Effects on the migrant or actions on the migrant in urban space is an aggregation of the following variables: visibility to issues of migrants, contention with middle-class, relocations/demolitions of urban settlements, and legitimacy to law and order actions on the migrant body. These variables are coded (range of +/- value coding) from the sample news texts.

The paper hypothesizes that the variables are largely disposed towards negative scores. Key hypotheses include:

H1: The media discourse of the migrant in urban space is alienating (Low Migrant Salience/Assimilation) which leads to exclusion (Negative Effects) for migrants in urban space (Theme 1). It gives a sense of legitimacy for the distinction with the citizen and governmentality which acts on the migrant as the 'other'.

H2: These low scores escalate in particular cases (e.g. in Event/Theme II and Event/Theme III, compared to Theme I), when the distinction of the migrant with the citizen increases, and so does the apparent legitimacy for governance actions over the migrant body (Higher Negative values for Effects).

The discourse on the migrant in the city is not just representative of practices rooted in marginalization and othering, but it works towards constituting an urban space that disaggregates the urban world of the migrant from that of the discourse of a lifestyle or a smart city.

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A Spatial Quantile Regression Analysis of Housing Prices in German Regions

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Abstract

The aim of the paper is to identify and establish empirical facts on the determinants of real estate prices by analysing spatial regional data. We provide empirical analysis on the panel data set of 401 German regions for the period 2004 – 2018 taking into account their relative geographical location and prices. The main contribution of our paper is the analysis of determinants and spatial effects in housing prices, taking into account whether regions belong to high-prices or low-prices cluster.

The panel dimension of the analysis allows to account for regional heterogeneity, whereas spatial regional dimension catches the interaction of close-located regions: how shocks in real estate price determinants in neighbouring regions affect the housing prices level and to what extent the shock in one region is expanded to other closely located regions. Finally, spatial quantile regression reveals the differences between the high-prices and low-prices regions. Taken together they provide a unique opportunity to analyse the fundamental factors affecting real estate prices from different perspectives.

First, we investigate whether real estate prices in German regions experience spatial correlation and whether this correlation is connected to the fundamental factors of the real estate prices. We find factors from the demand and supply side that affect housing prices. The prices may be influenced by socio-economic factors, such as the share of the population with higher education, purchasing power, the quality of human capital, which affect the level of development of the region's economy and in turn affects the real estate prices. Second, we perform spatial econometric analysis, applying SDM, SAR and SEM models, completing the estimation with the spatial quantile regression.

The results of the analysis suggest that the demand-side factors increase the housing prices in most cases, supply-side GRP per capita causes the decrease. At the same time, the magnitude of commuting flows may increase as well as decrease the prices depend on where the change is happening, inside the region or in neighbouring areas. Spatial allocation of regions plays an important role in real estate pricing: regions located close to regional centres benefit from it, which is easily accounted for by spatial correlation. We also find spatial effects for the determinants: a demand change in a region affects the price also in the neighbouring regions. From the spatial

quantile regression analysis, we expect that regions with higher prices are more sensitive to infrastructural or policy changes, whereas low prices regions experience a more sluggish reaction. More than that, positive spatial dependence is higher between regions with high housing prices and lower for less attractive regions.

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The construction of a territorial (environmental) governance index for the Brazilian Amazon region

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Abstract

Brazilian environmental public policy has advanced in an attempt to control illegal deforestation in the administrative political region called the Legal Amazon over the past twenty years. The environmental governance structure in the region was improved, such as the creation of conservation units, tightening environmental legislation, improvement in the systems for monitoring, inspection and control of deforestation, including the performance in illegal deforestation combat carried out by government agencies such as IBAMA, the federal police and the military. In addition, networks and channels for popular participation in civil society councils and associations were strengthened. In spite of this the enforcement capacity is not sufficient to dealing with the deforestation problem in all its dimension and complexity. Considering this scenario, through Factor Analysis and Principal Component Analysis, this article builds an index of territorial (environmental) governance in the Amazon to assess environmental governance in that region. This index was composed by six governance sub-indices estimated to reflect local dimensions, namely: Governance Capacity; Effectiveness and Control of Deforestation; Living Conditions; Productive Structure; Government Intervention and Social Participation. After that these sub-indices was used to study spatial correlations between them, applying the Exploratory Analysis of Spatial Data (Moran's I and Lisa Map.). The main results of this index confirm relative weaknesses in environmental governance in the Amazon region, especially with regard to the dimensions: government capacity and government intervention, but with significant spatial differences in their municipalities. Otherwise, the results also revealed that the municipalities with greater social participation, cooperation and social cohesion (high-high Social Participation) are confused with those with greater ability to govern (governance capacity) and government intervention, with local influences more relevant among the municipalities of the southeast of Pará, southwestern Tocantins and Mato Grosso, and among the municipalities of the metropolitan area of Manaus, mainly.

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Sustaining the Creativity and Innovation: Chikankari Industry of Lucknow

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Abstract

In urban studies literature, the Global South towns have not found their due place with respect to the agency and creativity. They have been often considered as dormant, traditional, subordinate and less modern and innovative than the towns in the Global North. Robinson (2006) demonstrates that all the towns need to be understood in their context and also read through the lens of alternative modernity. From this latter perspective, many of the Global South towns can be considered possessing their own modernity and creativity. Lucknow is one such town which has been historically famous for its creative arts and in contemporary times hosts one of the leading creative embroidery sector, called Chikankari. Inspired by the Turkish embroidery, the Mughal empress *Noor Jahan* introduced Chikankari craft in India during late fifteen century AD, which flourished in Awadh region with local block printing techniques. During colonial rule Lucknow was a major centre for agriculture and art and craft

industries like jewellery and embroidery clothes. Now, Lucknow and Chikankari is synonymous with national and global recognition by complementing each other as a brand.

The creativity among the workers is produced from human interaction process. The first interaction is learning within the family and neighbourhood from elderly, that is inter-generation process of knowledge transfer. The second major source is external that is, interaction with the contract providers, designers, buyers, and visit to the local hats and exhibitions. However, now-a-days the internet has become major source of receiving the design, videos how to produce the design, etc. A large share of Chikankari workers are women from Muslim community, and due to patriarchy and *Purdah (veil)* system they are immobile, which creates their dependency on external contractors. However, use of mobile phone and digital technologies are easing their interaction even from the four walls of the house.

This proposed paper will attempt to examine, (a) how for generations the creativity among the workers has been maintained in the city through the inter-generational transfer of knowledge, (b) what are the ways the external knowledge are constantly brought in to shape the products to maintain the relevance of the products to the market, and (c) what are the ways the workers benefits from this industry and whether the digital technologies (for communication, design, imitations, etc) and emerging globalization of the products have helped them to improve their wages and prospect of the industry.

The study through light on how human interaction is essential for the creativity and sustaining the creative products in a globalised market system. It also throw shows the causes of chronic deprivation among the workers of the Chikan industry, which if not resolved may undermine the creative city nomenclature of Lucknow.

The study will help us to understand the churning out taking place within the industry and impact of technology and globalised market system on the industry. This will also help us to understand the kind of policies needed to sustain the industry.

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Economic Analysis of Solar Irrigation Pumps: Evidence from Northern Region of Bangladesh

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Abstract

Bangladesh is heavily dependent on traditional energy sources and imported fossil fuels. Renewable energy technologies are promoted to satisfy the country's rural energy needs mainly as a form of solar home system and solar irrigation pump. As an agriculture-based country, irrigation is vital for ensuring agricultural production sustainability in Bangladesh, and solar irrigation pumps (SIPs) can be a reliable option in this regard. Solar irrigation is a time-saving, pollution-free, and regular irrigation option than the diesel operated ones. It protects the environment from air and sound pollution as well as water contamination by diesel. However, there is significant dearth of studies in this regard that provide economic analysis of the solar irrigation pumps. Thus, this study investigates the economic feasibility of the solar irrigation pump in the northern region of Bangladesh. The study is mainly based on primary data collected from the users and non-users of solar irrigation. The data have been collected from six unions of three Upazilas under three districts- Dinajpur, Rangpur and Bogra. 50 solar irrigation pumps (SIPs) with different capacities are selected randomly from the study areas after collecting the list of all solar irrigation pumps from Infrastructure Development Company Ltd (IDCOL). Then, five irrigation service takers from each SIP have been selected. In addition, data are also collected from 100 non-user farmers. As analytical tools, life cycle cost analysis of different energy options of irrigation, standard financial analysis of different solar pumps, the two-sample t-test and a binary logistic regression model were employed. The results show that the calculated annualized life cycle cost (ALCC) for 3 HP solar, diesel, and electrified pumping systems were BDT 38042, BDT 94861, and BDT 27740, respectively. ALCC of diesel operated pumping system has been found almost 2.5 fold higher than the ALCC of the solar PV pumping system. Thus, the farmers' irrigation cost would reduce substantially if solar pumps replace the diesel pumps, and small solar irrigation pumps are the most profitable option for investment. The SIPs contribute to higher yield of Boro rice production as is found in the study. From the binary logistic regression model, it is found that 'education', 'size of operational landholding', 'investment plan for renting', 'loan for agricultural investment' and 'attitude towards solar irrigation pump' are

the factors posing positive influence on the SIP adoption decision. The study provides the conclusion that giving subsidy to expand the use of SIP would prove to be a justified policy option in Bangladesh.

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Environmental Amenity and Rental Value of Houses in Rajshahi City: A Hedonic Pricing Approach

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Abstract

Environmental amenities are great economic resources and an important determinant of rental value of houses in the urban areas. However, measuring the value of environmental amenities is a complex issue and studies on the assessment of value of environmental amenities in the context of house rental market in Bangladesh are very rare. Although there are different factors affecting the rental value of houses, tenant households often value the environmental amenities associated with the houses while renting a house for living. In the literature of environmental valuation there are different methods that are frequently employed by the environmental economists to measure the value of environmental amenities. This study is an effort to investigate the determinants of rental value of houses and to measure the value of environmental amenities in connection with rent of houses based on Hedonic Pricing approach. The study is based on primary data collected from 210 urban households who live in rented houses in Rajshahi City Corporation Area selected on the basis of random sampling technique. The findings show that there are four types of factors- income of tenant, house structure characteristics, neighbourhood characteristics, and environmental amenities that determines the rent of houses in the study area. In this study, environmental amenity (dinamenity) includes the conditions of ventilation, open space proximity, drainage management, waterlogging and waste landfill. The disaggregated results show that in the planned housing areas, the influence of proximity to open spaces on house rent is 29.04% higher than that in unplanned housing area, and the influence of ventilation on house rent in planned residential area is 15% higher than that in unplanned area. The willingness to pay or hedonic value of environmental amenities in overall, planned and unplanned areas are found as BDT 146.16, BDT 333.16, and BDT 50.69, respectively, in excess of the average rent value of houses. It implies that tenants living in planned residential area are more conscious about environmental amenities and their hedonic valuation for environmental amenities is higher than tenants living in unplanned areas. Finally, the findings have the implication that improving environmental quality boosts house rent, which in turn fascinates environment-friendly urbanization.

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Impact of Subsidy and Credit Supports on Productivity of Marginal and Smallholder Rice Farmers: A Propensity Score Matching Approach

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Abstract

In the agriculture of Bangladesh, marginal and smallholder farmers comprise the largest group, whose performance, in terms of productivity, plays crucial role in the growth of this sector. To increase the productivity of marginal and smallholder farmers, government has been providing direct subsidy and credit supports to selected farmers for last several years. While direct subsidy and credit expectedly have positive impacts on farm productivity, there are other factors also, which can affect agricultural productivity. Therefore, this study aims to analyse the impact of subsidy and credit on the productivity of marginal and smallholder rice farmers in Bangladesh. For the study, primary data are collected from 1200 marginal and smallholder farmers from five districts of Bangladesh. Considering the existence of endogeneity and self-selection bias in the covariates that

generally occurs in a non-random experiment, the study employs Propensity Score Matching (PSM) approach to observe the net effects of subsidy and credit on productivity of the farms. The results show that after balancing the covariates, subsidy and credit have significant contributions to the productivity of rice farms as average treatment effect on the treated (ATT) in both cases, *Boro* and *Aman*, are positive and statistically significant. The findings justify the government's decisions to support the farmers through channelling of subsidy and credit. This study came up with the suggestion that both horizontal and vertical expansions of subsidy and credit supports are needed to increase agricultural productivity in Bangladesh.

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Aspiration of Migrants and Return to Human Capital Investment

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Abstract

Migrants are known having higher aspiration than non-migrants. In the previous studies, migrants are believed adjusting their aspiration to the new income to that of a new reference group. One conventional explanation stated that if the gap of aspiration is higher than the change of income, migrants will be trapped on hedonic treadmill phenomenon. Furthermore, migration can be viewed as a process of human capital investment. Migrant assume cities can be viewed as a place to accumulate human capital. So that by doing migration, migrants will be experienced an increase of aspiration. This study will test the phenomenon of changes in migrant's aspiration through both theoretical approaches using IFLS data 2007 and 2014. This study uses a variable that constructed by the different of migrant's current perception welfare level with 5 years to come perception and estimated using OLS, Ordered Logit and Village Fixed Effect method. The result show that the phenomenon of change in migrant's aspiration can be explained through both theoretical approaches. This study also proved the existence of hedonic treadmill phenomenon in migration activity.

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Democratic Participation in Negotiating Urban Public Space in India: Coexistence of Collectivism and Individualism among Street Vendors

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Abstract

This article explores how street vendors negotiate with different classes of people to sustain in urban space. Vendors' rights to use and appropriate public space have long been proven to be crucial to the emergence of intensive street life and productive urbanity in many cities of the global south (Bromley, 2000; Saha, 2017; Kamalipour and Peimani, 2019). Collectivism and individualism are discussed to understand workers' bargaining process within industrial relations framework (Olson 1965; Tilly 1978; Martinez Lucio and Stewart 1997; Kelly 1998; Beck and Beck-Gernsheim 2002; McGovern 2003; McBride and Martínez Lucio 2011; Taylor and Moore 2014). This study shows how street vendors as informal workers are practicing these interests as methods of negotiation to survive on the streets of urban India. Drawing case studies from New Delhi (North), Mumbai (West), Kolkata (East) and Guwahati (Northeast) during 2007-2021, the study examines the processes and natures of various forms of collective actions that vendors practice on the public space while vendors as a socio-economic group are discussed from researches conducted by the author during 2010-2019 using mixed methods research (MMR).

Vendors co-opt quasi-relationship with various stakeholders — civic authorities, service providers, fellow workers and customers— where class difference exists. Contrasting interests of individualism and collectivism are co-existed through self-devising strategies, participation, mobilization and organization. Unlike other cities in the nations of the Global South, labour market institutions (the Street Vendors Act 2014) legitimises reconstruction of binaries— organised/unorganised, legal/illegal and licit/illicit— and power relations, thereby re-defining urban governance structure for street vendors in India. Male vendors are more engaged with large-scale

operations, while females are engaged with small-scale operations selling perishable goods (Bromley, 1978; Agadjanian, 2002). As Saha (2017) argues, women's uses of public space are linked to the problems of vulnerability, intimidation, and insecurity posed by authorities, their male counterparts, passers-by, and customers.

A vendor exercises two kinds of bargaining – economic and social – across gender and class. Individualism and rationality are practised during economic bargaining for interest rates and bribes mainly among male vendors who sell products which has higher value. Collectivism are exercised by female vendors and those vendors selling lower valued products. Social bargaining is performed during collectivism to build social relations with different actors such as customers, other vendors and moneylenders. Thus, vendors exercise economic, political and social bargaining to form collective solidarity in acquiring controls over resources, accessing public spaces, and forming unions/other membership-based organisations to build relations and negotiate with various stakeholders, viz., vendors, shopkeepers and state. Vendors' collective interests are subdued in the class-based organisational structure. It can be protected through democratic process at the local level, thereby making collective and inclusive city.

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Woman Should Not Be Afraid to Work: The Study of Maternal Employment's Impact on Children's Educational Achievement in Indonesia

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Abstract

As the increasing of women participation in labour market for the last 20 years, many women in Indonesia have double status, being a mother and a worker at the same time. The effect of maternal employment to their children still becomes a debatable issue around society and researcher. This study analyses the effect of Indonesia maternal employment on the children's achievement in primary education. Using the 2nd-5th wave of IFLS (Indonesian Family Life Survey), about 1445 children have been used as sample research. National exam score of mathematics and Indonesia language from grade 6 (elementary school) and grade 9 (junior high school) has been used for the dependent variables. Maternal employment status is taken when children in elementary school entry age. Pooled cross section regression model is used to analyse this dataset. This study found that maternal employment status has a significant effect on children's achievement on Indonesian language score both of elementary or junior high school but it doesn't have a significant effect on mathematics regardless of any grade. Working mothers at this age have changed the quantity engagement time with children to the quality engage time. Internal factors such as higher motivation or existence of role model also become the reasoning of the positive result. Government and the private sector should formulate a regulation that can increase the parenting room and expand the development early education. Except asking help from the grandparents or relative's help to substitute their role, enrolling children to the kindergarten or early education could be a solution for working mother to avoid the disadvantage of their maternal employment status.

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The impact of international skilled migration on innovation resilience of Russian coastal regions

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Abstract

The highly dynamic and progressive regions around the globe all share certain commonalities – competitive industries, advanced infrastructure, and the inflow of talents. Despite being somewhat elusive and implicit, the competencies, ideas and creativity are continuously regarded as the drivers of regional growth. The processes of knowledge spillovers, innovation diffusion, and regional learning are all related to interpersonal communication. The development of coastal regions is particularly defined by the coastalization phenomenon, which stands for the attraction of human resources, economic activity and financial capital to the coasts. The aim of the study is to test the interdependence of international skilled migration with innovation development in the coastal regions of Russia. The research design is based on quantitative statistical data of the Federal Service for Labour and Employment (Rostrud), the SPARK-Interfax database on industry performance, and the Scopus database on research output. The sourced dataset is geotagged and processed in QGIS for identifying the spatial patterns. The incoming flows of migrant workers from abroad analysed in the article mainly represent countries with a visa regime for entry and are characterized by a high level of qualifications or a profession that is in short supply on the Russian labour market. Despite the numerical reduction of this cohort of workers in recent years, their concentration in the most economically developed coastal regions of Russia contributes to the human capital of the receiving territories. This effect is most noticeable at the level of individual regions, where the share of such workers in the labour market is most significant. At the same time, not only traditional centers of attraction in the most economically developed regions of the country (North-West and South of Russia) but also new local centers of attraction that have developed within the regions of population outflow (North and Far East of Russia) are attractive to international skilled migration. Highly educated migrants are concentrated in economically developed coastal regions with a high level of development of international relations (e.g. Kaliningrad region), while in the periphery, workers with secondary general, secondary, or primary vocational education are in demand. The study suggests that coastal regions attract skilled migrants giving an extra impulse for the regional innovation systems taking into consideration local specifics.

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Impact Evaluation of Vocational Training for People with Physical Disabilities on Employment Opportunities

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Abstract

This study examines the impact of vocational training, specifically for people with physical disabilities, who carried out in the Balai Besar Rehabilitasi Vokasional Bina Daksa (BBRVBD), also known as National Vocational Rehabilitation Center (NVRC), towards increasing employment opportunities for people with disabilities. By using pooled cross section data from 2014-2017 and probit model data analysis techniques, this study validates the hypothesis that there is a positive impact of vocational training on increasing employment opportunities for persons with disabilities, higher in 43.32% significant at alpha level 1 %. The level of education also has a significant positive impact on the level of 1% increasing the chance of being accepted to work for people with disabilities by 2.03%. There are 6 types of vocational skills held, the most accepted in work opportunities are sewing skills, followed by graphic design skills, computers, electronics, automotive, and metal work.

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The Impact of Income Gap to Migration Decision in Indonesia

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Abstract

Migrants make their decision whether to move or to stay are based on various motives such as financial or non-financial motive. Todaro, in his migration model said expected income of migration take a big part in migrant's decision making. They are tend to move if their expected income after migration exceed their income in current

place. The higher is this income gap, the higher migrant's propensity. We are trying to test the prediction of Todaro model for Indonesian study case. But, this research model have several problem like selection bias because information about expected income are available only after individual has already migrated. To overcome this problem, we use two-step Heckman to correct selection bias in the model. The main objective of this research is to analyse the determinants of migration in Indonesia and the impact of income gap on migration decision. This study shows that income differences affect the decision to migrate by households in Indonesia based on IFLS data.

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Education Expenditure and Economic Growth in Southeast Asia

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Abstract

The purpose of this study is to analyse the influence and direction of the causality between education expenditure and economic growth in Southeast Asia. This study used panel data from 11 countries in Southeast Asia in a period of 17 years. The method of analysis used in this research includes unit root test, panel cointegration test, model panel, and error correction model test. The results of this study during the period 2000-2016 indicate that there is a positive and significant effect between education expenditure, physical capital, and labour on economic growth in Southeast Asia in the long term. In the short term, only education expenditure and physical capital has a positive and significant effect on economic growth. Meanwhile, based on the Granger causality test, it was found that there was a unidirectional effect of economic growth on education expenditure. Furthermore, this research proves that human capital plays an important role in influencing economic growth in Southeast Asia.

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Determinants of Entrepreneurial Behaviour: Agricultural and Non-Agricultural Households in Indonesia

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Abstract

Entrepreneurship is the greatest employment opportunity that can be entered by all groups of young and old alike. To have an entrepreneur may be a diploma and academic performance is not the main prescription. This sector can become a type of formal work if the business undertaken develops by involving permanent employees in it. However, the work done by most people tends to be informal work because it is done without permanent employees or even the business is done alone. Many factors are behind a person to open a business or become an entrepreneur, so this research was conducted to see the determinants of entrepreneurial behaviour. Using data from the fifth wave of the Indonesia Family Life Survey (IFLS) in 2014, this study looked at two business models namely agricultural and non-agricultural businesses. The unit of analysis of this research is households in Indonesia with a lot of involving variables related to the Head of the Household. The model used is a cross section with logistic regression and marginal effects.

For the agricultural business model, this study uses several dummy variables such as gender, the main employment status variable whether having a job as an employee / labourer in the government/private sector. Health variables which is health/physical care, then ownership of mobile phones, ownership of internet access, ownership of electricity in the household, and location of residence whether in the village or city. It also uses the variables age, marital status, ethnicity whether Bugis, Minang, Chinese, Javanese, or others, and length of education and number of household members. In the second model, the model for non-agricultural businesses, the variables used are more similar to the agricultural business model, only slightly different by adding the ownership of the building/other buildings occupied

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Digital Innovation Hubs as new paradigm in Europe for digital ecosystem development in Smart Cities

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Abstract

Regional development in European Union have been connected to digital transition and the strict restrictions due to COVID made it even more significant. Consequently, the re-starting of a "new normal" operation of cities and regions require new methods for creation of more resilient communities and regional ecosystems alike. The new European network of Digital Innovation Hubs shall therefore provide a new layer of regional actors that can help primarily SMEs but also provide services to the public sector which shall open up new ways for cooperation between regions and cities.

The city of Szombathely in Hungary is a good example of smart city development with the support of the Intelligent Cities Challenge that brings together more than 100 cities in Europe with the objective to shape together the cities of the future in Europe. The Digital Innovation Hub in Szombathely is called am-LAB which was selected as the winner of the European Digital Innovation Hub Challenge in 2021. Consequently, the ecosystem in Szombathely is a good example of coordinated development initiatives for green and digital transition between the administration of the city and the regional stakeholders.

The first part of the presentation describes the key factors of success in Szombathely and the second part of the presentation compares it to similar cities in Central Europe with the objective to draw conclusions and make some recommendations for city planning.

Artificial intelligence shall be described as one of the key elements that shall guide the strategic planning of the sustainable and resilient cities therefore the human factor shall also be analysed beyond the technological aspects. The lessons drawn from the analysis can be used for practical implementation of smart city policies especially in cross-border zones of economic development activities.

Research actions with future scope for human-machine interaction that can complement the already realised work of the international team of researchers shall be presented in the final part of the presentation.

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The relevance of smart cities in assessing urban labour market resilience. A post-transition economy specificity

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Abstract

Resilience is a well-established concept that is used to assess whether a system has the capacity to respond to a variety of challenges. One of the dimensions of resilience is the labour market ability to overcome the perturbations imposed by internal and external shocks and improve its capacity to respond to it. The cities' characteristics in terms of infrastructure, demographics, socio-cultural, governance, mobility, standards of living in general, as characteristics that describe key features of a smart city, can significantly influence the resilience of the urban labour market. From this perspective, a focus on explaining spatial variations in labour market resilience by analysing the performance of urban areas is relevant in a geographical context of economic growth and development policies. This paper aims to assess the urban labour market resilience, the urban labour market resilience capacity and the relationship between the two, for the European Union's metropolitan areas from Eastern Europe. Also, the paper will follow the idea that this relationship is less significant for the borderline metropolitan region than for the most central ones. In building the resilience capacity index, we explored the extent to which key features of smart cities contribute to the evaluation of the resilience capacity of the urban

labour market. The urban labour market resilience will be evaluated by building an aggregate indicator, using variables that measure specific characteristics of a labour market for post-transition economies. A profiling of the metropolitan areas with different degree of labour market resilience will be identified, using key features that define a smart city, in order to understand the extent of spatial variation in terms of urban labour market resilience. A spatial analysis using a visualization tool, namely a self-organizing map, will be employed to assess the regional disparities between borderline and non-borderline metropolitan regions. Analysing the urban labour market resilience for a post-transition economy is considering the specificities of its labour market: the ongoing restructuring of the economy; the unemployment, especially for youth and female employment; massive migration of the workforce towards the Western developed countries. This approach can help investigating the possibility if a city with the key characteristics of a smart city can better cope with labour market shocks in a young market economy.

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Dutch Disease and Resilience – The Case of Croatia

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Abstract

The concept of the Dutch disease was for the first time used by "The Economist" in 1977 to describe the sharp rise in wealth in the Netherlands during the 1960s caused by the discovery of large gas reserves. After the discovery, there were negative effects on the Dutch production, mainly through the subsequent appreciation of the real exchange rate. Namely, as the revenue from exports rose, Dutch guilder appreciates having detrimental effect on other industries. Similarly, the rapid growth of the tourism sector can have possible negative effects as well. The availability of natural resources (such as national parks, nature parks, beaches, sunshine hours etc.) becomes a comparative advantage of the tourist product with subsequent specialization in tourism, neglecting other sectors with all the negative aspects such as real appreciation of domestic currency (decline in competitiveness), low growth rates of the industrial production, artificially high real wages, reallocation of production factors from tradable to non-tradable sector, the drop in the relative productivity of the tradable sector and similar. Such a scenario is possible to be seen in coastal part of Croatia and therefore the aim of this paper is to research possible indications of Dutch disease in Adriatic region of Croatia on the county level. Moreover, the aim is to scrutinize resilience power of those counties, especially in the context of current COVID-19 pandemic situation. Results of the paper should provide valuable information to policy makers whether there is a need to take a necessary policy decisions with the aim of managing negative consequences timely and preventing slower economic growth in the future.

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The trajectory of planned urban development: A case study on Rajarhat- Newtown, Kolkata

Angana Banerjee

India

Abstract

This article tries to figure out the how the co-production of formal and informal place within the planned boundary of a metropolis has stimulated a mixed kind of place. Rajarhat-Newtown, a planned township located at the periphery of Kolkata, is an outcome of unwitting plan by the government of West Bengal in mind 1990s. The west Bengal government has denied its status of being a 'smart' city and declared it as a planned green city. Interestingly the place fragmented into formal city places with contradiction of unplanned village pockets within its planned boundary. This research will try to find out what factor has prompted the existence of village pocket within the planned area and the interaction between them. To understand the dilemma related to the existing village pockets urban ethnography was used as a method. To unfold about the existence of village pockets; historical narratives from the villagers, interview from the HIDCO officials, and the published secondary

documents analysed. This analysis helps to understand about whether those existing village pockets are example of neglect of planning or it is a legacy of planning? It also tries to answer “informality from the very heart of state and as an integral part of territorial practice of state power” (Roy, 2009). Therefore, this paper tries to reflect about the place is neither “smart” nor “planned”. The transformation of rural place due to declaration of a planned township and the associated consequences will help to figure out the tyranny of planning and the trajectories of urban governance. Is this kind of urban development expands the city, transform rural places and generates a kind of mixed places (both urban and rural character) along the periphery of metropolis? It raises question in terms of planning, governance and sustainability. Thus it will help to understand the irony of planning, mapping-unmapping of a region and will try to figure out the actors and its interaction between how planned illegalities have reshaped a region and it helps to understand urban planning for India should be understood with the help of management of resources.

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The relevance of European funding in building regional economic resilience

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Abstract

An important objective of the European funds is to enhance economic development and to increase competitiveness of the European markets so that the regional economic disparities between the Member States are likely to lessen. These economic disparities are more visible for the borderline regions, as they are more likely to suffer from less administrative, economical or technological progress. The objective of this paper is, firstly, to estimate the effects the European Funds granted from the European Union have on the regional economic resilience, and secondly, to evaluate if the regional disparities between the borderline regions and non-borderline regions are likely to reduce under the influence of these funds. Considering the time period 2007-2020, which covers the budgetary cycle 2007-2014 that was hit by an economic crisis, whose effects are still visible today, a panel regression model will be estimated in order to assess to which extent the European funds contributed as a support-factor in building regional economic resilience of the European Union (EU). A visualization tool to spatially analyse the regional disparities will be further employed to assess the dynamics of the borderline regions in terms of economic development generated by EU funding. The results will add additional information to a body of research with inconclusive results, which did not manage to decisively state that this EU project effectively ensures a long term and sustainable economic development.

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Accessibility index to Italian universities

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Abstract

The Italian University Network for Sustainable Development (RUS) has carried out for the first time a national survey about university commuting. Thirty-seven universities joined the survey and almost 70.000 questionnaires have been collected. Years of academic mobility management policies and research show that universities may be seen as important players able to contribute to the definition of urban and metropolitan policies concerning mobility and accessibility. In this connection, the research shows the need to focus on students commuting in a comparative perspective in order to highlights the role of the universities – together with other institutions – in the mobility planning. The linkage between the right to education and the right to mobility makes it essential to sustain the latter in order to promote better academic performances, in a context characterized by high level of commuting and the absence of a serious national housing policy for students. The essay focuses on the definition of three synthetic indices: the accessibility index, the quality of life index and the sustainability index. After having identified the most important university areas within the Italian context, the

focus has been on the comparison among them in terms of territorial and structural features and, eventually, of the commuter's behaviour. Even though specific issues characterize each context, students preferably move by public transit. However, the accessibility index shows important differences in the access to the university. The index – which takes into account the time, the cost and the frequency of the travel – shows that the most accessible areas are Siena, Bologna e Pavia, confirming their nature of university towns defined by a high level of transfer students and active travel. The quality of live index – which summarize the accessibility index and the satisfaction of the travel, shows that the areas with the highest level of quality of live are both, the university towns and some regional university areas such as Milan and Turin. To conclude, the sustainability index provides a global assessment of the commute within the areas. In particular, it summarizes the accessibility and the quality of life indices, and additional elements such as structural features (density of public transport) and environmental features (kg of CO2 emitted per year during the commute). According to the quality of life index, the most sustainable areas are the university towns and some regional university areas such as Milan and Rome. The other areas are characterized by low levels of sustainability, due to the use of private modes of transport, greater home to university distance, higher level of CO2 emissions, and higher costs of the commute. In a context characterized by the increasingly relevance of the university in the field of the mobility management, studying university commuting is essential in order to identify new solutions to enhance the accessibility to the university and to promote sustainable mode of transport. In this connection, universities are no longer considered simply as attractors, but as active players within the governance of the mobility.

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'Gone with the wind'. Organised crime and the geography of wind and solar farms in Italy

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Abstract

The transition to low-carbon energy sources is considered as one of the key policies to tackle climate change and, to this aim, many European governments have been supporting the transition to renewable energy through subsidies. Growing anecdotal evidence suggests that the generosity of incentives has attracted the interests of corrupt politicians and criminal organisations, as the wind and solar energy sector offer attractive opportunities for mafias to benefit from public subsidies and to launder illegal money via legal business structures. Yet, no academic research has systematically explored the link between organised crime and the renewable energy sector at the local level. Our project aims to fill this gap. The analysis features innovative GIS data on the geo-location of wind and solar farms across Italy and on the local presence of mafia groups. Preliminary findings confirm how, in mafia-ridden regions, local criminal presence is strongly associated with a higher likelihood of hosting at least a plant.

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Transculturation and collective identity in subaltern spaces: Urban dynamics of the ethnic enclaves of Chitpur Road formed by multi-ethnic diaspora.

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Abstract

City's today are agglomeration of multi-ethnic communities. Heterogeneity of sociocultural attributes, activities and everyday life differentiates old city from the more contemporary quarters which possess a higher degree of homogeneity. Older neighbourhoods of the city display a complex special semiotics where people appropriate the social space through active participation and asserting their presence in the socio-spatial domain. Diaspora shift is not a contemporary phenomenon but happened extensively in the past, as a result *glocalised*¹ spaces are

formed. Humans are territorial, through cultural and social attributes they define the practical limit of physical territory and social meanings of existence. It creates an important process of self-definition and by differentiating the sense of self and non self they tend to claim agency in the physical environment. Streets, shops, pavements, living quarters are often customized acquiring an informal expression and social meaning, due to assemblage of people from diverse ethnic background and exercising a plethora of socio-economic processes creating ethnographic neighbourhoods. Thus, we realise there is a simultaneous negotiation between human activities and space that creates the phenomenology of the urban environment. Globalization in an old city like Calcutta has brought in diverse communities from across the globe who migrated along with their culture and occupational choice and settled within a distinct political boundary, thereby creating a diverse spatial semiotics in the everyday life on streets, shops, public spaces. Dynamics of capitalistic and neo-liberal urban aspirations are potentially posing as threats to the old quarters of cities of Global South. India's extensive economic and demographic growth queries what the old city cores (foundation cities, pre-industrial cities, and precolonial cities) can become in the future? These cores with their remarkable diversified urbanity are today under a double transformation: abandoned by the middle class and subject to brutal physical change by capitalist transformations.

2 anthropological perceptions of city could be understood in this kind of situation:

The interactional role studies behaviour lines that tie the social setting to the city and determine its evolution within a larger society. It would also reveal the performers of socio-cultural roles within an overall social organization. The ideological ties, eg. *pattern of values that bind this sub altern society to the city*. Here, rules would be studied, those composed the cultural roles of ethnic enclaves and its diffusion from the smaller cultural society to the city. The paper tries to analyse the transcultural effect of the subaltern communities, their collective identity and attempts of legitimising presence in the city. The conative, expressive, and phatic (Jacobson, 1960) expressions of spatial semiotics will be read along one of oldest streets of Calcutta-chitpur road. The research uses an ethnographic method through direct observation and participation observation method (A). The next step would be to understand the symbiotic relation between and space and communities through interview. The next step would be to understand how collective identity and a hybrid socio-cultural perspective played an important role in shaping up the urban environment embodying a localized set of everyday practices, social customs, interactional relationships, and cultural meanings?

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Probability of Public Works Shutdown: Spatial Influences and the Impact of Counterparts Received from Fiscal Decentralization

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Abstract

This work sought to identify the factors that influence the stoppage of public works carried out in the cities of the State of Pernambuco, Brazil, in the years 2016 to 2018. For this purpose, it was proposed to use a Probit Spatial Model, and its extensions, with the objective to investigate the effects of the various controls used and possible spatial spillover, since the behaviour of a local government official can be influenced by the behaviour of neighboring government officials. The main variable of interest was the value of the contributions received voluntarily by municipal governments from governments in other spheres of public power, for carrying out public works, through the signing of an agreement from the perspective of fiscal decentralization that suggests that the local government has better information about the needs of the population under its jurisdiction and can more efficiently meet local demands and generate a higher level of social welfare. The amount received by the mayors from the state and federal governments may be correlated with factors that can jointly determine the value of the consideration received and the chance of a public work being paralyzed. This time, as a way of controlling the endogeneity of the main variable of interest, instrumental variables were used based on the hypothesis of vertical interaction between governments, which would lead local governments with the same party affiliation as the state and federal governments to receive greater volumes of resources for carrying out public works through the signing of agreements and, thus, have less chance of suffering paralyzes in the works they execute. The data used were the public works carried out throughout the state of Pernambuco from 2016 to 2018, originated from the Court of Accounts of the State of Pernambuco (CAS-PE), the data with characteristics of the mayors and the local political scenario were from the Superior Electoral Court (SEC), and the socioeconomic data of the municipalities of Pernambuco, come from the Brazilian Institute of Geography and Statistics (BIGS). Thus, controlling the

regression model proposed by the characteristics of the municipal managers, the socioeconomic conditions of the locations where the works were carried out and its neighbourhood, in addition to the fixed effects of time and region, the results showed that works located in municipalities that receive greater compensation other governments are less likely to be paralyzed when party affiliation in common between governments is used as an instrument, since these instruments satisfy the criterion of relevance and exclusion restriction that make them valid. Additionally, there was a spillover effect of stoppage of public works, where works performed in municipalities surrounded by others that have a large number of paralyzed works tend to have an increase in their chances of stoppage.

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The urban-rural polarisation of political disenchantment: An investigation into social and political attitudes in 30 European countries

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Abstract

Despite the prevalent focus upon increasing political divisions between urban and rural Europe, relatively little research has explored whether there is a systemic urban-rural divide in the political and socioeconomic attitudes of citizens across the entire continent. This paper aims to fill this gap. Drawing on individual-level data from the European Social Survey, it explores potential linkages between place of residence and individual attitudes. Our results show that there are strong, and statistically significant, differences between the populations in these different settings. On average, rural dwellers show stronger levels of dissatisfaction with democracy and lower trust in the political system. Yet, while we uncover stark differences in attitudes towards migration and globalisation, we do not find significant variation on some social and economic issues traditionally at the core of left-right cleavages. And our analysis suggests that this spatial divide does not operate in a binary fashion. It is more of a continuum, running on a gradient from inner cities to metropolitan suburbs, towns, and the countryside. The differences are explained by both composition and contextual effects, and underscore the importance of moving beyond 'standard' trade-offs between so-called 'people-based' versus 'place-based' policy approaches to territorial inequality.

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Contestation and agency in subaltern spaces-the dichotomy of law and space in Dharavi slum, Mumbai

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Abstract

The year 2009 shall remain a milestone year in the century probably as the year which witnessed the major shift of diaspora in urban centers for the first time in human history. Does the growing city with an economic disparity and tremendous polarization of amenities consider their criticality and social aspects, deeply rooted within these communities thriving in the vast, continually changing physical fabric? In this context, it is also essential to understand the socio-spatial negotiations happening and may happen ahead between the physically growing city and the everyday life, work live relationship of these invisible communities within the city.

The planning framework of the cities which are manifestations of a bigger play of byelaws and demonstration of power often blurs out the existence of inculcating these quarters of the city within a holistic whole. As a result, these quarters grow sporadically within the city creating a sense of anarchy.

The paper tries to seek the relationship of state and political hegemony with these "excluded zones" where profit, political stability, and a constant saga of the failure of proposals to regenerate a highly diverse settlement in terms

of its religious and ethnic mix along with a wide gamut of informal occupations. The Dharavi slum in Mumbai is a sprawling 525-acre area with shanty roofs and deleterious sanitation conditions, housing over one million residents in the centre of India's financial capital of Mumbai. Dharavi's residents, like most slum dwellers around the world, live in illegal housing units lacking basic amenities and suffer from social exclusion.

The paper would critically investigate the failure of community engagement and mobilization attempts forming cooperatives, Formation of the several schemes across three decades and failures of almost all policies raising questions of redevelopment, how costing and finance schemes were mostly inefficient at large.

The paper would also try to understand the scale and scalability of various neo-liberal redevelopment processes initiated by political will, largely vested in the interest of capitalistic gains, and focusing less on addressing the complexities and issues of the existing socio-economic conditions.

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Long-term Effects of Conditional Cash Transfers on Children: The Brazilian Case

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Abstract

In this paper, we present some long-term effects of the largest Conditional Cash Transfers program in the world, and one of the pioneers, the Bolsa Familia Program (BFP). We focus on the effects on Schooling attained in early adulthood and Labour Market outcomes of our interest cohorts, i.e., individuals that were born in 1996, 1997 and 1998, and were more or less exposed to the BFP during their childhood.

The estimates were enabled by linking identified data from the Single Registry (Ministry of Social Development) from 2012 to 2017, with the Formal Labour Market (Ministry of Labour) from 2002 to 2017, and the BFP Payment Records (Ministry of Social Development) from 2004 to 2017.

The first source allows us to observe the family characteristics and composition in 2012, while our interest cohorts were still teenagers. The second source allows us to observe the Formal Labour Market performance of the parents of these individuals during their childhood, and, of course, the participation and earnings of our interest cohorts during their early adulthood. The third source fills the lack of SR data concerning the program's initial years and enables building the measures of program exposure during the individuals' childhood, since 2004.

In this Natural Experiment, the main identification strategy relies on a specific selection of the sample, considering only individuals from families registered in the SR during its strongest expansion period, between 2004 and 2006. Moreover, we were able to include a rich set of control variables, like the parents' Labour Market performance and schooling attained. We also rely on the program implementation rules, which states that the release of BFP resources for registered families is automatized and based on municipality quotas estimated by the government. In an alternative identification strategy, we consider an instrumental variable, an observed proxy for the municipality effort to register vulnerable families.

These strategies help to solve the potential selection bias of families to the SR, and consequently to the treatment. Nonetheless, since the program selects the most vulnerable families, the threats to the identification suggest that the estimated effects are lower bounds.

Our main results show positive long-term effects on Schooling, and on the Formal Labour Market participation, while mixed results are observed for Earnings. Heterogeneity tests suggest that the effects are stronger for boys, for smaller cities, and for families with never formally employed parents.

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Effects of banking concentration on micro and small firms in Brazil

Tyago Carmo, Santos Gervasio

Abstract

The objective of the article is to analyse the effect of concentration at the local level on the supply and credit costs of micro and small firms in Brazil. In addition, an evaluation will be made of how concentration affected by profits firms. The literature indicates that the banking monopoly increases credit restrictions for smaller firms. However, this same literature also signals that large banks facilitate credit conditions for young firms. The database consists of information from the banking system, micro and small firms and the regional characteristics of each municipality. The bank concentration index were calculated at the level of municipalities. The literature uses primary data, but this study uses secondary data. The application of secondary data encouraged the use of weights to construct the supply and credit cost variables of micro and small firms at the municipal level. The methodology will be used in the application of four econometric models. The first three analyses verify the impacts of the banking structure on the finances of micro and small firms, controlling the heterogeneity of the municipalities and the problems of similarity. The results show a low supply and a high cost of credit, in addition to a reduction in the profitability of micro and small firms in the face of the power of banking monopoly. The results differ from the creditor-debtor literature. On the other hand, they approach of traditional literature. In view of this evidence, the fourth analysis evaluating efficiency banking as a hypothesis for rationing credit to smaller firms from the monopoly power of banks. The study verifies the cost efficiency of banks at the municipal level through the analysis of the stochastic frontier. The efficiency index found is higher than 1. The literature indicates that when efficiency indexes are higher than 1, banks operate with above average costs. Thus, the last model estimates the impact of the bank inefficiency index on the credit cost of micro and small firms. The results show that the increase in bank inefficiency increase credit costs for small, medium and large firms in Brazil. Another verification this study was the combination of monopoly and bank inefficiency indexes. The results show that the increase in monopoly power increases the cost of credit and continues to grow with increasing sector inefficiency, but in proportion less. Thus, this study signals the rationing of credit to micro and small firms in Brazil is more explained by the monopoly power of banks than the inefficiency of the sector. However, it is necessary that future studies analyse the correlation between monopoly power and the inefficiency of the Brazilian banking sector.

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When your client moves abroad: forced upgrading and subcontractors' performances in the manufacturing sector

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Abstract

The aim of this contribution is to assess how small local subcontractors operating in low-tech manufacturing industries accomplish upgrading strategies in response to economic and structural shocks. The main assumption is that, when the local environment becomes more vulnerable as a result of disruptions, subcontractors' upgrading often occurs out of necessity. In such circumstances, local actors are forced to change their status quo operations to survive global competition.

The empirical analysis will focus on the 2008-2015 period and will exploit novel firm-level data extracted from the Italian Ministry of Economics and Finance Annual Survey (IMEFAS), using a sample of Italian subcontractors operating in the clothing and footwear industry. In this research, the shock is represented by production relocation decisions of client firms in the regions where subcontractors are operating. The analysis focuses both on captive offshoring (investments in existing or new production facilities abroad) and on offshore outsourcing (establishment of new subcontracting relationships with foreign suppliers). The aim is to assess whether 'forced' upgrading (i.e. upgrading in response to production relocation) has the same beneficial effects on subcontractors' performance as the standard upgrading processes identified by the literature.

This research aims to integrate the literature on economic resilience and that on Global Value Chains (GVCs), providing a novel perspective on upgrading. Moreover, the IMEFAS database allows to shed light on a 'grey area' of the manufacturing industry which has been overlooked by previous empirical research. This lack of contributions is surprising, considering small subcontractors represent a significant share of manufacturing

employment in several European regions. These firms are particularly vulnerable to global transformations: therefore, their ability to cope and react to sudden changes is crucial to increase the resilience of the economic systems in which they operate.

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Forms and consequences of distance asymmetry

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Abstract

Representation and analysis of geographical space is based on symmetry axiom of distance. This axiom is valid in geographical space, but frequently invalid in other spaces. Distance asymmetry (i. e. distance from one point to another is not equal to the distance back) is a very common feature of spaces generated by various non-geographical (such as time, network, cost) distances among geographical objects. One way streets in urban areas, directional traffic jams, timetable effect, wind and weather, slope, sea current can be the sources of asymmetry on different spatial levels and contexts, beside other factors. Practical problems of visual representation of asymmetric distance relations and analytic complexity may explain the relative disinterest in this phenomenon. The aim of the study is to give a typology of the sources of distance asymmetry, to demonstrate some real life examples and to present measures of asymmetry.

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Digital transformation of rural societies: the case of Kaliningrad region

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Abstract

Digitalization of rural territories is often proposed to be the effective development strategy that could overcome the peripherality – lack of public infrastructure and services, unemployment, economic backlog, and depopulation. Digital technologies are seen to foster social innovations in the countryside, as well as promote self-employment and freelance via the Internet. However, rural societies are highly heterogeneous. Different groups of the population live in the countryside – those employed in large agricultural production and farms, people involved in personal subsidiary plots, as well as the rural population working in the city and living in the countryside with an urban lifestyle. The aim of the study is to identify the differences in readiness for information and communication technologies across the different types of municipalities and population groups. The research design is based on the comparative assessment of rural areas of the Kaliningrad region by the Internet coverage, user density, the availability of various online services and e-government. The research sample includes rural settlements near the city and remote ones featuring different socio-economic structures, which are compared by infrastructure development and readiness of the population to implement digital routines. Results suggest that top-down initiatives will not be adopted by the local society if a population does not perceive the benefits of digitalization. A place-specific approach should be applied when drafting the digital transformation programs considering the established lifestyle, the needs of different types of residents, as well as the readiness of local societies for digitalization.

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Developing digital capacities from local perspective: the role of an extended supportive environment

Tamás Kaiser

Abstract

Digital technology evolves rapidly, but the adoption and use of the technology varies between different sectors and places. However, thus far digitalisation in towns, small cities and villages has received considerably less attention although digitalisation has the potential to play a significant role in the sustainable catching-up of these areas. From the viewpoint of inclusive digitalisation has been viewed as an essential element to adapt to the era of digital transformation. However, despite the growing body of literature on smart cities relatively little attention has been paid to the conditions, elements and operation of the necessary supportive environment according to inclusive digitalisation so far.

On the basis of exploring the enabling conditions of smart city and smart village's developments the presentation paper seeks to test them within the framework of the Digital Success Programme (DSP) in Hungary. Analysing the initial phase of the DSP, we assume that the creation of an extended supportive environment is of key importance to promote complementarity and synergies between pilot projects, knowledge sharing and upscaling of successful smart solutions. In doing so, smart city marketplaces promote and strengthen the cooperation and division of labour between towns and rural settlements which show fundamental differences of size, economic development and the level of digital maturity. The preparation of smart city and smart village initiatives will be evaluated from the viewpoint of skills, perceptions and attitudes of citizens as one of the main stakeholder groups of inclusive digitalization and smart development.

The paper relies on a desk research on relevant literature, key strategy documents, pilot projects, a regulatory environment as well as taking exploratory in-depth interviews with experts working for DSP and the so-called 'Smart Village' Programme. To evaluate of these findings in an empirical way a representative survey on citizen's perceptions (N=1250) was created and administered to measure attitudes skills and perceptions in Hungary focusing on towns, small cities and municipalities (without investigating the capital Budapest).

On the basis of the research the paper argues that in a case of collaboration between towns mall cities it is particular important to create a tailor-made local digital strategy and to create innovative hubs in the form of smart city marketplaces based on citizen-friendly institutional design, responsive management systems, as well as mapping and promoting innovative stakeholders and local solution providers.

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Economic impacts of droughts under future projections of climate change: a case study for São Paulo Metropolitan Area

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Abstract

Drought is one of the biggest challenges climate change can impose on cities. It can cause serious socio-economic problems by affecting water supply, industrial production, the price of food and energy, and actual income. Despite the importance of the evaluation of such impacts, there is a lack of evidence on the effect of climate change and droughts on urban areas, especially on industrial activities. This work aims to fill this gap by evaluating the socioeconomic impacts of projected droughts on the São Paulo Metropolitan Area (SPMA), in Brazil. Currently, this region is in highly critical conditions of water availability and it is subject to the occurrence of hydrological droughts.

The method of the work comprises three stages. Firstly, we estimate a dynamic panel data model to evaluate the direct effect of droughts on the added value of twenty-one industrial sectors. An Annual Weighted Cumulative Drought Severity Index represents the drought conditions in the regressions. Secondly, a frequency analysis identifies the frequency and intensity of future critical drought events using climate change scenarios. Lastly, we combine the result from previous stages to build scenarios representing future drought direct economic impacts. Then, a Spatial Computable General Equilibrium Model (SCGE) performs simulations with those scenarios to measures the economy-wide effects of the projected droughts.

The results show severe droughts are likely to occur soon in SPMA, and they can impose negative impacts on the production of water-intensive sectors, such as food production and metallurgy. Those effects spread through the

economy, affecting several other economic activities. The results from the simulations also allow the construction of a local economic vulnerabilities index, which can be useful for implementing climate change adaptation strategies and economic development policies.

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Do return initiatives promote interregional return migration? - Evidence from Germany

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Abstract

This paper investigates whether the establishment of so called 'return initiatives' within the last 20 years increased the likelihood of interregional return migration of workers within Germany. Demographic change leads to a significant decline in (regional) labour supply in Germany like in many other western countries. In particular rather rural regions are hit by this development, partly caused by a net migration loss among young people. Furthermore, these regions typically do not benefit from immigration from abroad like agglomerated regions because destinations of international immigration are often densely populated areas.

Since the beginning of the new millennium in more and more regions of Germany return initiatives have been established. They aim at promoting interregional return migration, i.e. the return of workers who previously left the local labour market in which the respective return initiative is situated. The early initiatives focused on the return of workers from East Germany, who moved to other eastern regions or the western part of Germany after re-unification. However, since 2010 return initiatives also exist in peripheral parts of West Germany and their number is increasing. Among others, they provide information on local vacancies and firms in order to increase the probability that the job search in the 'home region' of a worker, who would like to return given she finds a suitable job, is successful and she indeed returns.

To analyse the effects of return initiatives on return migration, we merge our unique panel data on return initiatives with information provided by the Integrated Employment Biographies (IEB) of the Institute for Employment Research (IAB). The IEB contains, inter alia, administrative data on all workers subject to social security in Germany such as daily information on individual employment relationships (e.g. wages, workplaces) as well as annual information on places of residence. Specifically, we use a 25% percent random sample of all (medium skilled) workers, who completed vocational training in Germany in the period 2000-2013 and who moved to another local labour market until 2014 (14% of all former apprentices). Applying event history estimation, we observe that about 40 percent of these workers return in subsequent years to the labour market of residence during vocational training.

To investigate whether there is a significant and robust relationship between the establishment of a return initiative and return migration rates, we combine discrete time survival data analysis and diff-in-diff estimation. More precisely, we study whether the likelihood to return to a certain region is significantly higher after a return initiative has been established than before conditional on time varying characteristics of the individual, regional labour market conditions as well as region and time fixed effects. Our results indicate that return migration rates are, conditional on covariates, about 10 percent higher after a return initiative has been established than before. However, further analyses suggest that region specific time trends might play an important role in this context, meaning that (some) return initiatives might have been established in regions, for which return migration rates were increasing anyway.

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How cooperation with universities can affect the corporate competitiveness?

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Abstract

Higher education institutions (HEIs) are one of the key actors of the social and economic development. There are two classical roles of the universities, such as the education and the research; in the past two decades the third mission role has appeared, too. Nowadays these three roles mean the triple role of HEIs. The third mission role has a different kind of approach, but in general it means all missions of the HEIs which are not related directly to the education and research. On the one part the third mission is related to the Triple Helix model, on the other part it can be all of the activities of the HEIs which are not related directly to the scientific activities. All in all, the third mission means those activities of the HEIs which are for the society and for the economy.

In the past two decades more and more HEIs identify their activities related to this third role. They realize that being part of the social and economic life could be an investment into the future and help them to be embedded in the settlement, region, country, etc. where they operate. The third mission means different kind of activities from supporting the local communities to taking part in the development of the companies. The presentation focuses on the latter, and would like to give answers to the question: How the HEIs-companies relations and cooperation can contribute to the corporate competitiveness? I believe that these relations can have an effect on the competitiveness, because they help companies to find good business solutions, to find new methods for development or to open new ways of management.

There are a wide range of potential activities which can be part of the third mission activities, such as organizing workshops, trainings; taking part in common projects, supporting students practice, etc. These relations could be important for HEIs, because they will be closer to what the market desires and will know better the current issues in the for-profit era. These relations are good for the companies because they can use the knowledge of the researchers, they can cooperate with students and they can use these activities to be a better one in the market, so to be more competitive.

The aim of the presentation is to show the third mission activities which are related to the HEIs-companies relations and to show how they could contribute to the competitiveness. The presentation demonstrates guidance for also practitioners and researchers and it also adds to the literature some possible good examples about managing HEIs-companies relations in the framework of the third mission.

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Family firms and economic spaces - building bridges between family business and regional studies /science

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Abstract

This paper is a review that searches for common fertile ground between the previously unconnected disciplines of family business and regional studies /science that have experienced delicate approximations in the past five years. Most existing studies linking both disciplines, however, are fragmented, dispersed and scattered not allowing for a systematic assessment of these approximations. Based on their relations to peculiar spatial entities – hereby we mean a superordinate term for spatial factors / structures, spatial process, spatial contexts, spatial scales, spatial settings, spatial policies, and spatial concepts – we are taking stock and attempting to group those studies along an extensive literature analysis. Moreover, we present two systematic attempts model (spatial family model, regional familiness model) already incorporating some of those entities within a single theoretical framework. We conclude that research streams in both disciplines have partly a high degree of overlaps. Therefore, we call for more interdisciplinary work to commonly address research gaps and exchange insights on theoretical, empirical and practical grounds around ideas of ‘Spatial Familiness’ and/or ‘Family Spatialities’.

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Evaluating the Population' Spatial Accessibility to Primary Health Care Units

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Abstract

Primary Health Care (PHC) is a key component of the Portuguese health system, representing the population's first contact level with the National Health Service. Understanding geographical imbalances in the spatial planning of the PHC is essential to reach a proper distribution that will culminate in a most effective prevention of disease progression on a large scale.

Within this context, it is critical to have a correct identification of the spatial accessibility to the primary health care units and having tools to assist analysing how to mitigate spatial inequalities. Previous studies have greatly improved our understanding of the role played by geographic distribution of health services in population health maintenance, with extensive research being devoted to the place-based accessibility theory, with special focus on the gravity-based methods (including the two-step floating catchment area (2SFCA) method).

Although they represent a good starting point to analyse disparities across different regions, the results are not intelligible for policy-making purposes. Given the weaknesses of these methods and the multidimensional nature of the topic, this study intends to: (i) highlight the main concepts and measurements of access; and (ii) exploit and propose a framework based on multiple criteria decision analysis methods and Geographic Information Systems to evaluate the population' spatial accessibility to healthcare facilities.

Regarding the latter, within the scope of the DRIVIT-UP project – DRIVIng forces of urban Transformation: assessing pUblic Policies – this study proposes a sociotechnical approach based on the UTASTAR model to build an index to evaluate the population' spatial accessibility to the Portuguese PHC units.

The starting point was to link scientific with policy-based evidence to properly define and structure the multidimensional spatial accessibility index, which unfolds in the dimensions of proximity and availability. The proximity assessment considers the travel time of individuals to the PHC units, and the mobility of populations when accessing healthcare. The availability dimension involves the coverage of PHC network in terms of human resources in health (general practitioners and nurses).

Respecting that multidimensional structure, the technical component of the proposed approach encompasses the adoption of a variant of the UTASTAR-based method, which will be able to model preferences provided by policy-makers and experts, grounded in different socioeconomic scenarios. The process of gathering the viewpoints and preferences of policy-makers and experts about spatial accessibility to PHC units constitutes the social component.

Given the current pandemic context and the limited availability of policy-makers and experts involved in this study, i.e. health administrators and health professionals, that are the frontline soldiers against COVID-19, the proposed socio-technical approach was thoroughly conceived, through the design of an interface that allows individuals to interact and emit their preferences, in a user-friendly fashion way. Also, a reduced number of judgments is required from the policy-makers and experts to avoid the risk of triggering rejection by them, without compromising the model accuracy and quality. The proposed methodology will be later applied to build an index to evaluate the population' spatial accessibility to the Portuguese PHC units.

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Uncovering the inter- and intra-regional heterogeneities in the minimum wage – employment relationship

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Abstract

We study the employment effects of minimum wage changes by uncovering and explaining inter- and intra-regional heterogeneities. For this purpose, we explore variations in the minimum wage bite across age groups, economic sectors, regions in time. Compared to previous studies, we use a novel, multidimensional panel data approach that allows us to simultaneously analyse the heterogeneous effects of minimum wage changes on employment elasticity among different groups of workers. We found regions characterized by factors that simultaneously stimulate employment elasticity and rigidity. Those factors influence different groups of workers and tend to mitigate the impact at a regional level.

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Urbanization, planning and scope of collaborative governance: A Case study of Delhi Metropolitan Region

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Abstract

Global South is now characterized by mega urbanization – a process resulting into rapid expansion of cities and increasing contradictions. One of the major outcome of this mega-urbanization is the shift from government to governance. That is, government cannot be the only single actor in planning and tackling urban challenges. Tackling the city problems now require new collaboration between different stakeholders and implementing agencies. This paper seeks to better understand this scope of collaborative governance and its promises for achieving urban sustainability and resilience in case of Delhi metropolitan region. While Delhi is India's capital region, its urban planning and quality of life is ranked globally at the bottom. Poor planning and complex administrative structure are both a cause of Delhi's compounding problems. Despite this, there have been innovative approaches adopted recently for better urban governance in the capital region. This paper giving an extensive planning history of Delhi, discusses collaborative approaches at six governance aspects – public transport, air pollution, urban greenery, energy supply, housing and climate change. Collaborative measures in each of these fronts exhibit innovation and creativity that has evolved with an active participation and contestation among stakeholders. The paper discusses this evolution and utility of few collaborative approaches in present. However, there are also concerns related to replicability, effectiveness and sustainability of these collaborative approaches. The paper discusses these aspects, presents evidences of success and poses critical questions for a better urban management in global South

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Effects of industrial agglomeration on the evolution of regional labour productivity (2010-2017)

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Abstract

The production stagnation that affected the Brazilian industry since the Crisis in 2008, is due, in part, to the lack of protagonism of the technology-intensive sectors, which were unable to induce the necessary transformations to sustain long-run growth. On the other hand, the strong international demand for energy, agricultural and mineral commodities has stimulated the growth of sectors that are intensive in natural resources. This problem can be examined through regional differences, in which regions based on the production of capital goods and durable goods would be growing less than those specialized in the production of commodities.

Thus, this paper aims to estimate and analyse the regional impacts of changes in industrial labour productivity in Brazil in the period 2010 to 2017. To facilitate the analysis, labour productivity indices from 26 industrial activities were aggregated according to four regional technological standards: (1) Traditional industry, (2)

Mineral commodities, (3) Chemicals, energy and fuels, (4) Capital goods and durable goods. This identification is an important initial step for the control of spatial heterogeneity, a typical problem in spatial models of panel data.

In model, productivity gains result from access to value chains in the international market, as well as domestic factors related to local markets, such as externalities formed by density in the labour market, and by multifirm interactions within the local productive structure.

Among the main results, it is worth mentioning.

1. There is a high productivity corridor forming in less dense regions, in the North and Midwest of Brazil. Growth in these areas is driven by exports, reinforced by Marshallian externalities and local intersectoral connections.
2. The production of mineral commodities is strongly concentrated in Pará and Minas Gerais. As it brings together exporters of basic products, its performance does not depend on connections with dynamic sectors, and there is no evidence of externality on the labour market, refuting the labour pooling hypothesis.
3. The growth of the Brazilian industry is driven by Chemicals, energy and fuels. The main refining firms seek to establish themselves in the vicinity of offshore oil and gas fields. The strong international insertion, strengthened the labour market and the connections with Capital goods and durable goods.
4. The critical point of the analysis is the export performance of capital goods and durable goods, whose elasticity coefficient was estimated with a positive and significant sign, but below average. Furthermore, productivity did not react significantly to agglomerations within the standard itself, nor between different arrangements.
5. Finally, econometric tests have shown that the SARFE (Spatial Autoregressive with Fixed Effects) model has better control over space spillovers imputed by the performance Chemicals, energy and fuels. In other technological standards, more efficient control results from the SEMFE (Spatial Error Model with Fixed Effects) model.

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The more inclusive, the less beneficial to the neighbourhood? A quantitative analysis on inclusionary zoning in São Paulo, Brazil

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Abstract

The regulation of land use to promote inclusive housing can take place through local policies that take advantage of economic gains from the appreciation of the real estate market to create low-cost housing. Thus, at market prices, the construction of new developments is linked to housing construction for low-income families. In the international literature, this type of program is known as inclusionary zoning. In its simplest form, it requires developers to sell a percentage of new residential units to low-income families if the construction is located in specific areas.

Already traditional in developed economies, such as in the USA, this policy began to expand in Brazil in 2001 with the creation of the urban policy instrument for the demarcation of ZEIS - Special Social Interest Zones. In São Paulo city, local regulation instituted the establishment of these zones in 2002. However, with the Master Plan of 2014, this policy took a qualitative leap, with the establishment of new ZEIS in well-located regions along the axes of public transport and the city center.

Due to the inclusiveness of development, this 2014 Master Plan, which established these zones of use, was recognized by the UN as an example for urban planning. But the construction of social housing in prosperous areas also faces a lot of resistance, especially from the residents of the region, who do not want to suffer from the effects of the devaluation of their properties. This work will contribute to this debate, evaluating through spatial statistical modeling if the construction of social housing in well-located areas of the city negatively affects the price of the surrounding properties and the magnitude of these effects.

Despite being a standard policy in developed economies, it has little empirical evidence. It also has very different characteristics between economies. In the USA, for example, it is generally established that a maximum of 25% of the housing units of a development is of social interest. In the ZEIS of São Paulo, this requirement reaches 60%. In addition to filling the gap in quantitative analysis of a policy with a different profile, this work will contribute with

an additional view of assessing the impacts of social housing construction on the prices of properties in the immediate surroundings.

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The geography of discontent or the discontent of the people. Evidence from individual data for some European countries.

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Abstract

An interesting and rich literature has emerged in recent years linking the increase in radical and anti-system political options with the socio-economic situation and its evolution over time. Both the conditions in the short and medium term, as well as contexts of secular economic, social, and demographic decline could have significantly affected some population groups, causing them to disconnect from the system and favouring their being attracted by populist messages of political options that claim to be against the establishment. Most of the empirical evidence to date has combined data for subnational units on support for anti-system parties in various countries with local/regional indicators on the socio-economic situation and its evolution in periods of different lengths. This empirical strategy contrasts with the one used in the literature that has assessed the validity of utilitarian (economic) arguments when explaining differences between individuals on issues such as identification with Europe, support for the EU and its institutions and, more generally, with issues such as the preference for a democratic political framework. Briefly, the studies in this literature have preferably used individual survey data combined with aggregate economic information on the individual's country and/or region of residence.

This work contributes to the literature on the geography of discontent, exploiting data on individuals' political preferences. To be clear, I use an indicator that reflects individual's preference for a strong leader who can solve the country's problems quickly without having to worry about elections and parliamentary rules. In other words, for a political option far from the standards of parliamentary democracies. The use of micro-data for 15 EU member states (from the PERCEIVE Survey) allows me to determine the impact of the regional socio-economic situation and the decline of the region in the long term after conditioning by composition effect, that is, by differences between regions in individual characteristics that can confound the estimation of the effect of the local socio-economic situation. Preliminary results suggest that spatial sorting (on observed individual characteristics) play a crucial role when it comes to explain preferences for “a strong anti-establishment leader”, although they also support the “geography of discontent” hypothesis, as there is a significant link between static and dynamic local socio-economic conditions and anti-system revealed preferences of individuals. Several robustness checks, including results for alternative indicators such as lack of support for, and trust in, the EU, and weak identification with Europe, confirm the main results of the study.

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Brazilian exports and income distribution: an input-output analysis for 2002-2014

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Abstract

The impacts of international trade on income distribution have presented conflicting results. Empirical studies found that the direction and magnitude of this relation differ for each country and time, depending on factors such as development and income level, productive, social and institutional structure, and trade reforms specificities (GOLDBERG and PAVNIK, 2007; MESCHI and VIVARELLI, 2008; BERGH and NILSSON, 2010; ÇELİK and BASDAS, 2010; BENSIDOUN, JEAN and SZTULMAN, 2011; ATIF et al.; 2012). These papers, like most of the literature, used econometric approaches. Otherwise, Alsamawi et al. (2014) used input-output analysis to calculate the inequality

footprint, i.e., the income distribution (measured by Gini index) that each country produces elsewhere in the world, for importing goods. Their main finding was that most developed countries (more egalitarian) import from developing countries (more unequal).

Brazil presents the fourth highest Gini index of upper-middle-income countries (World Bank, 2020), which makes the matter especially relevant for the country. An important question remains unanswered: what is the inequality footprint of Brazilian exports? To answer that, this paper aims to assess the domestic income inequality linked to Brazilian exports. That is, how the income yielded, direct and indirectly, from exports, is distributed among households. To this end, we adapted the approach proposed by Los et al. (2016), based on “hypothetical extraction”. We consider a hypothetical world where Brazil does not export anything to region n (Extraction I). We used the World Input-Output Database (WIOD) 2002-2014, which covers 43 countries plus the “Rest of the World” and 56 sectors. Additionally, we disaggregated the vector of wages in the input-output table into ten income classes was based on the National Household Sample Survey (PNAD), for the same period.

Considering total exports demand (all countries available in the WIOD table), we found an income Gini index of 0.304 for 2014, which is lower than the generated from domestic demand (0.376). This shows that, in general, the income required to satisfy all external demand is more egalitarian than the income created by domestic demand. Evaluating the exports to each trading partner separately, the only country whose demand generates more inequality than the domestic demand is India, presenting a 0.464 Gini index. Thus, we did not find evidence that production for international trade worsens Brazilian income inequality. Otherwise, it could be improving the country's economy, by creating jobs with less unequal wages.

The next steps of this study include creating a relative measure that considers the volume of trade. Moreover, these results will be explicit by sector, which could allow us to understand which industries from each country are responsible for such results. Thus, we propose another extraction (Extraction II), considering a hypothetical world where Brazil does not export anything to sector s from region n . Finally, the results will be extended to the 2002-2014. Thus, we will be able to observe how the income inequality in exports behaved over the time, given the changes that Brazil's export agenda has undergone.

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Building resilience beyond the EU's eastern borders. EU actorness and societal perceptions in Ukraine and Republic of Moldova

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Abstract

The resilience approach as EU's newfound paradigm places societies and communities at the heart of its interactions with external partners, and especially with its immediate neighbours. As such, in order to enhance its resilience and that of its neighbours, the EU has turned its attention from state to society, from a general top-down to a bottom-up approach. The success of this to a certain extent depends on the local trust in the EU's performance as a transformative actor. The present paper inquires how the EU actorness is perceived by citizens beyond its eastern borders, mainly in the border regions of Ukraine and Republic of Moldova and explores the implications for building a more resilient society in the Eastern neighbourhood. We argue that in spite of the EU's attempts to enhance its actorness in the region, to bring about reforms and promote European values, the positive citizens' perceptions and the overall awareness of the EU's impact are still modest, thus limiting EU's capacity to act towards building a 'stronger and more resilient society'.

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The routine tasks in labour markets and the gender wage gap in Brazil

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Abstract

The last few decades have seen an increase in female participation in the Brazilian labour market and a reduction in the average wage gap between men and women. However, there are gender inequalities in the distribution of workers within sectors and occupations and different degrees of formalization of employment. This suggests inequality persists, depending on the region, the sector of activity and characteristics of the workforce. Women are proportionally more frequent in sectors of care and domestic work, Education, and Health. Similar occupations can present different average salaries between sectors and genders and several elements have been analysed for the promotion of gender equality in Brazil (Bruschini, 2007; Itaboraí; Ricoldi, 2016). Additionally, some international studies have associated the reduction of the wage gap with a set of skills of women in certain occupations, making them more able to face technological challenges (Black; Spitz-Oener, 2010). Our contribution is to identify the factors that are related to the reduction in the wage gap by turning our attention to the tasks performed by men and women. We seek to verify whether the tasks associated with certain occupations with a greater female presence have allowed women better reactions in terms of variation in the rate of wages and the rate of formal employment in the face of a series of technological challenges presented by the internet. Tasks are classified into three types (Gonzaga; Guazioli, 2019): non-routine cognitive (NRC), non-routine manual (NRM), and routine manual (RM). Non-routine tasks are expected to be positively related to increased rates of variation in wages when there is greater access to the internet. We use data from the Brazilian National Survey (2000 and 2010) to define characteristics of local labour markets into micro-regions and to define the tasks associated with the occupations. Additionally, the data from Brazilian Municipalities Profiles (MUNIC 1999 and 2006) identify which municipality has faced internet rollout and this piece of information is used as a proxy to technological change. The empirical strategy involves two steps. The first step seeks to estimate the variation in the average wages of men and women in local markets, considering the characteristics of the labour market in each 412 micro-regions between 2000 and 2010. The first step reduces the influence of the demographic changes on the wage profile. The second step seeks to verify whether there is a relationship between the variation in wages and the type of task performed in each occupation. The results indicate that when women are relatively concentrated on activities that involve non-routine tasks, the rate of change in wages are higher for female workers than male workers. The concentration of women on routine tasks is correlated with a relative fall in wage growth.

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On Smart Institutions: Towards New Territorial Actors to Support Sustainable Development and Regional Diversification

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Abstract

The paper addresses the need for a change in the institutional framework of smart regions to address three challenges: (i) sustainability (SDG), (ii) innovation-diversification (RIS3), and (iii) the ability to properly allocate structural funds (Green Deal and Next Generation EU). These three challenges are assessed taking into account the complexity of managing smart regions, considering the presence of first and second-generation territorial commons that lead to innovate the configuration of new institutional forms. In this context, the paper analyses the role of territorial actors and their impact on the territorial systems. Some guiding criteria are outlined to support the configuration of smart institutions as the basis to enable the emergence and consolidation of smart regions.

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Spatial Justice (Inequality and Inequity) in the Provision of Primary Schools – The Case of Portugal

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Abstract

Spatial equity can be understood as the central principle of spatial planning which is, ultimately, concerned with guaranteeing that the attribution of property rights and the distribution of public funding counters spatial inequality (Kunzmann, 1998). But the way we judge spatial inequality is not self-evident and, necessarily, implies some overarching principle of justice. Probably the most frequently cited author when discussing matters of justice is John Rawls. Rawls' principles of justice, being broadly defined and including aspects such as power and self-esteem, besides economic resources, is also focused on the actual conditions of exercising different types of freedom (Rawls, 1971, 1981). Thus, even if assuming that inequality will always exist at some level, it is the responsibility of democratic institutions to redistribute resources and promote social justice in order to provide the maximum degree of freedom to different social groups and, in particular, to the least well-off (Resosudarmo, Kuncoro, & Hewings, 2019). In other words, spatial planning and public policy must assume the responsibility to ensure social justice principles in their actions, trying to find the right balance between: i) maximizing effectiveness and efficiency; and ii) minimizing inequalities (uneven distribution of opportunities and resources) and inequities (differences arising from poor governance).

The aim of this paper is to study and analyse territorial inequalities in the access to education. More specifically, it presents: i) an exploratory approach to assess spatial justice for different types of territories at different spatial scales, analysed by the relationship between the location of primary schools and the spatial distribution of different socioeconomic groups; and ii) a spatial econometric model to explain spatial equity, measured by an aggregated and single indicator of accessibility, regressed against a set of socioeconomic and territorial indicators. This study is developed in the context of Portugal, using the statistical subsections of the BGRI as the smallest spatial units. Three types of data are used: *school locations*, provided by the Portugal Directorate-General for Science and Education Statistics; a *street network*, available from OpenStreetMaps; and *socioeconomic data*, available from the National Statistical Institute. A database with approximately 240,000 subsections allows to assess how close different socioeconomic groups are to schools. This data can then be aggregated at different scales (e.g. parishes or municipalities), for which it is possible to calculate different measures, such as the minimum, maximum or average distances or the ratio of school by inhabitants.

The conclusions allow to identify two main dimensions of accessibility: i) distances to primary school and ii) coverage level of schools. A significant negative and non-linear relationship between the socioeconomic conditions of people and the level of accessibility, which is independent of the type of territories (clustered by the different kind of accessibility). For the number of schools by inhabitant, no relation was found with the IQ. This means that the inequalities in the provision of primary schools is restricted to distance and does not necessarily hold a relation to the per capita investment in territories.

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Local variations of spatial colocation of creative industries and coworking spaces in European metropolitan areas

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Abstract

The post-Fordist economy transition in developed countries featured by economies of scope and flexible specialization has brought into cities new challenges transforming their urban economics, land use, and commercial structure. The structure is gradually transformed by development of ICT technologies and advantages of economies of agglomeration resulting in Jacobs spillover and economies of density based on spatial proximity of suppliers or providers. Such transformation of commercial structure in European metropolitan areas have been affected by rapid increase of knowledge intensive business services - here represented by creative industries allowing flexible jobs due to digitalisation (Architecture, Advertising, Design, and Media), and new form of working places representing sharing economy - coworking spaces. Their spatial interactions given by their location decisions based on trade-off theory resulted in local variations of spatial colocation. Previous studies have confirmed Tobler's 'First law in geography' in investigation of such spatial association both in general and specifically setting spatial distances. Nevertheless, this study examines such colocation on particular coworking centre. The given approach allows to use an asymmetric approach to the study as preceding research studied a symmetric variation of the problem whether a colocation is present or not having missed any inspection of the issue whether coworking spaces are spatially attracted by specific creative industries sector or vice versa. The presented study treats the issue by a research question on whether coworking spaces are spatially attracted to

creative industries; i.e. alternatively that location of a particular coworking space is spatially dependent on location of specific neighbouring creative industries sector firms. Applying investigation of such spatial colocation on particular coworking centre the study contributes to the research on the given type of the third place by a question whether multiply colocations in local variations of spatial interaction between coworking spaces and specific coworking spaces exist and whether such multiple colocations are spatially clustered or not. To fulfil presented research questions, the study uses a Localized Colocation Quotient for investigating spatial association between coworking spaces and creative industries sectors and choropleth map for revealing spatial clusters of coworking spaces showing multiply colocation. Comparing two European metropolitan areas, namely Milan and Prague, which are a commercial capital of the country with the highest number of coworking spaces. The preliminary results show that coworking spaces are collocated to creative industries sectors by means of local variations and several coworking spaces have demonstrated a multiple colocation. To summarize the preliminary results spatial dependency of coworking spaces on creative industries clusters has been confirmed in particular places. Specifically, comparing Milan and Prague, Milan has displayed much profounder of coworking spaces colocation to Architecture comparing to Prague. Subsequently, all revealed colocation is going to be analysed and explained by the local variation of urban development trajectories.

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Youth Precarity and Resilience in Angola's Sub-Urban Settings

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Abstract

Based on literature, this text summarizes a research project on youth precarity and resilience in Angola's sub-urban settings, with a special attention on macro structural factors of poverty that underpin precarity. The research adopts a critical-normative stance and intends to produce use-inspired knowledge, targeting policy makers and civil society organizations.

Following Peter Hall with Michèle Lamont (2009) and Jon Schubert (2017), an institutional-cultural approach is utilized in order to understand the way in which institutional practices and cultural repertoires combine to produce young youth precarity. This implies looking, interrelatedly, at the ineffectiveness or lack of state policies and deep-rooted cultural practices that are detrimental to progress. Cultural practices include immediatism and the high symbolic value placed on generating children regardless of material conditions. By its side, the institutional-cultural approach transcends both institutional accounts, which focus exclusively on the public policy, and those that concentrate on the role of culture in development process.

Angola has made significant progress over the last two decades since the end of the civil war in 2002, which virtually destroyed the country since its outbreak in the aftermath of independence in 1975. Peace and security have been largely established and the country is becoming an important global player, while emerging as a regional power in Africa, thanks to a booming oil economy (Oliveira, 2015; Veins & Weimer, 2011; Carvalho et al., 2011; Rodríguez et al. 2013; Power & Alves, 2012; Chabal, 2007).

Moving from these premises, the research project seeks to understand the strategies that sub-urban youth in Angola implement in the search for better material and symbolic resources, the manner in which such strategies unintentionally end up perpetuating their precarity in a context of poor public policies and traditional cultures that basically lack an orientation toward progress for sub-urban life.

The historicity of these processes will also be stressed, by taking into account the impact of pre-colonial, colonial and post-colonial social order, as well as that of the civil war, on sub-urban youth precarity (Soares, 2015). This last point is important inasmuch it complements the focus on institutional-cultural factors, as most sub-urban youth were pushed from the war-affected countryside to sub-urban areas — the former being more secure — or were born in sub-urban areas from families who fled rural areas to seek safety. This means that the civil war marked most young people's lives. Furthermore, peace and political stability, along with scarce state investments in rural areas, have together stimulated youth exodus from rural to sub-urban settings over the last two decades. As a consequence, the living conditions of urban youth have worsened and their expectations for a prosperous sub-urban life frustrated, caught between their expectations with regard to the impact of economic growth and political stability, on the one hand, and the burdens stemming from a combination of institutional practices and cultural repertoires, on the other.

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A territorial housing cost overburden index: an exploratory approach for Portugal

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Abstract

Housing needs have been increasing their analytical complexity since the concept tends to encompass multiple dimensions. The (human) rights to adequate housing should cover entitlements such as the legal security of tenure, availability of services, materials, and infrastructure or cultural adequacy. Simultaneously, the housing market has been assigned an increasingly important role: it is the device chosen to provide decent and adequate housing while public bodies assumed a low level of intervention.

The growth of housing market prices (purchase or rent) has been accompanied by territorial and socioeconomic transformations leading to a recognized emergence of overall housing provision imbalances. In this context, the measurement of housing affordability regained new importance. Despite the existence of official measures, that are used to support some housing policies, significant limitations can be found and need to be updated – see, for instance, the housing cost overburden of produced and used by Eurostat and by the National Statistics Institute.

A classical affordability approach combines measures of the housing cost (supported by the housing prices associated with them), the households income, and the adoption of a normative threshold (such as the 0,4) to classify housing provision as affordable or not. This straightforward measure does not reflect the diversity of needs that should be considered today on housing affordability analysis. Housing needs are complex and multiple dimensional phenomena that emerge at the local scale, but housing affordability is usually obtained through national inquiry to households with limited territorial detail at the sub-national level.

Based on the data provided by National Statistical Institute (INE), it is possible to estimate housing prices and household income at the local level. This work presents the methodology of this estimation process, grounded on the spatial econometrics framework, to obtain the housing cost overburden rate at the local scale (municipality and parish levels). Moreover, estimations of housing prices and household incomes will be combined with detailed census data on houses and families to provide exploratory guidance on the role of socioeconomic characteristics and general urban transformation phenomena as territorial explanations of the imbalances in housing provision for Portugal.

The results highlight the role of intense rural-urban transformations, shaping Portugal in the last decades, as an important source of the territorial housing provision imbalances as the population migrates for urban areas both on metropolitan regions (Lisboa and Porto) or the regional and local urban centers, increasing demand and pressing prices in that locations. Simultaneously, the quick shift of the demographic structure, where aging and population decrease spreads throughout the territory, required important housing readaptations or reconstructions to satisfy the needs of the new population structure (elderly). As markets and the housing market, in particular, tends to be more inefficient when ideal equilibrium conditions are far away, the territorial housing cost overburden index presented provides important insights on the multidimensionality of affordability and its connection with the new integrated concept of housing rights.

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Spatial equity in context: perceptions and preferences in the planning of primary schools

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Abstract

Equity has long been considered an overarching policy goal in spatial planning, where it expresses the idea of justice in the management of property rights, the distribution of public resources or the location of spatial amenities and disamenities. While there is a broad consensus regarding the importance of equity in planning decisions, there are multiple challenges in defining its meaning in practice. These challenges are, partly, conceptual and regard the principles that best express a broad idea of justice, their formulation, or how to prioritize them when they conflict, leading to an extensive debate in the literature (where authors such as Rawls or Amartya Sen stand out). But even if assuming a given set of principles, this does not automatically provide a clear way for assessing the justice of planning decisions, which tend to be the outcome of broad compromises between policy goals and interests, and reflect practical considerations, which are very dependent on the specific policy and context. There are, therefore, no simple answers to questions such as: What criteria best express equity in a given planning decision? How to consider, and weight, different groups' advantages or disadvantages? What are the relevant thresholds for considering a state-of-affair equitable or inequitable?

This stresses the relevance of discussing spatial equity in real planning contexts and the importance of taking into account the conceptions and preferences of local stakeholders and decision-makers. This work contributes to this discussion by analysing principles of spatial equity in the accessibility to primary schools at the local scale. For this, first, a conceptual discussion of principles of justice and the way they can be applied to inequalities in the accessibility to spatial services was made. Second, a questionnaire was applied to territorial agents involved in a school planning exercise in a municipality in Portugal. This allowed to assess: what these agents consider to be the most relevant policy goals for the spatial planning of primary schools; what is the relative importance of spatial equity compared to other policy goals; what specific principles best express equity in the spatial distribution of primary schools. Third, an exploratory digital tool was applied to evaluate the agents' preferences regarding the balance between accessibility and costs – how are cost-minimizing and accessibility-maximizing solutions ranked in a pair-wise comparison.

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Rainforest Conservation policy assessment: The case of the Atlantic Forest in Brazil

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Abstract

The Atlantic Rainforest in Brazil, which used to be one of the greatest tropical forests in the Americas, is now reduced to 28% of its original area as a result of five centuries of strong human occupation. After a long negotiation process, the 2006 Federal Law nº 11.428 also known as the Atlantic Forest Protection Law (AFPL), established the formal framework to specifically protect the remaining Atlantic forests, including both primary and secondary forests.

In this article, we assess the effectiveness of AFPL focusing on the state of Sao Paulo, where AFPL has divided the territory into three main parts: the southeast and the northwest regions are protected by the law, whereas the remaining area in the middle is not.

We use a difference-in-differences approach to compare the natural forest cover and the frequency of environmental infraction notices in municipalities from treated and untreated areas. We restrict our analysis to municipalities whose territory is either 100% within the treated area or 100% within the untreated area, removing all municipalities whose territory was split in two parts (treated and untreated). We use a municipality panel data from 2001 to 2019 (treatment starts at year 2006) with natural forest cover as a percentage of municipality's total area from MapBiomas collection 5 data (Brazilian Annual Land Use and Land Cover Mapping Project). The starting date of 2001 was defined through an event study and it is consistent with the Environmental Crimes Law (Law #9605, from 1998), which specified ecological crimes in an effort to promote the legal certainty of previous laws and to make their enforcement credible.

Our results indicate that AFPL had a positive and significant effect on the natural forest cover in treated municipalities. Interestingly, the frequency of environmental infraction notices in treated municipalities is estimated to be lower relative to the untreated ones. The latter result might be a consequence of a legal framework that increased the severity of credible punishment for illegal deforestation.

Using event study, we can see that the effect on the natural forest cover appears after 2013, which is consistent to the fact it may take years for a forest to recover (and for such recovery to appear in satellite data). The coefficients for infraction notices suggest an overall decrease in the treated area relative to the untreated area, but are no longer significant for the most part of the years after 2006.

We are currently extending the analysis to include covariates and robustness checks considering subgroups or alternative treatment starting dates. We are also interested in impact of the law in other Brazilian states.

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Sustainable Community Development through the Perspective of a Type B Company: Yucatan, Mexico Case Study

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Abstract

Currently, companies are changing from a concept of income generation just for their own benefit, to one where the generation of economic development promotes improvements in the quality of life and the environment of a community where these are located. These companies with a social purpose have stood out for using the force of the market to solve problems faced by humanity such as education, health, economic and environment. This type of companies that stand out have a B certification. Type B companies have a very clear mission of generating a long-term impact that contributes to development in urban and rural areas. The objective of this article is to present the experience of an organization that works with artisan warpers and represents an opportunity for the contribution of sustainable community development in Mayapan, Yucatan. For this research a literature review was conducted. The purpose of this literature review was to find concepts related to understand the empirical approach of a B company in regards to sustainability. Four thoroughly interviews were carried out to analyse how B companies have been able to respond to social, economic and environmental demands, in order to demonstrate their viability as a sustainable alternative, in a world where social and ecological problems predominate. The complexity of reality, detail and context of Cielo Hamacas as a case study was examined from a systemic perspective. The results revealed that there is still a lack of actions aimed at a good economic and social development of the group of community warpers. So, it is necessary to promote greater economic and education capacity of the stakeholders that participate in conjunction with this type of companies, since their culture and social level do not make them see themselves as main actors of their communities development. For this reason, the transition to a new sustainable rationality of doing business is essential. Regarding the environment, the B company has good practices, and these have been reflected in the work that leaders and artisans are doing to take care of their environment.

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China Shock and Female Labour Market Participation in Brazil

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Abstract

Brazil was a successful case of economic growth based on import substitution. At the end of the last century, a period of inflation and growth stagnation, trade openness became a policy to help lower inflation by increasing competitiveness. Similar to the US, Brazil has expanded trade with China. The effects of China's trade shock in the US labour market have been well documented. However, it is not clear that the effects would be the same in other countries. Brazil is an interesting case to study because China Shock effects are spread by two channels: the rise of commodities exports to China, and the rise of imports from China. The rise of commodities exports offset the rise of imports impact in Brazilian labour markets, posing a question if the net shock favors female labour force participation. Indeed, female formal labour increases 12 percent in the same period.

This paper explores the variation of China Shock between Brazilian local labour markets to identify whether Chinese international trade expansion was able to improve the female labour market conditions in Brazil between 2000 and 2013. The identification strategy used was developed by Autor et al. (2013) and Costa et al. (2016), creating variables that relate the changes in trade flows between Brazil and China to Brazilian employment outcomes.

This paper uses administrative data from the Ministry of Labour (RAIS) and information about the trade flows between Brazil and China from the BACI database developed by the *Centre d'études Prospectives et d'Informations Internationales* (CEPII). The unit of measure of this analysis is the microregion, which is a grouping of economically integrated municipalities, allowing the use of a panel data structure for the estimations. To check female labour market conditions, the paper explores female formal employment, female to male wage ratio, and gender occupational segregation. We also control by microregional factors such as age, schooling, average wages of the formal labour force, and a cubic polynomial of income per capita, during the initial period.

Our preliminary results suggest that the China shock slightly reduced the proportion of female formal employment at the microregion level. Yet, compensatory effects may exist. Female labour participation in the microregions most affected by China exports intensification was lower than the experienced by the microregions more affected by the imports channel. Contrarily, in microregions most affected by the Chinese imported goods influx female to male wage ratio increased 2 percentage points. While in microregions that expanded their exports to China in greater volumes, the female to male wage ratio is negative.

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Social capital determinants of local food system resilience

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Abstract

Overview: This paper aims to forward research and engagement on spatial resilience and community ownership of local economic resources by understanding the role of social capital in adaptations of small-scale agriculturists in counties of Upstate New York.

Background: Disruptions in global food chains due to COVID-19, in tandem with the economic downturn, is exacerbating food insecurity world over which has disproportionately affected underprivileged communities. Demand and supply distortions across agro-food processing, retail, and labour, have resulted in a paradox of food shortages on the one hand and food wastages in farms on the other, which point to a breakdown of global supply chains. At the local level, media reports suggest that smallholder agriculturists utilize access to social capital structures such as direct/collective marketing to proximal consumers; and leaner, labour-intensive operations to build economic and environmental resilience, and consequently ensure continued food supply.

In academic literature, social capital – trust, cooperation, membership in groups – has been linked to food security, producer cooperatives, direct marketing, and other successes of local food networks. It has also been indicated in studies of disaster mitigation and resilience although its links to adaptation in situations of economic shock are understudied.

Hypotheses: Resilience here, is hypothesized as an interplay of three factors: (i) Greater product diversity and access to social capital in small farms enable them to better respond to systemic shocks; (ii) Supply chain resilience as a tradeoff of spatial proximity between localized actors which contributes to less disruption, but fewer redundancies which results in overreliance on nodal actors; (iii) Product diversity and spatial proximity create opportunities for local food systems to adopt cooperative, closed loop, and resource efficient practices. To test these hypotheses, this study attempts to understand the adaptive strategies that local food actors in upstate

New York have adopted in response to the pandemic. How does access to different forms of social capital influence their ability to adapt?

Methodology: This paper reports preliminary findings from a survey distributed to stakeholders in the agro-food industry in Upstate New York which is administered in partnership with Cornell Cooperative Extension's on-ground network of farmers. This survey has three sections which study pre-pandemic operations, adaptations to the disruptions of the pandemic, and social capital access of the respondent. Using a combination of econometric and spatial analysis, survey results are analysed to establish the role that social capital plays in local community adaptation in times of economic stress.

Implications: Practical implications of this study are ongoing efforts by civil society organizations and local governments (including New York State) to strengthen local food systems in the interests of health, lowered carbon emissions, and stimulated local economies. Scholarly contributions include efforts to examine the interrelated social and spatial natures of resilience.

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The intriguing connections between regional tourism and economic resilience

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Abstract

Tourism is an important key sector in regional and national economies which appears to have often a favorable recovery potential after a shock, leading to the notion of resilience capacity of regions. In the context of a tourism-led growth mechanism, the concept of tourism-led resilience capacity is introduced (constituted of sustained tourism resilience and speed of recovery). The analytical framework is tested for the 2008-2012 financial crisis in European Union by examining relevant data from European NUTS 2 regions. The research is unfolded on two complementary axes: a) assessing the resilience of the tourism sector, and b) estimating the weight of tourism in the overall resilience performance of EU regions. Finally, several implications for regional and European policies are addressed as well, particularly related to the role of innovation and diversification in increasing the recovery speed following a disruption.

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Can cities from peripheral regions become both resilient and sustainable?

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Abstract

In a world in which more and more turbulences occur and risks are more present than ever, resulting in increasingly numerous natural and human-made disasters, cities and metropolitan areas find themselves in a difficult spot. The risks become higher if one refers to cities that are located in less developed or peripheral regions. They should make serious adjustments to simultaneously achieve a good resilience capacity (i.e. ability to resist and restore after destructive/damaging events), while also reducing vulnerabilities and ensuring present well-being for the population and long-term sustainability (i.e. maintain the main functions and resources to a degree that satisfies not only the present but also the future needs of society). Our approach intends to test, in an international context, whether disasters can become a "blessing in disguise" by looking at some extreme events that occurred in metropolitan areas and changed the approach of urban planners and institutions in peripheral regions. Within a selection of most damaging natural and technological disasters that occurred in some of the most remote or less developed regions in the world, we first correlate data on the losses with resilience indicators

(preparedness capacity, coping capacity, and response capacity, Resilient city index), quality of life (Human Development Index) and sustainability (sustainable development index and environmental footprint of cities) – before and after the disaster. The statistical analysis using, classical methods but also machine learning techniques results in a typology that reflects the relation between disaster occurrence and the overall outcomes. Furthermore, taking into account one case study for each category, we try to look at the conflicts between the goals of the comprehensive sustainable development approaches and the more pragmatic purposes of resilience approaches. Examples of planning issues are taken into account and analysed from a comparative perspective by using qualitative methods. An institutional and administrative approach taking into account the strategies and the overall approach on planning metropolitan areas leads us to insightful conclusions on good and bad practices that could conciliate short term purposes of resilience with long-term sustainable development goals in vulnerable urban areas from peripheral regions.

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Being a long distance out-commuter or home employee in a rather peripheral region?

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Abstract

After reunification a net outmigration from East German regions occurred until the late 1990th. Many relatively younger people were looking for jobs in the west. About 30 years later outmigration flows exist but net migration is almost zero. However, still about 76.000 individuals out-commute for work-related purposes from the Federal State Mecklenburg-Vorpommern (MV). To the same time, employers in MV claim labour shortages. In this paper, we distinguish out-commuters and employees in MV to get a deeper insight into this interesting phenomenon. We especially address the question whether out-commuters are a selective group of individuals working in occupations that are not requested in MV. Additionally, we focus on the wage differential to work out potential strategies to get out-commuters back to work within MV. Lastly, we consider the number of workers that might be willing to work in MV and stop out-commuting. First evidence suggests that this would not appear. Labour demand in MV and respective wage levels are too low and the economic structure is too weak to sufficiently gain back out-commuters from a MV-perspective. Especially females suffer from the job-market weakness in MV.

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Building a Spatial Lakehouse system optimized for mobility data

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Abstract

With the exponential growth of location-related data, building systems that support these types of data presented a real potential to gain richer insights. Data Warehouses presented earlier the pillar of the decision support system. Thus, their spatial extension helped integrating the spatial dimension in the decision building process. However, with the emergence of Big Data, spatial data start also being produced at huge rates especially with the expansion of IoT and GPS tracking devices. The Spatial Data Warehouses showed several limitations such as the inability to support streams of IoT data and lack of scalability. Data Lakes emerged as a new technology trying to address the scalability issues and lack of flexibility related to Data Warehouses. They are defined as a repository containing data of any type and any structure. The flexibility and cost-effectiveness of data lakes were the principal reasons behind its propagation in the decision support landscape. Data Lakes presented a suitable environment for the complex queries and heavy storage of the Spatial Big data such as the storage and analytics of mobility data. Data Lakes give access to practically unlimited storage and support applying distributed analytics and advanced analytics and machine learning. However, they also showed some consistency issues. The next step, in the data architecture maturing, was the Data Lakehouse systems. The Data Lakehouse systems have the

benefits of both systems; Data Warehouses and Data Lakes. The Data Lakehouse's goal is to unify all the enterprise's data workloads in the same platform. They are based on a table format storage layer implementing governance and ACID properties on top of a Data Lake. The Data Lakehouse is a combination of governed and reliable Data Warehouses and flexible, scalable, and cost-effective Data Lakes. As the location-related data is frequently an object of regulation rules, the Data Lakehouse is more compliant than the previously mentioned systems. The existing works didn't address the Spatial Big Data requirements within the Data Lakehouse. In our paper, we are going to address this aspect by presenting the different components and best practices for building a Data Lakehouse architecture optimized for the storage and computing of Spatial Big Data. The paper goes through the successive components of the Data Lakehouse and details the methods of adapting this component with the Spatial Big Data requirements going from ingestion to advanced analytics and visualization using the most suitable open-source systems for each step on the pipeline.

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Family firms, Regional Competitiveness and Productivity: A Multilevel Approach

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Abstract

In this paper we adopt multilevel design to investigate how much of the labour productivity of a sample of Spanish manufacturing is explained by firm-level versus regional characteristics. To account for differences across regions in terms of human capital, knowledge intensity, innovation, and physical endowment, we calculated by applying the principal component analysis (PCA) a synthetic indicator of regional competitiveness for the period 2002-2015. Our findings reveal as most of the variability of firms' productivity is attributed to firm-specific characteristics. However, the regional context matters with firm's performance that is strongly influenced by the overall quality of the regional environment in which are located. When firms are differentiated according to the family status, that is in family and non-family firms, cross-level interactions show as family firms are particularly sensitive to spatial advantages offered by location in well-endowed and prosperous regions. Theoretical implications at the crossroads between family business and regional studies together with policy implications are discussed.

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Use of Technology in the Rural Households of Bangladesh Having Migrant Members

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Abstract

A good number of rural households in Bangladesh have at least one migrant family member – either in the cities of Bangladesh or abroad. These migrants contribute to the technology diffusion in rural households. The remittance sent by these migrants increases the household income, thus increases the affordability of rural households to buy modern technological items. Based on the survey of 276 rural households of 8 sub-districts, this study finds that though the indirect impact of migration by sending remittance on technologies is quite significant, the direct flow of technology in the country is lagging behind. Almost 60-80% of the technological instruments are self-purchased rather than sent by migrant members. However, the presence of migrant members in a family has statistically significant impact on the family income. Thus, this study shows that the effect of migration is low on the technological advancement of rural households in Bangladesh.

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The Role of Policy Support in The Development of Regional Health Tourism – The State of the Art in Croatian Regions

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Abstract

The changes in lifestyles of modern travellers (globalization, less free time, more stress, etc.) have induced the rise in the health tourism demand globally (Hall, 2011). A new concept in the tourism sector regarding health tourism development is present in the last decade (Connell 2011). This concept relates to active promotion of health tourism on national level and to high national support through the development of health tourism infrastructures and policies (Mainil et al., 2017). The rationale behind this support is in perception of health tourism as a generator of regional economic growth (European Union, 2016). According to Mainil et al. (2017) health tourism supports development of quality value-added products and services in a destination by mobilizing specific local resources and by contributing to smart regional specialization. Hence, health tourism helps diversification of tourism products, reduces seasonality and vulnerability of a destination in general and in times of crisis when reduction in general tourism demand occurs.

The purpose of this research is to analyse whether the improvement in national policies induces the rise in the efficiency of health tourism services providers in Croatia. More precisely, the panel DEA was used to analyse the relative technical efficiency of the providers of health tourism services, special hospitals and natural spas, in Croatia. The analysis is performed for 8-year period. The results indicate that in the analysed period, due to the innovation in services, the shift in efficiency level and in efficiency frontier is achieved. Furthermore, by analysing all of the Malmquist index components, results reveal that special hospitals and natural spas in Continental Croatia have achieved better results in term of technical efficiency, in relation to those in Adriatic Croatia. Knowing that the rise of efficiency of health care facilities can be brought by supportive actions of public and private sector, the study indicates that the national health-tourism policies are more favourable for special hospitals and natural spas in Continental Croatia. Moreover, it can be concluded that present economic policy is actively meeting and responding to multiple challenges the health care infrastructure is facing, which influences the reduction on regional disparities and vulnerabilities in Croatia.

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Spatial Agglomeration and Firm Productivity: Does Trade Status Matter?

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Abstract

This study uses micro-level panel data from Chinese manufacturing firms to investigate the impact of urban agglomeration on firm productivity taking a firm's engagement in international trade into consideration. Embracing firm heterogeneity in trade status, we find that non-exporters benefit from urban agglomeration through manufacturing specialisation whereas little effect of local specialisation on productivity is found among exporters. The findings mainly are driven by processing exporters involved in straightforward assembly. These findings increase the understanding of heterogeneous productivity gains from urban agglomeration and the spatial economy in China.

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Typologies of Agriculture and the Decision to Invest in Family Farms. A Chi-Square Analysis

Hélder Marcelino

Abstract

This research aims to analyse the possible connection between the types of agriculture and the decision of investing in family farms. Specifically, it is intended to estimate the significance level of the types of agriculture influence on investment decisions making on family farms in the commune of Lepi, municipality of Longonjo, province of Huambo, Angola, based on the typification that suggest the criteria of market linking, type of labour and sources of income. For this purpose, an economic analysis was carried out, based on an empirical data obtained through a survey on 361 households in the mentioned location, testing three hypothesis with application of Chi-square analysis, desiring to measure an eventual connection between the variables, assuming that the greater the value, the greater the chance of connection between them. However, the chi-square does not refer to the strength of such connection. If its value is zero, there is no association among the variables. The variables are presented in contingency tables and in graphs. The null hypothesis was tested with a significance level of 0,05. The results indicates that there is no significant connection between the types of agriculture and the decision to invest in family farms, regardless of the relationship they establish with the market, the used type of labour and sources of income.

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Poor people on the outskirts of Luanda city in times of pandemic: social practices, hits and misses.

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Abstract

This paper focuses on the social practices of peripheral populations of the city of Luanda.

The aim of this paper is to discuss the practices of subaltern populations and its initiatives, actions, and effects in the context of the global pandemic of Covid-19. Also, address a set of government strategies and measures that have been used as a reference for many of the social practices and, at the same time questions several other practices.

Henceforth, based on the approaches made by other authors, particularly in the social sciences, immersed in the treatment of the subject of the global pandemic, it was carried out a preliminary analysis of social practices and, qualitative approach, using various research techniques, such as observation, semi-structured interviews, observation, and focused interviews, as well as documentary analysis.

During the critical situation of the global pandemic, many governments, including the Angolan government started to integrate external models and references to deal with pandemic of Covid-19. At the national level, the efforts undertaken have mainly aimed to the population compliance with the guidelines and initiatives that advocate the defence of life and the minimization of the number of victims of covid-19.

The empirical studies have suggested that a set of practices related to the context of the pandemic of Covid-19 and the need for protection of its subjects and communities sometimes they align with (government) guidelines, some distance themselves or even ignore the guideline measures that can potentially protect the population of Angola.

It is concluded that, despite the fulfilment of some institutional measures by the population, there have also been a number of problematic effects that directly affect subaltern populations. It is also concluded that impoverished populations have shown immense difficulties in following and understanding many of the government guidelines and strategies, which has raised important aspects of the dialogue between leaders and governed and public policies in general.

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Proximity analysis of local actors' coordination in the circular economic process - a study case on methanisation based on social networks approach

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Abstract

Our article aims to analyse the dynamics of social and economic interactions and proximity relationships. It is based on a theoretical framework combining the approaches of analysis of social networks and proximities, applied to the mechanism of methanisation of household and assimilated garbage of the Syndicat Mixte du Point Fort (SMPF) of the commune of Cavigny. This case study is symptomatic of the problems of connecting actors at the local level. Stakeholders with diverse functions and from different territorial scales coordinate around issues of waste mobilization, co-product flow, risk management and social acceptability. In our approach the social networks tool is coupled with an analysis of proximities (geographical and organized), in order to provide a better understanding of governance associated with the structuring of productive and social interactions. We first present the SMPF methanization project, then the theoretical framework and methodology used to analyse the territorial governance of this case study. We study, on the basis of our surveys, the technical and innovation trajectories and their evolution at the local level, by representing them in the form of flow networks. We then analyse the dynamics of social networks, which reveal the evolution over time of synergies and cooperative behaviours between the actors of the methanisation of Cavigny. The last part is devoted to the analysis of the importance and the role played by proximity relationships in the productive choices and relationships maintained by the actors of this process.

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Cultural Tourism in Angola and Local Development: A Reality or Still a Challenge?

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Abstract

The socio-economic and cultural changes and the challenges of globalization that are taking place today, across the world, accentuated by the pandemic crisis of Covid-19, call on the public authorities, agents of change and civil society to rethink development models, looking for placing "man" at the centre of their policies and strategies and rationally exploiting all resources in order to contribute to the improvement of the quality of life of local communities, through the eradication of poverty, which is one of the main objectives of sustainable development.

Angola is recognized as a country, not only with a rich economic potential, but also with a rich diversity of its tangible and intangible cultural heritage, constituting the true "substance" for the promotion of cultural tourism at the local and international level, and consequently, one of the means to achieve sustainable development in Angola, aiming at social justice, through the elimination of asymmetries and the promotion of equal opportunities, especially for the most vulnerable populations.

In the Angolan context, the real questioning of the "Tourism and Development" relationship lies in knowing what the impact of tourism has been, in this case, cultural tourism on local development; how cultural tourism has contributed to development aimed at local communities, at this time that Angola is taking on the challenge of deconcentration and decentralization of public power and governance and, at the same time, facing the global health crisis of Covid-19? Considering the current local realities and specificities and moments of crisis, could this binomial "Tourism and Development" in Angola, be already a fact or is it still a challenge? Such is the problem to which we intend to respond. If, on the one hand, the promotion of cultural tourism in Angola starts to take shape, even timidly, its impact on local development seems to be still negligible.

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Regional Externalities of the Angolan Oil Industry: An Interregional Input-Output Analysis

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Abstract

The economy of Angola is highly dependent up on the oil industry whose production is concentrated in the northern part of the country. In this paper we analyse the economic effects of this natural-resouce-based export amounted sector in the contexto of an integrated interregional input-autput system calibrated for the 18 Angolan provinces. The model takes into account the regional interdependence imbedded in the production structure of the country trough linhages. We show that in spite of the averall importance of the oil sector for the economy, it does not genarate strong interregional spillovers to the rest of the country, runforcing regional disparteis in Angola.

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The Future of the Tourism Industry in Angola 'The Tourist Product Reflections'

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Abstract

Travel and Tourism is presently considered a truly global phenomena, based on a broad and div erase set of natural, historical, cultural and socio-economic resources, assuming new development directions towards greater important role in regional and local economic welfare, strength ending local identities and contributing to nature conservation and environmental protection in the majority of the countries and new tourist destination areas.

The tourist attractions, both natural and man-made, are the main components of a region's tourist product. Without attractions there would be no need for other tourism services, all the more so without attractions, tourism as we see it today would not exist. Despite the huge role that attractions play within the tourism industry, it is generally accepted that they are poorly studied.

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The Impact of Technological Innovation as an Instrument in the Angolan Manufacturing Industry.

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Abstract

The transformers industries have got a fundamental importance in the development policies of several countries at the world level, being very wide the bibliography that approaches this theme and several the different authors' positions.

In the present work, the impact of the innovation is analysed in the Angolan transformers industries, by politics and formulated strategies and applied for the Angolan government. Of this done, in the pre-textual aspects, it is made a panoramic introduction on the evidenced theme the delimitation of the research, problem, the proposed objectives, the hypotheses, the used techniques, the justification and the importance of the research.

The analysis of the theme took to the construction of four chapters:

First, to explain concept the meaning of the variables that you/they serve as pillars or focus for the understanding of the theme on the agenda, such as the innovation, investment, industry transformers, industrial policy and industrial strategy and, that allows to avoid to be in the strange whenever if it is to speak of the same variables.

As, to analyse the state or situation of Angola in terms of industries transformers. Through this it is half possible to make the historical framing of the industry transformers of Angola in the past and present, for branches of activities, including his/her contribution in GDP and in the job.

Third, why know to invest in Angola, of the innovation option and, of the regional and national impact from the past to this need moment; because that, the innovation passes the important being by the impact that this has for the stability macro economical of a country.

It is last, to verify which the initiatives, the strategies and politics of incentives that can be created by the government in industrialization terms and, the advantages of the same ones for the improvement and stability of the situation economical of Angola. And through the real data of the Angolan economy of the period 2000-2005 and leaning on in the techniques econometric, it was made an analysis of the models that you/they allow to measure the tendency of the production of the sector transformer of Angola.

The light for an economy healthy priorities part given by the government of a country by strategies and established politics. In this slope, considering Angola, it is indispensable and important to look for that that is priority, once the atmosphere in itself speech of what is necessary to take the economy forward.

Therefore, the study on the impact of the innovation in the industry Angolan transformers, gives a vision on the importance of the innovation, being the government the motor of incentives and form of appropriate politics for the same, because when this is well done, the remaining is "an Angolan economy heading for the growth and development economical."

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Revisiting the structural interdependence: a comparative analysis for Brazil, Colombia, and Mexico

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Abstract

The regional interdependence can be measured by different indicators. At this chapter we will address this issue analysing the interdependence from the intermediate inputs side and from final demand side among Brazilian, Colombian, and Mexican regions using input-output database from 2013-2015. Which is the relevance in this kind of analysis? The analysis of the structure of regional interdependence plays an important role contributing to a better design of regional policy. According to Williamson (1965) regional inequality is an issue related to development. For the author, the inequalities are generated at the early stage of development and as far as an economy became mature there will be a process of regional convergence or at least, a decrease on it. To reach this aim we will use the final demand decomposition and the hypothetical extraction. We depart from the ideas of growth poles and central places (Perroux, 1955 and Christaller, 1933) to implement the regional hypothetical extraction and observe the impact of those regions upon the regional economies. On the other hand, this exercise enables us to measure the relative importance of the most important regions in each country upon the rest of the economies.

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Tourism and Nature Conservation in the Huambo Province. An Analysis of Visitors Testimonials

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Abstract

This paper analyses tourism in the Province of Huambo, its interrelation with the natural and cultural heritage and nature conservation. Tourism is an important element in society, because it addresses the multidisciplinary nature of sciences. It is a natural phenomenon, of cooperation between peoples, linked to the science of life, promoting development, understanding and mutual respect between men and society. Tourism has been at the center of attention in the current and future perspective, it is the largest service industry in the world because it aggregates complementary businesses, and however, it is among those that cause more impacts and negative effects on the receiving location. However, it can contribute to the development of the city of Huambo, with indicators pointing to the ranking of economic activities that generate income, foreign exchange and direct and indirect employment in its different modalities. From the studies carried out, it was analysed the data collected by questionnaire to a sample of 39 visitors. The statistical analysis of the responses obtained, carried out with the support of the Q method, made it possible to identify the factors of choice of the tourist spots to visit, namely the heritage value and the quality of the environment, confirming the hypothesis of the relationship between tourist attractiveness and environmental quality. The research has a non experimental character, mixed because it uses qualitative and quantitative techniques having as variables the knowledge and the visitation and transversal because it makes the connection with other sectors of the economic apparatus of the Country and the Province. The method referred to above has made it possible to ascertain that tourism in Huambo is done in a raw way and at shy steps, and the tourist sites still need more attractions and environmental quality, besides the beyond the natural beauty, and the little that is known and explored is mostly consumed by domestic tourists, and domestic tourism being the most prevalent. In addition to being an economic engine, tourism can be used as an alternative for nature conservation.

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Gains from agglomeration: Evidence from manufacturing plants in the Russian Empire

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Abstract

I study the location patterns and the effect of agglomeration on plant-level productivity of manufacturing industries in the Russian Empire. The analysis is based on a novel micro-geographical dataset on the population of Russian manufacturing plants in 1908, augmented with geo-coded data on Imperial railroads and province-level indicators. Using continuous distance measures of geographic concentration, I show that most industries in the Russian Empire were localized at distances about 100--200 km. Also, I reveal coagglomerated industry pairs forming input-output linkages. I estimate impacts of location characteristics of each plant on plant-level productivity. I find that a firm-level TFP is bell-shaped with respect to the number of plants of the same industry in the same geographic area. I reveal a strong positive impact of closeness to railroads on firm-level productivity. These findings reflect non-trivial interplay between agglomeration and dispersion forces to which my estimation results impart empirical content.

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The role of Public management in the promotion of intelligent tourist destination: the challenge for Cozumel, Quintana Roo, Mexico

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Abstract

The smart tourist destination (STD) model has become a tool with advantages to analyse the role of public management of tourist destinations. This is because the model highlights the situation of sustainability of the tourist sector, its adaptation to the digitization and the progress towards connectivity. The STD model, in addition

to promoting the development of the destination, it endorses inclusiveness and other dimensions, such as benefits to the local population and the role played by public management in its establishment. Through a compilation of documents such as plans, programs and regulations, we analyse the STD model and dimensions as applied in the tourist island of Cozumel, Quintana Roo, México. This study intends to capture the current panorama of the smart model, at the federal, state and municipal levels in Cozumel. This allows us to point out the challenges that this island faces as a tourist destination in its route to becoming a STD. Above all, we measure the performance of public management in achieving this objective. We perceive that the challenges for the public administration is great due to the absence of a plan to promote, expand and to include the population at large, through actions that lead to the island's classification as a STD.

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Charles Booth and geodemographics: his London legacy in historical perspective

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Abstract

Geodemographics is concerned with the classification of neighbourhoods into categories or clusters based on their socio-economic characteristics. In layperson's terms, it can be said to be 'the analysis of people by where they live'. It uses a qualitative description – a 'pen portrait' – to summarize the distinctive attributes of each category or cluster. It works on the principle that 'birds of a feather flock together': people who live close by (i.e. in the same neighbourhood) are assumed to have more in common than a random group of people.

Urban planners and policy-makers have long had a practical interest in geodemographics, usually directly related to policy formulation, analysis and evaluation. Typically, the aim is to develop a consistent and systematic approach to spatial resource allocation, involving the definition of priority areas to receive favoured treatment. Such areas may be defined in relation to particular policy sectors, such as education, housing, crime or health or, in a more general sense, as in the case of designating 'inner city areas'. The geodemographic classification here serves as a composite measure of need and is usually constructed using census data, where feasible supplemented by other sources of small area data. It generally takes the form of a map displaying the spatial distribution of neighbourhood types, together with a set of pen portraits.

Use of the term 'geodemographics' is comparatively recent, dating from the 1980s, but the basic principles, in one form or another, have a much longer history. The earliest example is generally attributed to philanthropist Charles Booth who prepared pioneering street-by-street surveys and poverty maps in late nineteenth century London. Booth wanted to find and present clear evidence of the extent of poverty in London, in an effort to convince politicians to take urgent action. The full results of his research, including his poverty map, were published under the general heading of the *Life and Labour of the People of London*.

As the world's first urban social survey, Booth's survey had a big influence in London and elsewhere. Here we present an historical review, starting with Booth's original survey and drawing on three later efforts to produce surveys of London Life and Labour, intended to show how, over the years, London's social and economic spatial structure had changed. We focus particularly on how geodemographic classifications have evolved as an analytical planning method, spurred on by advances in computing power and the increased availability of small area socio-economic data. In a final section, again focusing on London, the paper first examines the recent development of *workplace* geodemographic classifications, to sit alongside the more familiar *residential* classifications, opening up the possibility of creating a classification of *travel to work flows* and, secondly considers the availability of *open geodemographics*, where users have the opportunity to customise their geodemographic classification according to the application they have in mind.

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Economic Valuation of Ecosystem Services Offered by the Cold Greenhouse in Huambo City

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Abstract

Natural resources in recent years have been vandalized, damaging ecosystem services. The present study was carried out from October 2019 to July 2020, in the cold greenhouse located in the city of Huambo. The objective was to estimate the use value attributed by visitors to Estufa Fria in the municipality of Huambo. Methodologically, visitors to the space were interviewed, then the willingness to pay for the use of the space was calculated using the contingent valuation method. Results: The age group was between 16 to 54 years old, and about 9.3% is 20 years old, while the family income the most expressive range was 7,000 to 30,000 kwanzas, about 40%. About 24% visited the greenhouse at least twice a week. The reasons for the visit about (64%) point to study purposes. Regarding the indicators of risk of degradation, 26.7% point to the absence of toilets, inspectors, tree plantations, poor conservation of space structures and the accumulation of garbage causing pollution. About 48% are concerned about the degradation of space. 45.2% were willing to pay between 100 and 500 kwanzas for the use of the space.

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Food Security and the post-pandemic city: Some perspectives from Lagos, Nigeria

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Abstract

Many cities around the world are food insecure. Goal 2 of the Sustainable Development Goals seeks to end hunger and food insecurity. While SDG2 recognizes the implications of climate change, unsustainable agricultural practices and regional conflicts on food security, the COVID-19 pandemic has added additional threats to existing urban food systems vulnerability.

The COVID-19 pandemic, as an evolving urban crisis has further complicated the vulnerable food systems in Lagos, Nigeria's primate city. Lagos, due to its topography and extensive built-up area, has typically relied on food supplies from other parts of Nigeria and beyond. The COVID-19 related lockdown in March 2020 resulted in disruptions in the national food distribution networks, with acute consequences for the city and her residents.

Therefore, our study seeks to address the following questions (i) How did the challenge of food vulnerability play out when the city locked down to protect itself in a pandemic? (ii) What is required for a more resilient (food secure) future? To answer these questions, we examine the effects of COVID-19 pandemic containment measures on food distribution systems, the implications on food availability, accessibility and affordability; and the associated coping strategies by residents of Lagos, Nigeria.

Our findings suggest that food vulnerability exacerbated during the lockdown and in the absence of adequate and effective coordination of government social safety nets, vulnerable residents relied on informal social reciprocal efforts as alternative channels of support, demonstrating what Abdoumalik Simone refers to as '*People as Infrastructure*'.

Drawing theoretical insights from the concept of *People as Infrastructure* complemented with the notion of social capital; and utilizing social media analytics, desk research and interviews, we explore the effectiveness of social reciprocal efforts in providing food support during the COVID-19 lock down; as well as its potential for building a more resilient and food secure city.

The paper concludes by reflecting on the regional development implications of our findings and offers some thoughts on how social networks can contribute to making Lagos food secure.

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The Batey-Madden model: forty years and counting (or should that be multiplying?)

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Abstract

In 1980, the present author and his late colleague, Moss Madden published their first paper in an international regional science journal[1], on regional demographic-economic forecasting. The paper identified a serious flaw in modelling the effect that population has on the economy. Up till that point a population forecast would typically be fed into the final demand vector of an input-output model as consumption. This consumption then produces changes in the gross outputs of the industrial sectors represented in the model, which are combined with changes caused by other factors (such as exports) to represent overall changes in the economy. The problem is that in order to obtain a consumption vector from a population, we have to know (or make some assumption about) unemployment, which is a determining factor in the level of consumption.

Batey and Madden developed a solution to this problem by embedding an extended input-output model within an activity-commodity framework. The key innovation here was that instead of having one type of household, in the extended model there were now two types: employed and unemployed. The activity-commodity framework had a number of benefits: it offered flexibility in the choice of variables (demographic and economic), in the units in which these variables were measured, and in its solution method (in the form used here solved by inverting the (square) matrix of coefficients to give a single determinate solution.

The inverse of this new, extended input-output model, known as the Batey-Madden model, provides a rich source of impact multipliers that are more realistic, including so-called Type 4 income, employment and production multipliers, and a range of demographic-economic multipliers that measure the effect of population change upon the regional economy. What is more, the model provides a simultaneous solution to the inconsistency problem, so that by inputting economically active to the model, consistent values of unemployment are calculated.

Activity-commodity frameworks have proved useful in many ways, providing a means to compare the structure of existing models, as well as serving as a useful tool in designing new forms of extended model.

In this paper, several aspects of the Batey-Madden model are explored: how the model came about; the benefits of activity-commodity frameworks in developing extended input-output models; why the household sector matters so much in regional modelling; a survey of how the model has been applied, where and when; new forms of the model capable of measuring the economic impact of changes in particular population cohorts, including an ageing population, an enhanced skill structure, and the impact of changing dependence on in-migrant workers.

The paper aims to show that more than forty years after it was first introduced, the Batey-Madden model continues to offer useful insights about the nature of demographic-economic change.

[1] Madden, M. and P.W.J. Batey (1980) "Achieving Consistency in Demographic-Economic Forecasting", *Papers of the Regional Science Association*, 44: 91-106.

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Cooperatives as an alternative to reduce the high territorial concentration of capital ownership in the Chilean case

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Abstract

Many countries struggled with high levels of inequality. Territorial inequality is sometimes overlooked as an important source of inequality. Differences in the territory are associated with the distribution of capital both human and physical. However, a more nuanced source of inequality may play an important role in how to develop local economies.

Studying the value chain of dairy products in Chile, this paper shows how cooperatives can promote redistribution of profits from upstream links (manufacturing) to downstream links (agricultural), which have a territorial impact given that manufacturing ownership is highly concentrated around the Chilean Metropolitan Region.

In addition, the cooperative allows its associates to be more resilient to face an economic downturn, due to this allows the associates to receive revenues from the manufacturing activities of the cooperatives, given that manufacturing profits are larger than the ones generated by agricultural dairy production.

Using an input-output framework, it is shown that the impact is even larger when the indirect and induced effects are taking into account, especially because most of the induced effects are spent in the territory, while in the case of the large company this amount is concentrated around the Metropolitan Region.

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Managed retreat in the face of climate change: What influences buyouts of floodplain properties

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Abstract

This paper uses a double-hurdle model to empirically examine the factors influencing government buyouts of floodplain properties, with a particular focus on the local fiscal resources and flood management practices. Using nation-wide panel data of buyouts funded through the federal Hazard Mitigation Grant Program, we find that counties with more property tax revenues or a lower fiscal reliance on property taxes have more buyouts. We also find that higher flood insurance take-up rates are associated with smaller amounts of floodplain buyouts. Our results provide insights into the barriers and challenges for government buyouts and managed retreat.

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The Persistent Effects of Natural Disasters on Opioid Deaths

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Abstract

Catastrophic natural disasters have been increasing worldwide in recent decades, among which floods and coastal storms (e.g., cyclones, hurricanes) have been recognized as the most consequential in terms of economic and human tolls. The two types have been responsible for the most economic losses and human impacts in the United States as well. Up to date, the research has focused on understanding disaster vulnerability measured by the number of fatalities at the onset of the event. Much less is known about the long-term health implications of disasters. Disasters can have health implications and potentially result in deaths in the long term potentially due to the debilitating consequences of post-traumatic stress disorder, as well as the overall decline in general mental or behavioural and physical health. Moreover, languishing health problems could lead to other more serious issues such as substance abuse and dependence and possible drug-related fatalities. This is a concern considering especially the already dire US opioids crisis coupled with the preponderant scientific consensus that climate change will likely increase the frequency and severity of extreme weather events in the future.

In this paper, we focus on understanding how individuals' exposure to extreme disaster events may linger over time and contribute to drug-related mortality in the United States. We also explore how federal disaster response specifically addressing the immediate needs of households in terms of temporary housing (e.g., shelters, hotels) accommodation and quick repair of homes, short-term counseling and legal services could mitigate substance-related fatalities of disasters.

Results of our county-level analysis covering the entire US over the period 1970-2016 suggest a significant rise in drug overdose mortality in areas experiencing damaging flooding events. Interestingly, our results indicate that

impacts of floods on deaths (as opposed to opioids abuse, which may have started immediately after the disaster) start to emerge two years after the incident and linger over the long-term, with a significant rise in death rates seen even 9 years after the catastrophic disaster experience. Meanwhile, we also find that increased support for housing and other household needs made available by the Federal Emergency Management Agency (FEMA) in the aftermath of disasters is important in terms of reducing opioid-related mortality.

Our results are important and have significant policy implications both for the disaster risk and ongoing opioid crisis management.

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Scaling of Urban Heat Island and NO₂ with Urban Population: A Meta-Analysis

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Abstract

Due to urban population growth worldwide, thermal anomalies and toxic air pollution are increasing concern for citizens. Despite this increasing challenge and indications, there is still no consolidated understanding of the effect of city size on urban heat island (UHI) and nitrogen dioxide (NO₂) pollution. Meanwhile, nowadays cities are viewed as organisms where their magnitude of socio-economic outcomes changes along with their population size, and these changes can be generalized by scaling laws. However, we find most studies dedicated to UHI or NO₂ consider only a single city or a few cities within the top ranks of specific world regions or globally.

We fill this gap by conducting a qualitative synthesis of the literature and performing a statistical meta-analysis from published work with the aim to uncover scaling laws of UHI and NO₂ with the population size of cities. Under the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guideline, we collect and filter about 500 research outcomes on UHI and NO₂ from Scopus and Google Scholar. We select 22 articles at the stage of qualitative synthesis and summarize them based on their measurement types and geographical locations. The qualitative synthesis of UHI studies includes 384 nonduplicated cities from Asia, Europe, North America, and Oceania. 52 cities are measured by car traverse, 12 cities are measured by monitoring stations, and 328 cities are measured by remote sensing. The qualitative synthesis of NO₂ studies includes 1653 nonduplicated cities from Asia, Europe, Africa, North America, and South America. 4 cities are measured by handy sampler, 61 cities are measured by monitoring stations, and 1588 cities are measured by remote sensing.

Then, for meta-analysis, we group those 22 articles and conduct ANalysis Of VAriance (ANOVA) to identify significant model specifications (linear, semi or double log relations). Through ANOVA we identify significant relations of maximum UHI intensity and logarithmic maximum UHI intensity with logarithmic population size among 52 nonduplicated cities in Asia, Europe, North America, and Oceania. These 52 cities are all measured by car traverse. We also find significant relation of logarithmic annual mean NO₂ surface concentration with logarithmic population size among 24 nonduplicated Asian and European cities. 2 cities are measured by handy samplers, and 23 cities are measured by monitoring stations.

The results of meta-analysis show moving from a city with a population of 100-thousand to a city with a population of 1 million, the max UHI intensity increases by 2.66 °C, the annual mean NO₂ surface concentration increases by 14.95 g/m³. Moving from a city having a population of 1 million to a city with a population of 10-million, the max UHI intensity increases by 3.87 °C, the annual mean NO₂ surface concentration increases by 21.72 g/m³. Thus, larger cities have higher levels of UHI effects and NO₂ pollution. We also give the progress of verifying the NO₂ scaling using census data and in-situ and RS-measured NO₂ data at the level of Urban Atlas 2012.

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Regional Differences in the Economic Impact of Lockdown Measures to Prevent the Spread of COVID-19

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Abstract

This paper analyses the regional economic differences in the impact of lockdown measures ordered by Colombia's national government to prevent the spread of COVID-19. Using an input-output model, we estimate the regional economic losses of extracting a group of formal and informal workers from different sectors of the economy. Results show regional differences in the impact of lockdown measures on labour markets, local economies, and their productive sectors. We also find that peripheral regions concentrate a higher number of informal workers in isolation than the inner regions. Regarding the economic impact, regional losses range between 5,4% of GDP (Amazonia) and 6,3% (Coffee Area and Antioquia). Finally, we compare the Colombian case with other developing economies, articulating what the Colombian case can tell us that informs about other countries' experiences in fighting the COVID-19 pandemic.

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The Evolution and Driving Mechanism of Urban Innovation Network in GBA

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Abstract

This paper is focused on the evolution and driving mechanism of urban innovation network in Guangdong-Hong Kong-Macao Greater Bay Area (GBA). Based on data of patent transfer among 11 cities in BGA from 2009 to 2020 mining from National Intellectual Property Office of China, the paper analyses the evolution characteristics of urban innovation network using the social network analysis method, and exploits a modified version of the gravity model to verify the driving mechanism of urban innovation network evolution by negative binomial regression approach. The study finds that the innovation links among 11 cities in GBA are becoming closer and closer, the network agglomeration capacity is gradually enhanced, and the degree of collectivization within the network is increasing. In the network, an innovation corridor with Shenzhen and Guangzhou as the core and extending to Dongguan and Foshan respectively has been formed. The results of the gravity model estimation show that the evolution of urban innovation network in GBA is significantly related to the technological innovation strength represented by the number of patent application, the proximities of geography and technology, as well as the similarity of economic development, industrial structure, and institution.

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Heavy metal and bacteria removal from River Nile, Egypt by carbon nanotube filters that enhancing the marine conditions for fresh water bivalves

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Abstract

The contamination of water resources with a wide range of pollutants has become a source of concern in recent decades. Due to their unique properties such as chemical stability, thermal stability, and high surface area, chemically functionalized MWNTs (F-MWNTs) have a lot of potential as a new effective filter. The aim of this study is to see whether F-MWNTs can be used as an efficient filter to improve the aquatic conditions for *Mutela singularis* (*M. singularis*), a freshwater bivalve that is used as a bio-indicator of heavy metal contamination. The histological and biochemical composition of *M. singularis* was studied before and after the use of F-MWNT filters.

The bivalves and water samples used in this analysis were obtained in Abu Hummus, Egypt, on the Nile River. At high pH, the metals Co, Cu, Fe, Pb, and Zn had high removal efficiency, while Cd, Cr, and Ni had higher removal efficiency at low pH. Copper was removed 99.8% efficiently by F-MWNTs-based filters at pH=10 for a 5 µg/L concentration. The mechanisms underlying F-MWNT filtration as a feature of pH were discussed. *M. singularis* samples filtered with MWNTs filters had a high standard of structure, as well as a large increase in carbohydrate, lipid, and protein content. The protein increased by 45% due to enhancing the aquatic conditions of *M. singularis*. Our research contributes significantly for water treatment applications, and to the potential feeding fields.

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Spatial Variability of Land Use Types in Relation To Soil Moisture and Climatic variables over Egypt

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Abstract

Soil moisture, as a fundamental factor in the hydrological process, it directly influence land use type capabilities in response to rainfall, humidity, temperature and topography characteristics. Many studies have documented land-atmosphere interactions, however, studies that investigate the impact of land-use/land-cover changes in the context of the processes involved in soil moisture-precipitation coupling have been lacking. This would be covered by understanding the spatial variability of land use type and soil moisture induced by different climatic elements.

Spatial modeling in land use types can influenced by slope gradient, followed by soil moisture and elevation and slope position, nonetheless climatic factors can be the reason for changing both soil moisture and Land use types. The coupling metrics exhibit a strong positive soil moisture-precipitation relationship within the water cycle, soil moisture and evapotranspiration (ET) influence each other. Therefore precipitation, humidity and temperature are the main climatic factors to be consider for the land use type and soil moisture changes.

The study provides an insight into policy making of land resource management and can be used in the modeling and integrates field inventory data with the satellite images. Analysis involves four major steps, namely, (i) landuse/cover types, (ii) soil moisture dataset (iii) important climatic factors (iv) change monitoring between land use types and the relationship with other variables.

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Government Spending and Regional Poverty Alleviation: Evidence from Egypt.

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Abstract

Poverty is one of the fundamental socio-economic problems facing most developing countries. In Egypt 32.5 percent of citizens are living below the poverty line. At the regional level especially in Upper Egypt the problem is more evident. Understanding the relationship between government spending and regional poverty reduction will help policymakers to design and implement programs that reduce regional poverty incidence and income inequality effectively. This study aims to analyse the impact of public spending in various sectors in alleviating regional poverty in Egypt by using panel data from 27 governorates during 2011-2017 period.

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Location Patterns and Spatial Distribution of Co-working Spaces in Istanbul

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Abstract

Co-working spaces are a rising phenomenon for cities to attract creative workers and to enable knowledge exchange. These spaces provide a flexible, shared working environment for small firms, start-ups, and freelancers to collaborate, share ideas, and network. İstanbul, as the country's cultural and creative capital, hosts the most significant number of co-working spaces in the country. They locate in different city locations, from the CBD to new emerging working environments of the city such as airports. Although their rapid expansion becomes more visible in the city, the literature on the analysis of their location effect is absent. This empirical study aims to understand their geographical footprint and location patterns. It shed light on understanding the location factors of co-working spaces in İstanbul deeply. In this context, it discusses the location concept in three levels: building level, the neighbourhood level, and the city level. It investigates the former use and the current function of the building at the building level where the co-working spaces are nested. At the neighbourhood level, it identifies the motivation behind their location decisions from the co-founders' perspective. At the city level, it aims to understand their spatial distribution in the city by mapping their locations. The study's finding contributed firstly to the so-far very limited empirical data on the spatial analysis of co-working spaces. Second, it provides a perspective to discuss a policy framework to strengthen the city's co-working space ecosystem.

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Boiling Hot! Economy-wide Impacts of Climate Change on Colombian Coffee Yields

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Abstract

Colombian coffee is renowned worldwide for its quality and delicious taste. It is one of the major crops of the country, being the world's third largest exporter. Although coffee growing is not relevant in terms of GDP, it plays an important role when it comes to employment, with over half a million families benefiting directly from it, potentially more indirectly. Given the importance of this commodity in the economy, global warming has sparked the discussion about how to overcome the coming hindrances imposed by new climate conditions. Using the forecasts of (Sierra, 2019), the present chapter tries to quantify said hardships in an interregional computable general equilibrium framework.

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Clusters of Cultural and Creative Industries: Empirical Evidence for Catalonia

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Abstract

Creative clusters are increasingly being recognized as vital tools in the promotion of a city's competitiveness, innovation, urban development, and growth in developed countries. This paper studies the geography of Cultural and Creative Industries (CCIs) in Barcelona (Spain) for the years 2009 and 2017.

Although several studies have made contributions on CCIs clustering, there exists a need to understand how clusters change, grow or decline and what processes influence their geographical concentration and knowledge

embeddedness, with a variety of theoretical efforts and empirical means. This is an initial attempt to identify CCIs clusters' evolution over a period of time, to understand their lifecycle and progression. Though the benefits of clusters have been assorted in preceding literature, this paper attempts to fill an existing gap in understanding those patterns for CCIs by exploiting Kulldorff's scan statistics methodology using SaTScan as an additional input to existing work on "third-generation methods" for identifying significant industrial agglomeration.

Our findings indicate that CCIs are not haphazardly located, as they tend to cluster in and around Barcelona's prime districts. The evolution of the clusters over nine years reveals distinct patterns of clustering among the twelve sub-sectors of CCIs. The mature clusters in Barcelona's core tend toward greater growth and have enhanced transformation capabilities. The clustering patterns reflect that the maturity of an existing cluster or the emergence of a new one is not a "coincidence" and can be rather explained by understanding the local environment and the related variety among CCIs at the subsector level. This reinforces existing arguments that locations with older but related industries have a higher likelihood of forming a cluster. With this being said, the findings confirm two major economic claims (1) Jacob's claim on the development of new work on the basis of old work as a 'branching' process that is fundamental to the way that economic growth happens in cities (2) Schumpeter's claim on how economies evolve through the process of new innovation and path *interdependence*, not only dependence (depending on the knowledge base of the CCI subsector). Furthermore, clusters' evolution findings reveal linkages to knowledge flows within and outside the cluster, suggesting that knowledge embeddedness can either widen the spatial boundary of a cluster or narrow it down. Also, the role of institutions and local policies is highlighted and is assumed to modulate the sustaining and emerging clusters in the core of FUAB. Our results can guide CCIs cluster policy, taking into account the specificity of each sub-sector. In addition, they can direct place-based development strategies and creative urban planning and restructuring within a polycentric context.

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Egypt's National Road Project: Assessing the Economic Impacts of Upgraded Transportation Network

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Abstract

In 2014, Egypt has started a large infrastructure project (the National Road Project). This project is one of the greatest achievements realized in the history of the Egyptian roads. It aims to connect governorates, enhance accessibility and mobility of goods by expanding the transportation network from 23,500km to around 30,500km with a total cost about US\$9.79 billion. The ministry of transport has recently revealed that 4,500 out of the total 7,000 kilometers of National Roads Project have been implemented so far since the program's inception in 2014; another 1,300 kilometers are under construction, whereas an additional 1,200 kilometers are planned for the near future. The main goal of this research is to explore how the developing road network and increasing accessibility that enhanced by the National Road Project in the last 6 years, has affected the country economic variables at both national and regional levels. For this purpose, we tend to apply an interregional computable general equilibrium (ICGE) model for Egypt that has the ability to estimate the economic impacts of road projects.

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Educational Intuitions in Bridging the Socio-Spatial Exclusions and Promoting Social Mobilities: A Study of Muslim and Dalits Women in Mumbai

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Abstract

The pre-capitalist social institutions play major role in socio-spatial and inclusions in Global South cities (Shaban and Zinat 2021). The caste, religion and ethnicity shape the individual and families' voluntary or involuntary residential choices and options, and, as such, produce enormous segmentations and exclusions. Marginality in space also produces the economic marginality of communities, thus producing the overlaps and superimpositions of both the social and economic (class) marginalities. The socio-spatial segmentations of urban spaces inhibit the possibilities of social mobilization and/or formation of secondary alliances among disparate social and economic groups. However, the educational institutions, specifically the undergraduate colleges have become sites of interactions of youth of these disparate groups and create affections, bonds, networks, and mutual learnings furthering educational and employment/occupational mobilities, specifically, among youths of marginalised communities. The colleges are found to be more important site in this process than schools and universities offering post graduate degrees, because (a) they are situated at intermediate or meso level in spatial scale which cut across the geographies of caste, religions, ethnicity, and class, and (b) the society is reaching to such level of development where families aspire to educate their youth at least till graduate level. As such the colleges are becoming interesting intersection and assemblage sites for the youths. The present paper examines this process in Mumbai. The study is based on the structured interview of more than 2000 college going women from different communities and income groups, and case studies of 15 women from Muslims and Dalit communities, the socio-spatially excluded groups in Mumbai.

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Regional Economic Disparities in Colombia

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Abstract

This paper studies changes in income inequality in Colombia over the 2010-2019 period from a regional perspective. It focuses on how labour and non-labour (pensions, transfers, among others) income contributed to the reduction of income inequality, measured through the Gini coefficient, within most of the main cities of the country. Although, the current Covid health and economic crisis are acting as a severe negative shock, significantly affecting economic performance and social indicators, this paper highlights what worked in the previous decade in the path to achieve social cohesion and regional development that can be replicated after the current events.

We follow Bourguignon and Ferreira (2004) to model the main decisions of the household that determine their income in a system of equations that we estimate sequentially for each of the cities of interest. Our results show that inequality was reduced within all the largest 13 cities of Colombia except one, in which non-labour income played a significant role in increasing inequality. The determinants of this reduction vary by cities, given that in some cities the main driving force were changes in non-labour income, while in others it was due to changes in the factors that determine labour income.

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Urban Travelers Go to the Beach: Regional Effects of Domestic Tourism in Colombia

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Abstract

The aim of this document is to address the role played by domestic tourism as a mechanism of interregional transfers of income. In Colombia, domestic tourism flows follow a pattern of origin in the central regions to destinations in the periphery. One of the main tourist destinations is the Caribbean Coast, which exhibits the worst socioeconomic indicators in the country. It is expected that the injection of resources, through tourists' expenditures, will contribute to systemic effects in the destination regions. There is little empirical evidence of such regional impacts of tourism in Colombia, with most of the existing studies adopting qualitative methods.

Those that use quantitative techniques do not consider a systemic approach to calculate regional impacts. In this sense, the aim of this paper is to analyse the regional impacts of the consumption patterns of expenditures by Colombian tourists, focusing on the Caribbean region, using an interregional input-output model, together with data from the Encuesta de Gasto en Turismo Interno (EGIT) 2014-2015. The empirical evidence found in this work contributes towards the study of the domestic tourism to inclusive economic growth in terms of socioeconomic characteristics of jobs and income generation, both direct and indirectly. This is important to provide insights for the formulation of tourism-related regional policies. The results suggest that domestic tourism can be considered as an important channel to produce a more efficient allocation of resources to improve income distribution in Colombia. We conclude that regional policy strategies aimed at the tourism sector may be relevant to the local development of the Colombian Caribbean.

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Mapping Spatial Patterns of Co-working Spaces in Europe

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Abstract

Digitalization has transformed the economy, the ways of working and spatial arrangements of businesses and co-working spaces have emerged as a new type of workplace organization in the last decades. Following the first co-working space established in San Francisco in 2005, the number of co-working spaces has increased and spread around the world rapidly. Today, major cities of the world have increasing number of co-working spaces. According to the global survey conducted by co-working magazine deskmag.com, the estimated number of co-working spaces in 2020 is 26.300. Globally, it is estimated that 2.680.000 people are working in these spaces. The average annual growth rate of co-working spaces has been 58% for the years between 2011-2017. It is obvious that the co-working market presents a growing trend in all over the world. This rapid spread of co-working spaces all over the world has raised new questions: How do co-working spaces present themselves distinctively in different countries and regions? How do location choices and spatial patterns of co-working spaces transform our cities? In order to answer these questions, this paper aims at investigating and mapping spatial patterns of co-working spaces in Europe at the country and city levels. Using the data from the specific website of coworker.com and addressing 3838 co-working spaces in Europe, this paper compares European countries and cities in order to understand similarities and differences in spatial patterns of co-working spaces.

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Measuring the Population Size of Cities in China

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Abstract

City size is a key indicator across many disciplines that study cities including planning, economics and geography, but its measures are full of difficulties and controversies, particularly in China. This paper provides another measure of city size in China, and describes its main characteristics and evolution, by using the population data at the township level, the land cover data at 30-meter resolution, as well as the satellite images of night lights. In each prefecture city's urban proper, county-level city or county, we recognize a township as urban if it has (1) at least 1 km² or 10% urban land, (2) night lights brighter than approximately 10, and we also require a city size no less than 50,000. Our preliminary results, quite different from the official data, suggest following results during 2000-2010. First, the number of cities increased from 1,115 to 1,612, and the average city size from 370 thousand to 440 thousand. Second, almost no cities shrank, while the rural areas around some cities were losing population. Third, some county-level cities and counties have large "cities" (larger than 500 thousand or even one million), while in some prefecture's city proper cities were small (smaller than 500 thousand). We will conduct similar analyses by individual regions including East-Central-West, North-eastern China, Beijing-Tianjin-Hebei Urban Agglomeration, Yangtze River Delta, Pearl River Delta, etc. We believe this paper provides more accurate description of the size and evolution of cities during China's fast urbanization.

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Mapping and Assessing Water Resources Related Interactions in the Bekaa, Lebanon

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Abstract

Water resources can serve as both a source of tension and conflict, or as a tool for cooperation and partnership. Successful interactions over shared water resources can help build confidence between involved parties, foster cooperation in managing other resources and could even be a path for dialogue and negotiation. In Lebanon, the increasing scarcity of water resources and the fragile state of water governance has worsened water-related interactions among stakeholders. The Bekaa, whose resident population has nearly doubled due to the Syrian refugee influx, is perceived to represent a microcosm of the challenges facing the water sector in Lebanon. By examining the nature of new and existing pressures on water-related interactions among stakeholders in the Bekaa, this study aimed to assist development organizations working in the water sector to identify priority areas prone to conflict. This is done to ensure that cumulative efforts effectively contribute towards abating existing pressures and improve governance of the sector in the Bekaa. In order to achieve this aim, the research sought to identify and map stakeholders involved in the water sector in the Bekaa; determine the state of water resource related interactions among the identified stakeholders; identify and analyse different factors that contribute to the negative interactions in the Bekaa; and identify hotspots or areas in the Bekaa that are predisposed to water-based conflict. Factors contributing to water-related conflict in the Bekaa were categorized into three main groups: socioeconomic and demographic; institutional; and physical and geographic. The most negatively and frequently mentioned factors were considered areas of concern that must be addressed and were found to be, in decreasing order of importance: refugee influx; water quality; untreated wastewater; water availability; and implementation of Law 221. Seventeen towns/villages in the Bekaa were identified as having the highest predisposition to conflict based on the previously mentioned factors. This was done while taking into account two demographic factors: the first included local population density alone, while the second added to the first refugee populations. The main recommendations drawn out from this study include improving communication with local communities on water and wastewater related issues in relation to informal settlements; easing tensions by enhancing wastewater treatment capacity through developing integrated solutions relying on the reuse of wastewater; and assist in capacity-building of municipalities, enabling them to take over some functions and responsibilities regarding the management of the water sector to help achieve better decentralization.

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Systemic Impacts of Climate Change in Paraguay from Business Agriculture

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Abstract

The climate conditions may affect crops productivity and, as a consequence, as well as regional agriculture earnings. In this paper, we use a CGE model for Paraguay, which incorporates detailed information about the value chain of the agriculture sector in the country. According to the 2014 information input-output matrix, we calibrate climate shocks associated with the agriculture business in Paraguay. We model the climate shocks as a technical change in the agriculture-producing sector. Moreover, we calculated uncertainty systemics effects on crops productivity due to the climate change. Given the specific economic environment for the model and the proposed simulation; it is possible to observe the Paraguayan real GDP reduction around 2.55%. In terms of household consumption reductions, representing 4.15% of (2014) current per capita annual consumption.

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Diversification in the Destinations of Paraguayan Exports: What can the Trade Complementarity (TC) Index Explain about It?

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Abstract

The theory of international trade states that a free trade agreement enlarges the market for the subscribing parties and allows economies of scale. With an agreement, the trade between the parties growth as it happened with Paraguay's trade during the first years of the Southern Common Market (MERCOSUR in Spanish). Despite this, since the beginning of the millennium, it can be observed that regional market share in Paraguay's export is declining almost linearly. What is happening with Paraguayan exports? Is it diversifying, because the regional market is no longer attractive? Are Paraguayan exports a competition for the production of its commercial partners, which forces Paraguay to search for new markets? Perhaps, the Paraguayan exporters with the internationalization, due to the MERCOSUR, have improved the country trading as well as international negotiation capacity, resulting in the accession to new markets. Of these questions, and others, that may arise?, this research focuses on the reduction of the regional market as a result of a lesser coincidence between the export supply of Paraguay and the import demand of MERCOSUR. Specifically, it aimed to: (i) calculate trade complementarity (TC) index between Paraguayan exports and MERCOSUR imports, using Brazil as a proxy for the regional market; (ii) identify which products are subject to change in their complementarity; (iii) identify those products that did not show any changes in their complementarity. It concluded that the participation of the regional (Brazilian) market has been reduced in the number of products, but there has been a strong increase in value, presenting a concentration of exports of products in which there is complementarity between the Paraguayan supply and Brazilian demand.

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Productive Structure and Agricultural Sector of the Paraguay: An Input-Output Approach

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Abstract

Researches report that Paraguay's agriculture sector has shown a high-performance last years, which put the sector in a key-sector status, in terms of economic growth. Actually, the agricultural and livestock sector is evidenced, mainly in exports to the others countries; although it generates low incomes and jobs directly from the activity, it generates a high multiplier effect of these variables in the input supplier sectors to its production. The main goal of this paper is identifying the role of agricultural and livestock in Paraguay economy with an economy growth theories basis, which in a large viewpoint, consider the agriculture sector being essential to the growth of other productive sectors. For this purpose, it was used, the interregional input-output system for Paraguay, for the year 2014. The analysed empiric data confirm the importance of agriculture sectors as a supplier of raw material to the other sectors, and as a buyer of manufactured products.

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Climate Suitability for Tourism in China in an Era of Climate Change: A multiscale analysis using a tourist defined holiday climate index

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Abstract

Climate change is increasingly influencing tourism policy and practice and there is a growing need to assess climate risk for destinations and the potential implications for global tourism demand patterns. Climate-dependent tourism markets, such as beach tourism, are particularly sensitive to changes in climate, and understanding the future redistribution of tourism climate resources remains a gap in many world leading tourism regions. This paper presents the first climate change assessment of tourism climate resources in China. The tourist-defined Holiday Climate Index:beach (HCI:beach) and Holiday Climate Index:urban (HCI:urban) are calculated for 775 climate stations across China for the 1981-2010 baseline and mid and late-21st century using projections from six CMIP5 Global Climate Models under low and high emission futures. The projected geographic and seasonal redistribution of tourism climate resources are advantageous for many climate-limited destinations, but pose high heat risks for some major city destinations. The differential results for the HCI:beach and HCI:urban reinforce the importance of utilizing market-specific indices to assess future climate risk. The results provide new decision-relevant climate information for tourism managers and destination planners throughout China.

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Impact of Climate Change on Rural Livelihoods in Lebanon

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Abstract

Lebanon has been enduring multiple crises for the past 18 months that have had economic, political, and social repercussions all over the country threatening the livelihood of many. The agricultural sector not only suffers from these economic threats but is also subject to the impacts of climate change and natural disasters. Farmers have been highly affected by climate variability as well as the current economic crisis and will need to implement adaptation measures to sustain their production and secure income generation year-round to ensure their food security. Building on the World Food Program's efforts to expand activities that promote food security and livelihoods for refugees and host communities in Lebanon, this study aimed to generate evidence on the impact of climate change and climate variability on food security and rural livelihoods. The WFP Consolidated Livelihoods Exercise for Analysing Resilience (CLEAR) was used to identify, design, and implement pilot interventions to test new approaches and generate lessons learned to help upscale UN's World Food Programme's (WFP) agriculture and climate related activities in Lebanon. The study adapted and applied the WFP-developed CLEAR methodology relying on extensive desk-research and stakeholder consultations at the national and sub-national levels. CLEAR has three distinct analysis steps: (1) Mapping of livelihood zones; (2) Developing a resilience index based on poverty, food security, climate sensitivity of crops and livelihood diversity; and (3) Assessing the impact of future climate risks on livelihoods and food security. The livelihood zoning conducted for this study resulted in the division of Lebanon into 19 different livelihood zones focused on eight main agricultural sources of livelihoods. Those zones were divided into three main categories based on agricultural land density. Three out of four zones relying heavily on agriculture showed a low resilience index regarding impacts of climate change on livelihoods. Zones with low agricultural land density had mixed results with a high resilience index for the four highly urban zones. The other two zones in which scarce agriculture land comprises of deciduous fruit trees and field crops displayed a low to moderate resilience index. Five of the zones with moderate agricultural density displayed a low to moderate resilience index, while the remaining four zones had a moderate resilience index. The main recommendations for implementing effective adaptation to climate change revolve around a comprehensive and dynamic policy approach covering a range issues, from helping farmers understand risk profiles to the establishment of efficient capacity-building programs and pilot projects that facilitate response strategies. More systemic changes in resource allocation need to be considered, such as targeted diversification of production systems and livelihoods and working towards increased climate change adaptation action.

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Climate change vulnerability assessments: the case of Batroun and Tyre

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Abstract

According to the Intergovernmental Panel on Climate Change, low-lying coastal zones are at a particularly high risk of severe harm due to climatic hazards and various vulnerabilities. Climate change vulnerability assessment is a critical exercise for defining climate change risks and developing climate change adaptation options that are context specific, which could be accounted for in city development plans.

In Lebanon, vulnerability assessments to climate change have rarely addressed the city scale due to its complexity and lack of data at such a scale. The understanding of the vulnerabilities to climate change impacts and risks on local and city scale in Lebanon is still limited, obstructing the mainstreaming of climate change adaptation into city planning and governance.

This study adapts and applies an integrated approach, mixing both bottom-up and top-down methodologies initially developed by GIZ et al. (2017), in Lebanese coastal cities, Batroun and Tyre. First, vulnerable sectors were identified in a stakeholder consultation meeting. Next, an impact chain was developed for each sector to select potential impacts, and vulnerability components. The approach used a simplified formula which defines $\text{Vulnerability} = \text{Exposure} + \text{Sensitivity} - \text{Adaptive capacity}$. For each component, a set of indicators were identified to ultimately compute the vulnerability index of each sector. The developed impact chain and associated indicators were validated by experts in an expert consultation meeting. Data collected for each selected indicator was normalized into a 0 to 1 scheme, whereby 0 is optimal and 1 is critical.

Our research has shown that, in both Tyre and Batroun, the most vulnerable sectors were tourism, water resources, infrastructure and fisheries. The tourism sector scored 0.66 and 0.61; the water resources sector scored 0.54 and 0.52; the infrastructure sector 0.57 and 0.52; while the fisheries sector scored 0.53 and 0.47 for Batroun and Tyre, respectively. The score of the tourism sector for both cities is considered as 'rather negative' while the other sectors' are seen as 'neutral'. In all sectors, the adaptive capacity component, specifically governance, is the one that impacted the vulnerability of sectors the most. This highlights the need and role of local and national Lebanese governments in integrating sound adaptation actions while also enforcing existing policies. Key institutions and authorities should build their know-how and capacities to enforce and update environmental laws. Laws should tackle accountability and participation practices to guarantee sustainable management of natural, financial and social capacities.

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Smart Cities from Low Cost to Expensive Solutions. An Optimal Analysis

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Abstract

Each region contains at least one urban agglomeration which becomes a growth pole over time. During pandemics, such as COVID-19, the negative effects on growth poles are exacerbated by the accumulation of aggravating health and economic factors. In this context, the concept of smart city has acquired a new nuance and has aroused both theoretically and practically the interest of the researchers.

The objective of this scientific approach is represented by a critical analysis starting from the current state of scientific knowledge in the area, the development of the smart city / smart community concept in order to objectively evaluate the progress of these organization forms in relation to other classical / traditional forms of the cities' organization.

The empirical approaches are supplemented by a pertinent statistical analysis of the socio-demographic and economic indicators reported through the Eurostat platform by the first 10 European smart cities, to which is added the city of Bucharest, as an antipole of smart city development.

The statistical data processed in dynamics allowed the consolidation of smart indicators at the level of the selected sample (local GDP, internet users, R&D&I, Internet of Things, internet banking, general motor rate, green vehicle motor rate and polluting vehicle motor rate).

The elaborated model allowed the construction of the dashboard of the access actions in the smart city / smart community category on two levels of financial effort correlated with the impact on the sustainable development of the smart cities. We have to specify that this model is absolutely new. It is not a copy or an adaptation of another existing model. This model was transposed by pivoting the hypotheses into a minimal and extended dashboard with pivoting links on each branch of the table in order to facilitate the step by step implementation of this form of superior organization of urban populations. We started from simple solutions, implementable on short term, but we arrived at extensive solutions with high efficiency and high added value on the inhabitants' life of the applicant cities.

The statistical analysis covers 2009-2020, the period representative as duration and which includes the impact of COVID-19 on the urban society.

The validity of the proposed model and our approach are supported by the complex statistical analysis performed in this scientific article.

The results of the study are useful for all administrations ready for change which want the rapid implementation of the measures with beneficial effects on the community or which through a strategic vision aim to connect to the European objectives of sustainable growth and social welfare for citizens.

The entire analysis is based on the latest official statistics, which are processed in the form of diagrams, tables and relevant mathematical equations and functions.

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Research on the Efficiency of Technological Innovation in Chinese Industrial Enterprises

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Abstract

Industrial enterprises are an important force in China's economic development, and technological innovation has become the core factor affecting the rapid development of industrial enterprises. It has become an important research topic to understand the input and output status of technological innovation in Chinese industrial enterprises, improve the efficiency of technological innovation and change the development mode of Chinese industrial enterprises.

Based on panel data of 27 industrial enterprises in China from 2011 to 2019, from the perspective of innovation value chain, the technological innovation process is divided into technology research and development stage and technology transformation stage. The paper evaluates and analyses the technological innovation efficiency and overall innovation efficiency of industrial enterprises in time and space. In order to compare the differences of technological innovation efficiency in different regions, China is divided into four regions, namely east, central, West and northeast, while studying the efficiency of inter provincial technological innovation. Using SBM network DEA model and DEA-Malmquist total factor productivity index model, this paper analyses the efficiency of technological innovation from static and dynamic aspects; the spatial evolution of technological innovation efficiency is analysed by using Arcgis software. Finally, we use the econometric model to empirically analyse the factors that affect the technological innovation efficiency of Chinese industrial enterprises. Through the analysis, the following conclusions are drawn:

1. From 2011 to 2019, the overall level of technological innovation efficiency of Chinese industrial enterprises is 0.520, and the overall level of technological innovation is low. The overall level of technological research and development stage is 0.451, and the overall level of technological transformation stage is 0.594.

2. From 2011 to 2019, the total factor productivity index of technological innovation of China's industrial enterprises is 1.059, showing an overall upward trend, with the stage of technological research and development being 1.064 and the stage of technological transformation being 0.971.
3. The average value of the overall technological innovation efficiency from 2011 to 2019 is the eastern, central, north-eastern and western regions from high to low; The average value of total factor productivity is from high to low in the west, middle, northeast and east regions. There are obvious differences in technological innovation efficiency and its growth rate in different regions, which hinder the improvement of the overall technological innovation efficiency level of Chinese industrial enterprises.
4. Empirical analysis shows that human capital, government support and market control have positive effects on the efficiency of technological innovation. The investment intensity of R&D capital, the density of high-speed rail and the number of R&D personnel have a negative impact on the efficiency of technological innovation.

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Subnational poverty dynamics in developing countries: the cases of Ecuador and Uruguay

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Abstract

This paper analyses subnational dynamics of a novel composite indicator, called Local Multidimensional Poverty Index (*LMPI*), accounting for multidimensional poverty at subnational level in Ecuador and Uruguay between the last two census, 1990 and 2010 and between 1996 and 2011, respectively. As a first step, using censuses microdata, we construct the *LMPI* at municipal level for both counties. Then, through a set of tools like probability transition matrix, Moran's I and Moran scatterplot, spatial probability transition matrix and spatial regressions, we explore the spatial and time dynamics of the *LMPI*. Results indicate that, compared to Ecuador, Uruguay is initially in a better position in terms of *LMPI*. However, Ecuador achieved a generalized reduction of *LMPI* during the period of analysis, reaching the levels of Uruguay. Probability transition matrices point to a convergence toward low levels of *LMPI* for both countries, while spatial probability transition matrices based on Moran scatterplots highlight a tendency toward clusters of municipalities with low levels of *LMPI*. Finally, divergence due to spatial spillovers is observed for Ecuador, while in Uruguay convergence is due to a leapfrogging phenomenon.

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Post-earthquake short-run labour income shifts. What happens with the distribution of wages after an Earthquake?

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Abstract

In this article we explore whether a strong earthquake (Manabí and Esmeraldas provinces, Ecuador, April 16th, 2016) had a distributional effect in labour income. We use survey micro-data and exploit the exogenous nature of the shock with an empirical strategy based on a combination of matching, difference in difference (DD) and quantile regression (QR) methods using three earthquake intensity measures (Peak Ground Acceleration, PGA; Peak Ground Velocity, PGV; and Modified Mercalli Intensity, MMI). We find a short-run distributional effect for the poorest workers in the most seismic areas. Compared to our control group, workers located in the lower income percentiles in the most affected zones earned more in the short run (between 17.6 and 20.3 percent in percentile 0.1, and 15.5 and 19.4 percent in percentile 0.2). Our results suggest that although some disasters could create opportunities for poorest workers, the assumption that proper public policies and support networks do exist is strong, and there is a need for specific policies to avoid gender gaps and help the most vulnerable workers in a disaster scenario.

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Oil royalties and multidimensional poverty in Ecuador: Have the extraction regions improved their living standards?

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Abstract

In this work we check for the causal effect of the introduction of a regulatory change on oil royalties happened in 2008 in Ecuador. This law established conditionalities on the transferences of money to extractive municipalities, that have to spend these resources in sectors such as education and public services, which should reduce unsatisfied basic need poverty. Our estimates, based on a difference in differences approach, are robust to different specifications and show a lack of positive effects in the improvement of education, provision of public services and poverty reduction. These results have various public policy implications related to the quality of local and national institutions, the way in which the oil resources are management and the population audit of way in which the local authorities spend this royalties.

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Small area estimation of multidimensional poverty: the case of Cambodia

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Abstract

Many public policies in developing countries are spatially blind. Among the drivers of this blindness is the lack of up-to-date geographical breakdown of data which limits the ability of policymakers to develop and assess impact of policies to tackle poverty at a granulated subnational scale. In spite of continuous efforts to generate reliable information on living conditions and poverty, it is still a ubiquitous issue the scarcity of information at sub-national scale and its evolvement over time. In this context, this study aims to contribute to the estimation and mapping at a granulated spatial scale of multidimensional poverty in light of the global MPI (g-MPI) measure. The methodological framework encompasses techniques from Small Area Estimation (SAE). SAE is concerned with the estimation of disaggregated domains when information collected is not representative for these domains. Most surveys are statistically representative at national scale or by state. Specifically, this study uses Bayesian spatial hierarchical models which allow us to combine information provided by surveys and additional sources of data to estimate poverty indicators that are not formerly targeted by national surveys.

The case of study was Cambodia. We estimated spatial and spatio-temporal predictive models for the years 2000, 2005, 2010 and 2014. The inputs of the models come from two types of information. Type 1 encompasses spatial points of misaligned clusters of household locations, for which the source are the Demographic and Health Surveys (DHS). The DHS provided the main information to measure the g-MPI. The second type of data are the auxiliary predictors, including multiple gridded and polygon information which inform variability of poverty risk across space. Among this group we use corrected nightlight data, accessibility to cities, build-up areas, rice land per family, number of rainy days and population. Additionally, this research compares our geostatistical models with the most commonly used method for poverty mapping as proposed by Elbers, Lanjouw, and Lanjouw (2003). The reason for this comparison is that although ELL has served as a valuable and applicable instrument, it mainly relies on timely census data, which are not periodically available in developing contexts.

This study concludes that the incorporation of survey design could be critical to generate more accurate predictions. Moreover, it finds that more complex spatio-temporal models do not necessarily yield better estimations, specifically in larger time spans. We hypothesize that this is the case because of the natural smoothness effect implicit in these models. We also found that the relatively recent strand of research on the field of geostatistics such as the main models used in this research offer promising tools to overcome data limitations

(e.g. census availability). For instance, the rough comparison between the ELL and geostatistics leads to similar predictions of poverty. Lastly, this study also roughly contributes to the discussion about the compatibility between monetary poverty and multidimensional poverty measures. Spatial predictions show a strong correlation, in the case of Cambodia, between both forms of poverty.

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An Analysis of Socio Economics Factors that Affect to Use Energy Efficient Technologies in Household Sector: The Case of Sri Lanka

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Abstract

Power crisis is one of the major problem in Sri Lanka. Demand for electricity is growing rapidly in Sri Lanka. Nearly 70 per cent of electricity demand is supplied by hydropower plants. Due to high demand new thermal plants have added to national grid. This cause to huge environment damage. Hence, it is high time to promote energy efficient technologies to reduce demand for electricity. Out of total electricity consumption household sector consume a considerable amount of electricity. Especially, electricity demand for household lighting is very high compare to other household purposes. However, most of households use inefficient lighting equipment such as incandescent bulb although there are various energy efficient lighting bulbs available in the market. Some researchers have pointed out that the financial, economic and environmental benefits are enormous if household sector use energy efficient lighting technologies. Therefore, household lighting sector represent the significant role in electricity conservation. Hence, objective of this study is to determine the factors that affect to use energy efficient lighting technologies in household sector in Sri Lanka. Mainly primary data were used to analyse the objective of this research. Primary data are collected from three districts in Central province in Sri Lanka using structural questionnaire. Data are analysed using Tobit regression model. The results of the regression model indicate that family income, education level of the decision makers, ownership of the house, lack of information, risk and uncertainty and attitudes are the main factors that affect to use energy efficient lighting technologies in household sector. Especially, results indicate that high price of the energy efficient bulbs are not affordable for low income families. As well, low educated decision makers do not have sufficient knowledge to calculate the comparative advantage of the use of energy efficient lighting technologies. Further, most people do not like to use these new energy efficient risk and uncertainty of the new equipment. Therefore, introduction of subsidy program to enhance the use of energy efficient technologies is highly recommended. Accordingly, it is worthwhile to conduct awareness programs all over the country regarding use of energy efficient lighting technologies.

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Geographies of collabourative spaces in Poland

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Abstract

Before COVID-19 pandemic era the increase of various types of collabourative spaces had been observed. Even if during the pandemic period, such spaces as coworkings, makerspaces and hackerspaces are making their attempts to survive, they may still play an important role in collabourative behaviour. It is argued that collabourative spaces (CSs) provide facilitative milieu for knowledge sharing and enhance proximity in various dimensions (Micek, 2020).

Since recently, little was known about spatial patterns of CSs. Some case studies (e.g. Mariotti et al., 2017) revealed their location is central and they tend to heavily concentrate in metropolitan areas. However, the recent research carried out in the most advanced economies showed that there is also a tendency of spatial diffusion of CSs to small-sized cities and rural areas.

The paper looks at geographies of collaborative spaces in a very specific national context. The case study of location patterns of collaborative spaces in Poland as one of the largest countries in post-socialist Europe, is conducted. It is based on the longitudinal database of various types of collaborative spaces. The database has been constructed based on registries of CSs such as coworker.com, spacing.pl, but also numerous other web resources on makerspaces and hackerspaces.

The research carried out in two spatial scales: regional and intra-urban. The spatial structure of collaborative spaces is compared and contrasted with the distribution of other economic and social indicators. The dominance (hypertrophy) of the capital city of Warsaw in terms of attracting collaborative spaces is revealed. The large role of other metropolitan areas is also shown. Rural peripheries and small-sized cities in Poland do not house collaborative spaces as it is becoming common in the US, Western and Northern Europe. In this respect, it shows the semi-peripheral position of Poland in the evolution of spatial patterns of collaborative spaces.

Intraurban spatial patterns are examined in the case of the capital city of Warsaw. Spatial patterns of collaborative spaces largely follow the location of old and new business districts. The number of CSs in intraurban peripheral locations is highly limited in Warsaw.

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An Analysis of Impact of Microfinance in Alleviating Poverty: The Case of Sri Lanka

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Abstract

Poverty is one of the major problem in the world. The United Nation aims to eradicate poverty by 2030 in the world through Sustainable Development Goals. Poverty is one of the huge problem in Sri Lanka although it declined over the time. According to Poverty Head Count Index 4.1 per cent of people live below the poverty line. However, rural poverty in Sri Lanka is an enormous problem that should pay attention of the policy makers. 4.3 per cent of rural people live below the poverty line and rural poverty contributes to 82.2 per cent to total poverty in Sri Lanka. Therefore, to achieve high economic growth in the country alleviation of poverty in rural sector is very important. Most of rural people are low educated and financially destitute because of that they have less access and use of resources that need to go out of poverty. As well, a few formal financial institutes located in rural areas limiting their access to formal financial facilities. Because of that many poor fulfil their financial needs though informal financial sources with high interest rate and other rules and regulations that harmful to their social and economic life. Microfinance is one of the vital solution that used by many countries to combat poverty. There are number of micro financial service in Sri Lanka that especially target on poor people. Therefore, the objective of this study is to analyse the impact of micro financial service to enhance social and economic life of the poor people and identify the barriers that face by poor people when accessing the micro financial service. The impact of micro financial services is analysed mainly through three channels such that individual level, household level and micro enterprise level. Primary data are used to analyse these objectives that collected from 800 households and 200 micro enterprises using structural questionnaire. Apart from that 12 focus group discussions also conducted to gather more information. The results of the research indicate that micro finance positively affect to enhance the poor people social and economic life and contribute to economic development process of the country in serval dimension. Individual level analysis indicates that micro finance help to increase social respect, individual empowerment, and reduce gender inequality. Household level analysis indicates that micro finance cause to increase household welfare through different ways such that diversification of household income, smooth the coping with risks, reduce indebtedness and improve education of the children. Micro enterprise level analysis indicates that micro finance basically affect to increase the revenue through changing amount of investment and nature of investment. As well, micro enterprises contribute to increase the employment

opportunities. Hence, micro finance plays a vital role in eradicating poverty and economic development. However, the finding of the research indicates that there are some barriers in micro finance such that insufficient loan amount, take long time, inflexible repayment methods. Therefore, it can be recommended to improve the quality of the micro financial service so as to timely access poor people financial needs.

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Analysis of the Convergence of the Productivity of Soybean (Glycine max L.) In The Eastern Region of Paraguay. Period 2007 - 2018

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Abstract

It is extremely important for the country's economy to analyse the behaviour of soybean cultivation, because it is the main agricultural export product of the country and the one that generates the greatest amount of income, that is why this research had as its objective the main objective is to evaluate the convergence of soybean productivity in the producing departments of the eastern region during the period 2007-2018, to test the hypothesis of the existence of absolute convergence. For this, an exploratory data analysis was carried out, which were measured by the spatial econometric model where the initial level of crop productivity was associated with the increase in this same productivity over a certain time. The dependent and independent variables were used as study parameters, which were the growth rate of soybean production and the natural logarithm of soybean productivity, respectively. The parameters studied were significant at the 1% confidence level, this indicates that the dependent variable (y) is influenced by shocks from all departments, with the closest departments being the most influenced. Likewise, the spatial dependence through the residuals was detected, indicating the existence of non-modeled factors that may be influencing this process.

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Reorientation as a tool for recovery: analysis of regional economic resilience in Croatian NUTS 3 regions

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Abstract

Recently, since the 2010s, regional economic resilience has been a specific interest of the researchers' focus. Among many, one of the pioneer, yet most comprehensive definitions was offered by Martin in his research from 2012 when he explained that regional economic resilience could be viewed through the capacity of a regional economy to reconfigure, that is adapt, its structure (firms, industries, technologies, and institutions) to maintain an acceptable growth path in output, employment, and wealth over time. In the same research, Martin identified four dimensions of the regional economic resilience: i) resistance (the vulnerability or sensitivity of a regional economy to external shocks, for example, recession), ii) recovery (speed and degree of recovery from such shocks), iii) reorientation (the degree to which the regional economy goes through structural changes and adjusts after the shock), iv) renewal (continuation of the growth path of the regional economy before the shock).

Following Martin's division of the resilience's dimensions, this paper focuses on reorientation and recovery. Precisely, it aims to investigate if reorientation affects the recovery in Croatian NUTS 3 regions. As noticed by Đokić, Fröhlich, and Rašić Bakarić in their research from 2016, the latest global financial crisis harmed Croatian national and regional development and led to significant regional disparities. This paper analyses recovery and reorientation in Croatian NUTS 3 regions and sets up the model to investigate the impact of reorientation on the recovery process in Croatian NUTS 3 regions. In the context of resilience, recovery has been proxied by many authors (for example Romão in 2020, Muštra, Šimundić and Kuliš in 2020, Giannakis and Bruggeman in 2017 and 2020). The possible indicator could be the ratio of the values of the employment change in the year (or years) of

the economic recovery period and the starting year of the crisis period. On the other side, the indicator for reorientation can be calculated following the example of the research performed by Ženka, Pavlík and Slach in 2017 as Finger-Kreinin index of structural shifts in employment (or possibly in GVA).

Data will be collected from Croatian Bureau of Statistics (CBS) for a period of ten years (2009-2018). The analysis is based on a panel data approach. The dynamic panel data model is formed to estimate the effects of regional reorientation on the recovery in 21 Croatian NUTS 3 regions. The model is tested using standard diagnostic tests for dynamic panel data analysis. Results are expected to show the positive impact of reorientation on recovery in Croatian NUTS 3 regions. Furthermore, the descriptive analysis made in the paper identifies the best performing regions and best performing sectors. Empirical conclusion alongside descriptive analysis offers valuable insight for policymakers: the reorientation, including key structural changes, as a tool for regional recovery. Those findings are of big importance considering the latest global crisis due to the coronavirus pandemic. Finally, this paper is one of the rare attempts which investigates regional economic resilience in Croatian regions.

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Digital Economy and Regional Industrial Upgrade: Evidence from the Yangtze River Delta

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Abstract

Developing the digital economy and forming the new impetus of regional industrial upgrade are the significant strategies of China. It is of great theoretical and practical importance to figure out the relationship between them, as well as quantitatively analyse the related process. This study takes the Yangtze River Delta, which is China's pioneer region of developing digital economy, as the research scenario. The main work and possible innovations of this study include: (1) from both the meso and micro levels, it reveals the mechanism that how to realize industrial upgrade with promoting digital economy. (2) The paper puts forward the theoretical hypothesis that there might be three paths, on which would help digital economy accelerate the industrial upgrading: technological upgrading, factor-input-structure upgrading and product market upgrading. In addition, we conducted an empirical test using a multi-step multiple mediator model, and the results support the three assumptions above. (3) Comparing to previous research, the paper takes the response mechanism of regional development as one of the variables, solving the endogeneity problem, which is high-efficiency enterprises more tend to use digital technology. The results show that the development of digital economy is an important driving force of industrial upgrading in Yangtze River Delta. Furthermore, the regional response mechanism and market response mechanism triggered by digital economy have an attention-worthy impact on regional industrial upgrade.

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The Deconstruction and Evolution Trend Forecast of Industrial Carbon Footprint Network in China

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Abstract

The analysis of the conduction structure of industrial carbon footprint flows from a complex network perspective is one of the central themes to explore its diversified emission reduction paths systematically. Therefore, this study utilizes an integrated evaluation model based on Input-Output Theory and Life Cycle Assessment Model to construct the correlation networks of industrial carbon footprint. Then, Social Network Analysis and Link Prediction are applied to quantify these networks' structural features and evolutionary trend. The results demonstrate that the better industry accessibility and agglomeration are conducive to the synergetic emission reduction of industries. Firstly, Agriculture, services, and traditional energy-intensive industries in manufacturing

are the core sectors in the network that strongly drive other industries to reduce emissions together. In contrast, equipment manufacturing and light industry mainly belong to the peripheral sectors of the network. Secondly, we found that some key sectors, such as the Metal smelting and calendering industry, the Manufacture of chemicals and chemical products, and Transportation, warehousing and postal industry, could influence the smooth operation of the carbon networks. Thirdly, the network of blocks has shown a structural shift from "dual-core resonance-driven" to "dual-centric-driven", and then to "single-core-driven". It demonstrates that carbon footprint flows in the network of blocks gradually concentrate on a particular block. Finally, the future evolution trend of the correlation networks of industrial carbon footprint is mainly characterized by the gradual rise of the service industry's control rights and its related manufacturing industry in the network.

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Urban built environment quality and economic development: An examination with big data on 50 Chinese cities

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Abstract

The quality of urban life has been considered as an important factor in determining the attractiveness of cities and the flow of human capital and other resources. While Edward Glaeser argued for aesthetics and physical setting as a critical urban amenity (Glaeser et al., 2001), yet empirical examination of its role is still not enough. To fill in the gap, this study employs newly-available big data on urban built environment in 50 most-populated Chinese cities and produces fine-grained evaluation on their quality, which was hardly measurable with conventional urban data. More specifically, we utilize street view images provided by online mapping services to evaluate the quality and aesthetics of urban buildings and utilize building footprint data to evaluate the comfortableness of urban space. An R package is developed for this purpose, which will also be introduced. With such unprecedented information on urban built environment, we aim to examine its role on urban economic development and answer questions like whether high built environment quality drives urban economic development. The work is on-going and will be reported in the conference.

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An Analysis of Supply- Side Inequalities in Education Sector in Sri Lanka

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Abstract

Education is the most prominent factor that determines personal wellbeing and economic development. As well, education is a basic human right. United Nation's Sustainable Development Goals also have emphasized the importance of provide quality education for all. Sri Lanka provides free education for all school-aged children. However, there are huge inequalities in the micro-level. These inequalities limit the development of human capital which is the essential factor for economic development. Hence, the main objective of this study is to identify the supply side inequalities in school education in Sri Lanka. To analyse this objective secondary data are used. Data are analysed using descriptive statistical methods. The results indicate huge inequality in distribution of National Schools in the district and provincial level. Although there are considerable number of National Schools in some districts, the students' enrollment rate is low because those schools have located only in the main cities. Students from remote area have limited access those schools. Further, results highlighted that students in remote areas have limited chance to follow Mathematics and Science scheme subjects for Advanced Level. This barrier negatively affects the economic development since some human resources move out from their potential path. Availability of adequate teachers also important to ensure quality education. However, the distribution of teachers according to their specialized subjects and education level are highly unequal. Especially schools located in remote areas suffer from trained and graduate teachers and teachers for subjects such as English, Mathematics,

Science and Esthetics subjects. Unequal distribution of infrastructure facilities also hindered the right for quality education. All these inequalities negatively affect for passing rate of the benchmark examinations of the students. Policymakers and government should properly involve to reduce inequalities in the education sector by providing equal facilities for every and each student.

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High-Speed Railway Reshapes China's Tourism Spatial Organization

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Abstract

This article discusses the impact of the high-speed railway network on the spatial organization of the China's tourism industry. Different from the point-to-point air transportation, the rapid growth of high-speed railway construction in China has improved the accessibility of small and medium-sized cities along the railway. The tourist destination region (TDR) is taken as the basic geographic unit to observe the spatial organization. The TDR refers to the geographical range of a day trip itinerary centered on the tourist accommodation. Based on the national aviation network and the highway transportation network in 2017, two scenarios are compared in this study, one with the highway transportation network and the other without. The geographic datum of the research come from the "Bigemap database", and the main geographic calculations are carried out using ArcGIS. 345 sample cities are included in the calculation. The results show that the total area of all TDRs is about 2.74 million square kilometers, accounting for about 28.5% of China's land area. The distribution of independent TDRs in eastern and central regions is relatively dense, while the distribution of those in the western region is relatively sparse. In the scenario with the high-speed railway network, 42 independent TDRs are added, and the number of independent TDRs in the central region significantly increases. The number of combined TDRs in the eastern region decreases, and the large combined TDRs in the central region collapses into multiple small ones. According to the calculation results, it is found that the high-speed railway network will influence China's tourism spatial organization. It will promote the decentralization of tourism spatial organization. The threshold of air-railway competition determines the differences in tourism spatial organization in different regions. New tourism cities will rise with the development of high-speed railways. Opportunities are coming for county-level cities to develop tourism. For a long time, China's domestic medium and long-distance tourism transportation has been dominated by aviation. As a transportation hub, big cities combine with surrounding cities to form tourist destinations. The formation of the high-speed railway network has enabled small and medium-sized cities in central and eastern China to have the traffic distribution function. It directly leads to the gradual disintegration of tourist destinations composed of multiple cities into tourist destinations composed of separate cities. It also provides opportunities for the development of tourism in China's small and medium-sized cities, including prefecture-level cities and county-level cities.

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Can Phone Usage Improve Technical Efficiency of Rice farming? Evidence from Indonesia

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Abstract

Several studies have found that mobile phones are a promising tool to improve the livelihoods of smallholder farmers in developing countries, however whether the phone usage in rice farming can really improve the technical efficiency is mostly uninvestigated. There has been an increasing number on phone usage in rice farming in Indonesia for the past decade. In Indonesia, rice is the most important commodity because it is the

staple food for around 270 million people. The agricultural sector still contributes greatly to job creation, about 30 percent of workers in Indonesia are in the agricultural sector. There has been a great concern within the country on the importance of food security and even going toward food self-sufficiency. Various challenges faced in rice farming, such as productivity that needs to be continuously increased, the lack of agricultural production factors, climate change, and the potential for supply disruption due to the Covid-19 pandemic, make this study necessary. This study aims to investigate whether the phone usage improve technical efficiency of rice farming as well as to determine the level of technical efficiency. The main data used in the study is household survey data from the 2014 Indonesian Family Life Survey (IFLS) managed by RAND (2015). The sampling carried out at IFLS used the stratified random sampling method by using the province and the regency / city category as the strata. Samples were randomly selected based on these strata. From these secondary data sources, we obtain 2120 rice household data. This study uses a production function which includes rice farming and capital as input. Stochastic frontier analysis with the Cobb Douglas production function which has been widely used to measure technical efficiency in various sectors including agriculture, especially rice farming is employed. Analysis using the stochastic frontier production function shows the technical efficiency of rice production in Indonesia is 0.6, where the area of rice and the use of new superior seeds has a significant effect on the output produced by rice farmers. In fact, labour does not have a significant effect on the estimated output because the number of workers in the agricultural sector is too large when compared to the availability of existing rice land. The estimation results of the stochastic frontier production function also show that there are inefficiencies in rice production in Indonesia. The inefficiency model shows that phone usage, farmers' education and irrigation improve technical efficiency. Phone usage in rice farming allows farmers to get information and coordinate better with other farmers. In addition, the use of cell phones, especially those connected to the internet, can provide opportunities for farmers to access more knowledge in rice production, thereby helping to use optimal inputs.

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Depicting the blurred regional boundaries in China using individual mobility data

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Abstract

Delineating the boundary or impact area of an economic, cultural, or life-style region has been a long-lasting problem in regional studies. The fundamental difficulty lies in the exact definition of a region, and what criteria need to be considered. Existing methods either use the strength of macro-level connections to evaluate the affiliation of a city to a region, e.g., the proportion of commuters in between, or use network science methods to “cluster” cities into regions. However, both types of methods only give static and definitive results but ignore the dynamism and graduality between regions—it could be debatable to include the so-called periphery cities to either side of the regional boundary. In this paper, we propose a Singular Value Decomposition (SVD)-based method to depict the impact areas of regions in China using individual-level connections among cities. Using the individual mobility data from a mobile map service, we decompose the mobility patterns of China into a series of eigen-mobility patterns—each corresponds to the impact area of a city, or a mobility-based region. The overlay of multiple eigen-mobility patterns depicts the “blurred” boundary between the respective regions—or their competing hinterlands. With the blurred mobility region boundaries as an example, we hope the method could be used to help understand the complexity of drawing regional boundaries and help policy makers to identify the non-confined but blurred economic and cultural landscape of various contexts in regional governance.

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Urban network externality and economic growth of major urban agglomeration regions in China

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Abstract

Urban agglomeration regions are the center of future urbanization and the engine of future economic growth in China, which are advanced spatial organizations of interconnected cities. Previous studies have analysed the spatial form of the urban agglomeration region, but shed little light on the economic benefit from the compact urban network in the urban agglomeration region. This study first proposes a theoretical framework for urban network externality and its mechanism. The complex network method is employed to evaluate the development of urban agglomeration regions in China. Further, based on panel data from 2003-2018 of 12 urban agglomeration regions, this study has tested the hypotheses proposed. The basic result demonstrates that there is significant positive urban network externality among urban agglomeration regions. Moreover, the relationship of network centrality and economic growth takes the form of inverted U. At last, industrial structure similarity and proportion of secondary industry of central cities have a positive effect on urban network externality. These results suggest that the urban agglomeration region is indeed an efficient form to boost economic growth by urban network externalities. At the same time, appropriate network centrality can help to make the best of urban network externalities. Raising the industrial structure similarity and the proportion of secondary industry of central cities is a way to produce more urban network externalities.

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Digital Regions: A Different European Regional Space Structure

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Abstract

The Europe 2030 Agenda for Sustainable Development gives emphasis to people and to sustainable way of life. Sustainable development was identified as important aspect for European Strategy 2020, which is based on three pillars of growth: 1. *Smart growth*, focus on fostering education and innovation, 2. *Sustainable growth*, focus on low carbon emissions, tackling climate change and protecting the environment, 3. *Inclusive growth*, focus on establishing new jobs and reducing poverty.

In the last decade, there has been given a strong emphasis on Smart growth, which was mainly achieved through the transition of cities to the digital era and introducing the concept of Smart City. However according to our knowledge, the concept of Smart Region is slightly examined by literature.

Regions in contrast to a city, are associations of more areas or cities with different growth rates, with different spatial development and physical - technological infrastructure and with different needs of citizens. Moreover, the digitalization of our societies force regions to face new challenges such as e-economy, e-government, etc, issues that have already been examined in the context of Smart City".

The goal of this study is to contribute to the literature and to the public discussion of smartness in our life, by introducing the concept of Digital Region.

The idea of Digital Region is the result of the rapid development of Information & Communication Technology (ICT) and their applications. Internet of Things, Artificial Intelligence, Cybersecurity, Big Data are some of applications that transform the both economy and society. The concept of region is redefined by this new digital environment. At the same time, the pandemic of the COVID-19 has highlighted the urgent need, to take actions in terms of digitalization at regional level. The introduction of the concept of Digital Region as a mental region that will consist of regions with common characteristics and common problems to face and which knows no borders but focuses only on creating the appropriate strategies to deal with a common emergency is the subject of this paper.

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Research on the Assessment of Cities' Adaptation to Climate Change and Its Relationship with Urbanization in China

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Abstract

With the aggravation of climate change, extreme climate events occur frequently in urban areas, resulting in great loss of human life and property. Therefore it is urgent to enhance the cities' adaptation to climate change. Focusing on the impact of high temperature, low temperature, drought, and flood, multi-dimensional assessment systems covering natural, economic, social elements for cities' climate change adaptation are established. Based on the assessment systems, the studies of adaptation to climate change are conducted in 248 cities in China with using entropy weight method, coefficient of variation method, exploratory spatial data analysis. And with the help of geographically weighted regression (GWR), the relationships among the four types of urbanization and cities' adaptation to climate events are explored. The results showed: (1) High-administrative-level cities have stronger adaptation, lower vulnerability and higher readiness than ordinary-prefecture-level cities. (2) The differences of adaptation to the four types of climate events among cities within each of the seven regions in China present different spatial patterns. The gaps of adaptation among cities within Southern China and Southwestern China are very prominent. (3) Compared with Southern China, Northern China has a wider advantage in adapting to climate change and climate events, and the gap among different regions in adapting to low temperature is relatively small, while there is a significant adaptation gap in coping with high temperature. The key to improving balanced adaptation to climate change in all regions of China lies in narrowing the gap of adaptation to high temperature. (4) The adaptation to high temperature and flood are characteristic of high-in-north and low-in-south. Cities with high adaptation to low temperature mainly belong to high-administrative-level, forming a high-low agglomeration area centered on cities of this level, and cities with low adaptation to low temperature are mainly distributed in Southwestern China, Central China and Huaihe River Basin. Cities' adaptation to drought shows a significant trend of decreasing from southeast to northwest, with high adaptation cities mainly concentrated in Jiangsu, Zhejiang, Anhui and Pearl River Delta, while adaptation in Northwestern China is generally low and shows the characteristics of low-low agglomeration. (5) Under the four types of climate events, the global spatial correlations of cities' adaptation in China are positive, and the agglomeration characteristics of adaptation are mainly H-H and L-L agglomerations. (6) When analysing the impacts of four types of urbanization on cities' adaptation to climate events, the fitting effects of GWR models are far better than those of OLS models. Population urbanization affects cities' adaptation to four types of climate events, economic urbanization on low temperature, drought and flood, industrial urbanization on drought, and land urbanization on flood. Population, economic and industrial urbanization have positive impacts on adaptation of most cities. Population urbanization can improve adaptation of all cities to high temperature, while land urbanization hinders adaptation of most cities to flood. Under the influence of social and economic development, the urbanization regression coefficients of different cities have significant spatial differences.

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Interprovincial trade in Argentina: main determinants

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Abstract

This paper is part of a broader agenda and constitutes a first step to empirically understand the main determinants of the interprovincial trade in Argentina. We use a novel database of regional trade flows between the 24 Argentinean provinces for 2017. Using a structural gravity model and novel econometric techniques we analyse the main variables influencing trade between the provinces. In fact, the main determinants of trade flows between the provinces are analysed by adding to a canonical gravity model several variables that can possible affect trade between sub national jurisdictions, such as informality, commercial channels, government transfers, financial inclusion among other variables that may be correlated with formal trade. Additionally, the potential impact of shocks in the regions is considered according to their origin and transmission capacity through trade flows. The results indicate that national transfers from the redistribution federal arrangement are an important determinant of inter provincial trade generating relevant spillover effects between the provinces.

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Long-lasting effects of pandemics: The case of the 1918 influenza pandemic in Argentina

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Abstract

The 2019 novel coronavirus disease pandemic poses a severe threat. While its short-term effects are evident, its long-term consequences are a matter of analysis. In this work, long-lasting negative effects derived from exposure in utero to a great pandemic 1918 influenza pandemic are analysed for the Argentine case.

Outcomes of interest include educational achievement and unemployment status in adulthood -50 years after the pandemic. Based on a Local Linear Regression plus a Difference-in-Difference regression specification, temporal differences in the spread of the pandemic and between close birth cohorts are exploited.

The results indicate a significant reduction in educational achievement for people exposed in utero to the pandemic. However, the decline in educational attainment is not homogeneously distributed across the different regions of Argentina. In the region with the highest incidence of cases (Noroeste), this reduction is 0.5 years of education. There are no significant changes in the chances of being unemployed. Besides, the results are also robust to the implementation of placebos in which the treatment group is falsely defined based on cohorts that were not exposed to the pandemic. As expected, no significant differences are observed. In the context of climate change, these results constitute a call of attention for the implementation of child protection policies from gestation.

Some caveats should be made regarding the results of this paper. For the Argentine case, the estimates are subject to the limitations of the primary sources of information. In the future, it is desirable to explore the specific channels through which exposure to natural biological disasters can generate long-lasting negative effects. Two of these channels widely indicated in the literature, malnutrition and maternal stress, take on relevance in the current economic crisis and obligatory social distancing. The availability and easy access to microdata for a broad population group are essential to advance in this analysis direction.

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How to measure the territorial economic impact of the COVID-19 pandemic in contexts with scarce regional data? A methodological proposal and application for Argentina (April-September 2020)

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Abstract

The trade-off between epidemiological prevention and economic activity is one of the most pressing issues that governments and societies are facing. Recent studies highlight that, unlike other crises such as that of 2008-2009, the impact of the pandemic has been regional rather than national. This is why the literature raises the need to adopt a regional perspective in the analysis of the economic impact of COVID-19 pandemic.

However, studies on regional economic impact often face several limitations, in many cases due to the limited availability of updated information at the subnational level. The abundance of real-time epidemiological statistics for multiple geographical scales contrasts with the scarcity of economic statistics, which in developing countries are often non-existent or very outdated. Moreover, available estimates of the economic impact of COVID-19 are usually presented at an aggregate level (by country or sector).

In this paper, we wonder how we can measure the territorial economic impact of COVID-19 pandemic in contexts with scarce or outdated regional data. We propose the calculation of an index that, with minimal adjustments to

each context, could be used to measure the regional economic impact of the pandemic and the isolation measures, based on data or statistics that are usually available in most countries. Our index of territorial economic impact by COVID-19 (ITEI-COVID) takes into account: a) the sectoral production structure of the different regions, based on pre-pandemic data, b) the operational level of each sector, based on secondary post-pandemic information at the national level, c) the mobility of workers in each region, based on easily accessible data from Google Mobility Reports, and d) the possibility of remote work across different activities or sectors, based on recent studies that have been carried out in many countries.

As an application, we show the results of the ITEI-COVID for the 24 provinces and the main 85 Labour Market Areas (LMAs) of Argentina, throughout the six months (two quarters) of greatest economic contraction, from April to September 2020. In line with recent literature, the ITEI-COVID reveals large disparities between the 24 provinces and the main 85 LMAs, as well as the heterogeneity within some provinces, which revalues the use of smaller geographical units. The results also showed that, although the economic impact of the pandemic has been decreasing over the months for the country as a whole, there is considerable stability in the relative position of the most and least affected regions. Besides, the economic impact in many regions has been dissociated from the health impact or the relative number of cases.

Finally, the comparison with sporadic official indicators of the regional economic impact of the pandemic emphasizes the validity of the proposed index, which also has a higher geographical and temporal coverage. Although we propose a relatively simple and descriptive exercise, the calculation of an index of territorial economic impact can be a relevant input for the design, implementation, and monitoring of targeted and place-based policies, which seek to mitigate the harmful economic impacts of the pandemic and isolation measures.

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Impact of Urbanization on Micro Climate Change: A Case Study of Asansol city of West Bengal, India

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Abstract

At present, the world is going through rapid urbanization, which greatly affects the climatic condition of a particular area and human life within this region. The rapid growth of the urban population of developing countries in south-east Asia like China, India, Pakistan, Bangladesh, Indonesia, Malaysia, etc., heading towards unplanned and haphazard growth of urbanization, which altered the urban microclimate greatly. Urban areas face intensified heatwave conditions due to the Urban Heat Island (UHI) effect, which results from anthropogenic changes on both surface and atmospheric temperature patterns relative to the natural environment. (Arnfield, A. J., 2003). Asansol, the second-largest city in West Bengal after Kolkata, is experiencing a rapid urban growth rate. This rapid urbanization is negatively affecting the environmental condition, especially on the microclimatic condition of the city. Urbanization, Industrialization, the growing transportation sector, and coal mining activities uniformly produce greenhouse gases like CO₂, CO, SO₂, NO₂, CH₄, and CFC, dust particles leading to the greenhouse effect and rising temperature. Built-up areas and industrialization have increased the impervious land surface and emit poisonous gases for the greenhouse effect, which changed the micro climatic condition. This present study will bring out the relationship and effect of Land Use Land Cover changes spatiotemporally and relationship with Land Surface Temperature change. Land Use Land Cover map is prepared through Landsat satellite images of 1990 and 2020, and corresponding Land Surface Temperature is also calculated using thermal bands. Correlation of Land Surface Temperature (LST) with various spatial indices like Normalized Difference Vegetation Index (NDVI), Normalized Difference Water Index (NDWI), and Normalized Difference Built-up Index (NDBI) have been measured, and it shows there is a significant and strong correlation with each other. Temperature patterns indicate a direct association with changing LULC patterns of the study area. The maximum and minimum temperature of 1990 were 37.37°C, and 16.25 °C respectively, which increased to 39.27 °C and 26.05 °C in 2020. This change is indicating a continuous increase in LST.

On the other hand, the built-up area has also increased from 8.86 to 22.87 percent, respectively, from 1990 to 2020, signifying natural land conversion to the built-up area. The average temperature increased to 5.85 °C during this period, indicating a significant change in temperature in the city. Nearly 22 %, i.e., 71.84 km² was under green

cover in 2000, which has reduced to 17.05 %, i.e., 55.66 km² in 2010; so green space has lost 4.5 % only in 10 years (Siddique et al., 2020) which validate the impact of human on environmental change.

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Green exports in Argentina: trajectories and opportunities for diversification at the regional level

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Abstract

This project aims to analyse the trajectory and opportunities for export diversification in green products for the Argentinean provinces between 2003-2019. The development of products with environmental benefits (green products) is considered one step towards a sustainable transition, an issue of utmost relevance to any economy.

In particular, developing countries present conditions that could promote and limit a sustainable transition in these economies (Hansen et al., 2018; Köhler et al., 2019). On the one hand, Argentina has a wide range of resources that could be considered an opportunity to foster green development strategies. On the other hand, it faces structural problems that constrain regional development. In this context, ECLAC argues that it is possible to strengthen the productive capacity towards a green and more inclusive economy (ECLAC, 2019). Even though, a radical transformation could be perceived as not urgent or not possible in Latin America, we need to study niche options that can help avoid a lock-in process (Marin & Benavente, 2011). In this line, this research focuses on a group of products with environmental benefits, considered preferable in the world, with a growing demand that may represent an opportunity in terms of green development.

In order to distinguish these products, we follow the list provided by Mealy and Teytelboym (2020) that identify 543 traded green products (HS 6 digits). We analyse export data at provincial level (HS 6 digits) for Argentina between 2003-2019.

The empirical strategy draws on economic complexity and proximity concepts (Hidalgo et al., 2007; Hidalgo and Hausmann, 2009). We calculate indices that capture the present capacities of green production and identify potential diversification opportunities. The study presents an overview of the green economy in the Argentinean regions and concrete indications on future diversification opportunities. These results can be useful as a basis for regional policies that foster the green economy.

Preliminary results show that the green economy has a heterogeneous spatial distribution across the country. This pattern has also remained stable over time. In this line, the ranking is led by central provinces (Buenos Aires, Ciudad Autonoma de Buenos Aires, and Santa Fe y Cordoba. Diversification opportunities are also seen to be greater for the above-mentioned regions, as well as for Neuquen, Chubut, Santa Cruz, and Mendoza.

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Determinants of Well-Being in the Turkish Provinces

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Abstract

In recent years, there has been a growing debate on insufficient perceptions of living conditions which relies only macro-economic dimensions. Turkish Statistical Institute conducted a study to measure and compare well-being of individuals and households on the province level and introduced the well-being index for provinces in 2015. Using 11 dimension and 41 indicators of objective and subjective criteria, the study aimed to monitor the well-being of people with all aspects. However, the study iterated only on national level and failed to measure, compare and monitor the wellbeing on province level. This study presents a new approach to well-being literature by creating a new well-being variable using age and family size related variables which have inverse U shape relations. We collect data from 81 provinces between 2012 and 2018 to understand determinants of well-

being in Turkish provinces. We use income (GDP per capita), job (female employment), education (female university graduates), health (physician), access to services (road length), agglomeration (population density), governance (NGO), safety (homicide), feel of belonging (migration) indicators with panel data models. According to the results; female employment, female university graduates and share of population who lives in the same province they were born have positively effecting well-being. On the other hand, population density and number of physicians have negative effects. Interestingly, GDP per capita does not have any significant effect on well-being. It is also possible to conclude that time affect well-being positively.

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Argentina's integration into global value chains: a sectoral and product analysis, and an attempt at regionalization

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Abstract

The aim is to identify sectors and products with potential for participation in value chains on a regional scale (South America) and in dynamic global markets. The type of integrations is that of importing goods as inputs and exporting them with a certain level of additional processing. In other words, an input is purchased from the region or the rest of the world and exported to the region or the rest of the world for final consumption or to continue the productive transformation process.

The identification of sectors with potential for participation in regional and global value chains was carried out using the information provided in the South American Input-Output Matrix (MIPS). Three types of indicators were constructed, each of which captures different ways of viewing the phenomenon under study: domestic intersectoral linkages, vertical integration with the international economy, and the degree of proximity to final demand. The selected sectors have high import contents, are generally far from the final demand, and have an important regional integration. Within the selected sectors, 90 products were identified. The main destination markets for these products depend on the type of good, although there is a clear presence of Brazil and other South American markets (although to a lesser extent) in all the selected sectors. For each of the selected products, the main inputs were analysed using information from the temporary admission import regime, which allows linking inputs with products at an appropriate level of disaggregation. In general, the linkages refer to inputs that originate in countries outside the South American region, on which there is a high level of industrial transformation and which are then exported to countries in the region.

To complement the analysis, tariff and non-tariff barriers were considered to detect concrete possibilities and barriers to achieve productive linkages, especially in the case of trade with countries with which there are no trade agreements. For inputs where opportunities for regionalization were identified, Argentina already has a preferential tariff rate equal to zero for most of these products with its regional partners. In the case of inputs with low regional supply, most products have preferential rates equal to zero for partners in the region, but for extra-regional suppliers, there are no preferential agreements and the rate applied corresponds to that of Most Favored Nation.

With reference to the analysis from a regional perspective, using a provincial input-output model, we evaluated the regional impacts of an increase in exports in the eight selected sectors with the potential to join global value chains. These impacts differ according to the destination country considered (given the characteristics of the exported goods and existing trade links). The results show that for almost all the selected sectors, the region that benefits the most is the Pampean region, mostly through an increase in exports. In the second place, it appears CABA, which, in contrast to the Pampean region, benefits indirectly through an increase of sales to other regions inside Argentina.

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Solving a Plastic Pollution Problem While Creating Better Income for Marginalized Women

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Abstract

The «Plastic-Free Surf Project» took place in Bades, in Al Hoceima Park, in Morocco. It was aimed at reducing local plastic pollution and at contributing to increase the local craftswomen's income. In this Park, located along the Mediterranean Sea, the presence of plastic waste negatively impacts the continental and marine biodiversity.

Three intervention tools were chosen to support 20 craftswomen in the search for solutions to the plastic problem: design thinking, Facebook and WhatsApp. The research question was: What is the relevance of the solutions proposed by craftswomen to the problem of plastic, when they are supported with design thinking and Facebook?

Twenty artisans were accompanied by researchers for a year with the aim of reducing plastic objects thrown in the region. The idea was to allow these women to manufacture new products that would reduce the plastic objects used locally or reuse the plastics composing these objects. In workshops and on a Facebook group (during Covid-19 confinement), the project followed the steps of design thinking: observation, synthesis, ideation, prototyping, testing and communication. On Facebook, the craftswomen and the researchers shared, assessed and improved prototypes.

After 9 months, Canadian and Moroccan evaluators (n=37) were invited to comment and to put scores on 35 craftswomen's prototypes. They analysed the participants' prototypes with creativity criteria: environmental value, adaptation, novelty, originality, elaboration and fluidity. The craftswomen made jewellery, home decorations, toys and fashion accessories from plastic. They created innovative manufacturing techniques: sticking micro plastics on paintings, stuffing objects with plastic scraps and used bags, assembling compact discs to make decorations, embroidering plastic jewellery covered with felt, etc. The environmental value of their products was judged as quite good. Several prototypes contributed to reduce the quantity of plastics thrown into the Sea. The adaptation criterion (marketable product) was given a good score. The criteria of novelty and originality were fairly reached. The elaboration criterion received a lower score. The participants carried out the construction of varied prototypes, meeting the criterion of fluidity (large number of ideas).

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Beyond the political or administrative definition of the Argentinean economic regions, do their provinces have a common economic cycle?

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Abstract

In this article, the clustering methodology is applied to group the Argentinean provinces by regions according to the cyclical behaviour of their economies. As usual in empirical literature, we implement three techniques for clustering: the first uses the well-known k-means procedure without imposing any restriction of geographical contiguity in the provinces that are clustered, the second is similar to the first one but imposing contiguity restrictions, while the third alternative is based in agglomerative hierarchical clustering. On the other hand, the economic cycle of each province of the twenty-four Argentinean provinces is measured by constructing coincident indices using the Stock and Watson (SW) methodology. This approach is mathematically based in probabilistic state space models and rest on the hypothesis that the observed co-movements in indicator series can be captured by a single unobserved variable that represents the unknown "state of the economy". In contrast to the traditional composite index methodology which applies equal weights once the volatility in each series is standardized, SW approach uses maximum likelihood procedure to estimate the weights of the component series that best identifies the single underlying factor that is time dependent and that best represents the co-movement

in the components, which is more rigorous from a statistical point of view. One of the main results of our work is that clustering provinces according to their economic cycle presents some differences with the official regionalization of the Argentinean Institute of Statistics and Censuses (*INDEC*) which is used for the production and dissemination of statistics of employment, income, exports, prices, life conditions, among others, although some patterns could be observed. Second, we find that the provinces that concentrate the country's agro-industrial production and exports -that is, *Córdoba* and *Santa Fe*- show similarities in their cyclical behaviour, which are robust to the use of different clustering methods. Third, provinces such as *Formosa* -that according to *INDEC* regionalization belongs to the *NEA*- or *San Luis* -a member of the *Cuyo* region- repeatedly appear grouped together with provinces that belong to other *INDEC*'s regions. Even in some cases, the results show isolated provinces, surrounded by others with noticeable differences in their economic cycles, such as *Jujuy*, *Misiones* and *Entre Ríos*, which are grouped with neighboring provinces only when contiguity is a constraint. Our work also makes a valuable contribution to the empirical literature on regional economic dynamics, scarce in studies of the state of the economy in Argentina. An additional contribution consists of obtaining coincident indices for the twenty-four provinces, with a statistically precise methodology, which until now has been used exclusively to calculate indices in a few bunches of provinces. Finally, the results as a whole show that, at least in those cases where the purpose is analysing the economic performance of a region over time, the impact of a national economic policy or the effects of an external shock on the performance of the economic activity, regionalization based on static criteria may not be the most appropriate approach.

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Political dynasties and human development investments: Evidence of linkage from Rizal province, Philippines

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Abstract

Local government investments on human development, reflected in their level of expenditure on health, education, and social welfare, are necessary public investments geared towards enhancing human capital and enlarging human capabilities of their constituents. Therefore, human development spending represents a reasonable measure of good performance of incumbent local officials who may be dynastic or non-dynastic (Solon et al, 2009; Manasan, 1997). To empirically test whether dynastic mayors tend to have lower human development investments for their constituents, this study draws inference from a panel data composed of all 13 municipalities in Rizal, a well-known dynastic province in the Philippines, as a preliminary empirical investigation. These municipalities are dichotomized into dynastic or non-dynastic and observed over 17 years (i.e., 2001-2017). All identified political dynasties are categorized as fat dynasties—elected public officials occupying political seats simultaneously with their relatives over several incumbency periods. Based on the results of Panel-corrected Prais–Winsten Generalized Least Squares (GLS) estimation, this research finds that Rizal municipal governments led by fat dynastic mayors tend to have significantly lower human development investments, compared with non-dynastic counterparts. Specifically, they spend less on human development at the (1) aggregate level (i.e., total municipal expenditure on health, education, and social welfare), at the combined levels of (2) education and health, and (3) at the specific sector of education. These findings are in line with the prediction of the predatory view of political dynasties, particularly the fat type: with wider and deeper entrenchment of political power due to monopoly of multiple elective positions over consecutive years, fat political dynasties are inherently prone to be predatory—inimical to governance, socioeconomic outcomes, and development. Results are robust to various alternative model specifications and econometric estimation procedures.

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Tracing the changing pattern of location and agglomeration of manufacturing enterprises in Greece: an application of point pattern analysis

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Abstract

The aim of this paper is to estimate the trends of location and agglomeration of manufacturing activity in Greece during the period 2002-2018. The location of manufacturing enterprises and the composition of manufacturing activity in the Greek regions has undergone important transformations during the last two decades. The introduction of euro in 2002 and the economic crisis in 2008 have signified important turning points that have affected/changed the evolution of manufacturing activity across time and over space. The analysis is based on a novel dataset that includes the point geo-locations of manufacturing firms in Greece that have been classified into NACE-2 codes. The estimation of spatial agglomeration of industrial activity is measured by the spatial agglomeration index (SPAG) which is a recently introduced distance based technique which provides an exact and unbiased analysis of the spatial structure of the distribution of economic activity (Kopczeska et al, 2019). Results indicate the changing regional pattern of agglomeration of manufacturing enterprises and they are relevant to the location theory and the regional policy literature.

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Exploring polarization and social segregation trends in Greek metropolitan areas: the case of Athens

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Abstract

Studies on polarization and social segregation are widespread in international literature, given that multi-developmental changes that are taking place within urban areas, influencing the evolution of income inequalities. This paper analyses the polarization and segregation trends in Athens during the period 2004-2015. The analysis is based on a novel database that utilises individual household data from the EU-SILC and declared income postcode data from national official sources. The paper applies spatial segregation indices in order to explore the evolution of segregation and polarization trends before and during the economic and fiscal crisis. Mapping declared income in the broader metropolitan area of Athens shows distinct patterns of high and low income concentrations. Our analysis shows a division between centre and periphery with local differentiations between north-south, particularly in the eastern part of Attica. More specifically, higher declared incomes are concentrated in the north-eastern part of the metropolitan agglomeration, in the centre of the Municipality of Athens, in the southern part and in an enclave that includes Psychiko and some zones of the Municipality of Filothei. Lower incomes cluster in the western part of the Municipality of Athens, a number of zones in the Municipality of Agios Ioannis Rendis and Tavros as well as parts of the north-western zone comprising. There is limited “mobility” of the spatial analysis units in the income hierarchy. Areas at the upper end of the distribution have a very high probability to stay there or move upward, while low-medium areas are likely to “move” either higher or lower. Economic crisis has intensified the segregation trends. Results are relevant to public policy and inclusive growth and development.

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Economic crisis and resilience at local level in Greece

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Abstract

A new strand of literature, known as regional resilience, has gained prominence in spatial economics in the recent years. Regional resilience has attracted academic attention in the current unfavourable economic environment mainly because of the generalised sense of uncertainty and insecurity, necessitating the search for formulas for adaptation and survival. The main aim of this study is twofold: firstly, to evaluate and map the impact of the 2008

economic crisis at the municipal level, comparing the income distribution pre and post crisis; secondly, to examine the main determinants of economic resilience among the Greek municipalities. As a result, a range of economic and other variables are included in a spatial econometric model built investigating several important hypotheses. The data used in this study were obtained from a relatively new database, including annual taxable household income at the micro-region level (zip codes). The results clearly point at very heterogeneous resilience for the Greek municipal level yielding critical policy implications.

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Regional Public Infrastructures and Development on Decentralized Indonesia

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Abstract

Empirical evidence on how different types of regional investment in public capital plays a role in influencing economic and social development within the context of a decentralized government system in developing country been relatively limited. Using a case study of Indonesia, this paper aims to analyse the impacts of regional infrastructures development for different types of government regional infrastructure spending, which are: (1) district/city governments' infrastructure spending, (2) provincial governments' infrastructure spending, (3) the national government's deconcentrated budget on infrastructure to district/city governments and (4) the national government's deconcentrated budget on infrastructure to provincial governments on district/city's economic and social development. Such disaggregation is a unique feature of this paper. The main conclusion obtained is that, compared to district/city governments, provincial governments seem to be better at allocating their infrastructure spending and utilizing national government infrastructure spending deconcentrated to them to induce regional economic and social development in their regions.

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Regional Value Chains: an input-output model application

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Abstract

This work details the concept of value chain at the regional level and how they can be defined by a particular good, produced by a specific industry in a certain region. The main idea is that the location analysis of the production activity should not only consider the top of the chain, meaning the specific place and industry that produces the product that is ready to be consumed as final demand. Value chain analysis is a method that allows to allocate the value-added to the specific industries and regions that are involved in the production process and to estimate how much was their contribution to the final product. Here, we suggest the use of multi-regional input-output analysis as a method that allows to disentangle the complex web of intersectoral and interregional dependencies that characterize the modern and global economies. In this work, we will also present several examples of value chains estimated for Portugal.

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Regional Scientists in Portugal: An analysis of what they think they are

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Abstract

Science is the object of analysis of science. In recent years, many studies have been developed to understand the boundaries of the state of the art in various scientific domains with structured consultations with specialists. This chapter aims to contribute to the analysis of the dynamics of regional science in Portugal based on the application of Method Q to 23 of the 94 regional scientists of the Portuguese Association for Regional Development, who were asked to rank 27 sentences about what is and what matters to regional science. Results indicate that there are complementary views on regional science or the study of the creative human interaction within space. Geographers and social scientists favour understanding, academics with rooted theories and economists and engineers prefer methods. It is suggested an evolution of regional science to territorial medicine where the effort of science mobilizing various disciplines is oriented towards decisions that promote the development of people, sites and places.

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How to define Entrepreneurial Ecosystems?

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Abstract

This paper carries out a systematic literature review on Entrepreneurial Ecosystems (EEs). Innovation, clusters and open innovation are revealed to be the most important streams of literature. From an analysis of social networks, word co-occurrence and co-citations, and cluster analysis, EEs are defined as a set of interdependent actors and coordinated factors, in order to allow entrepreneurship within a given territory. Here, innovation is considered to reflect a new idea and that clusters originating in the spatial concentration of principal and supporting companies use open innovation combining intentionally internal and external knowledge flows, to accelerate internal innovation and market expansion for the purpose of using innovations externally.

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IACOVID19 Vulnerability Index for Brazilian Municipalities: a machine learning application with Gradient Boosted Tree Method

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Abstract

This study develops a predictive model on the main socioeconomic factors that will lead to a high number of deaths by covid-19 in Brazilian municipalities. The observations of the progress of the disease between March and April 2020 and machine learning method are used to construct the IACOVID19 Vulnerability Index. The results suggest that the regions largely affected by the coronavirus are in the southeast, south and Midwest. For the rest of the country, spot concentrations are expected depending on the region.

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Space and Territory in the Context of Regional Development

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Abstract

The debate around the broader notion of space has a long history, becoming an important topic in several scientific domains, in physics, philosophy, geography, planning, and of course in regional science. Many authors in

these domains of knowledge have developed different theoretical frameworks and conceptions of space (see, for example, the works of Benenson & Torrens (2004), Harvey (2006), Lefebvre (1991) or Park (1984)), however, still exist some lack of conceptual clarity, if not in the definition of the concept, in how these different notions of space are operationalized. If the analysis of space, in physics and mathematics, is done with great rigour, defined by metrics and objective criteria, in the social sciences the difficulty is obscured by the undefined of what space is. If time is what is measured with a watch, what is space and how is it measured? Can we say that space is what is measured with a ruler? To a certain extent, yes, but it all depends on the type of ruler we are using.

Space can be more than two-dimensional Euclidean geometry and can be more than a medium in which social, economic and political processes operate. Two main ideas emerge throughout this reflection, the first is that space involves not only a concept associated with its physical arrangements, but is also socially lived and produced, and can mean different things to different people. A distinction is made between a geometric view of space, in which it can be described and analysed by the position of objects in space itself and the relationship established between those objects (perspective associated with the concept of absolute and relative space of (Harvey, 2006)); and a view in which space is not a "container", but a product of biunivocal relations, which result from the permanent interaction between objects and the space itself, reinforcing the idea that space depends both on physical constructions, but also, and above all, on different conceptions and cognitive perceptions.

Starting from a positivist vision (the desire to create a spatial order), the scientific disciplines which have space (territory) as its primary object of analysis, have rapidly evolved towards a post-structuralist perspective, focusing on socially produced space and place. As a consequence, the understanding of space has also followed this change, towards an apparent loss of the physical and isotropic substance of the notion of space, becoming more immaterial and intangible. This reflection also allowed us to assess the challenges associated with the analysis of space, identifying four distinct but interdependent elements, namely, i) the definition and measurement of the attributes of objects, ii) the assessment of the spatial patterns of these objects (heterogeneity), iii) the analysis and interpretation of the relationship between these objects (dependence, interaction or spillover effects) and, finally, iv) the level of detail or resolution at which these phenomena are described and understood (scale).

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Thirty years of Regional Science in Portugal

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Abstract

In this session, some papers from Portuguese academics will be presented. Additionally, I will moderate a short discussion on the last three decades of Regional Science in Portugal, from the creation of the Portuguese National Section of RSAI. We will use as starting point for discussion a recent book that gathers some contributions by the most prominent Portuguese regional scientists.

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Who's right, Weber or Glaeser?

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Abstract

Recent evidence about the relative strength of localization and urbanization economies is rather contradictory. Most empirical work on agglomeration economies has been devoted to the analysis of pure density mechanisms, which actually subsume two possible amenity effects. On the one hand, vast empirical evidence suggests the importance of productivity-enhancing features of spatially concentrated settlement structures, which attract profit-maximizing firms despite the costs associated to large population concentrations. On the other hand, cities

also function as major market areas, concentrated in space and thereby offering within a limited area a large number of consumption possibilities.

These two strands of literature have seldom spoken and to date the relative importance of these sources of agglomeration benefits is not yet clear. In this paper we address this gap. We exploit two large data bases comprising (i.) 70 per cent of all house transactions in the Netherlands in the period 2005-2011, and (ii.) ORBIS data covering balance sheets of Dutch firms in the period 2005-2011. We also merge these two main data sources with Statistics Netherlands neighbourhood data from the *Wijk- en Buurtkaart*, data on monuments from the Cultural Heritage Agency, and, lastly, LISA data of all registered firms in the Netherlands.

The paper provides two main contributions: (i.) We measure the intensity of the productivity effect of consumption and production-related advantages for the Dutch case, and (ii.) We observe whether the relative intensity of the two effects change over the observed time span, following recent theoretical predictions, that suggest the growing importance of consumption amenities as sources of agglomeration benefits (Glaeser et al., 2001; Koster et al., 2019). This empirical framework is for the first time to date explored by looking at the three main indicators of relative locational advantages, i.e. house prices, firm productivity, and worker wages, thus providing evidence on all three main sources of income (rent, profits, and wages, respectively).

Our findings suggest that both consumption and production-related externalities are reflected in house prices, firm productivity, and wages. In particular, urban land rent increases with the intensity of competition, as well as with the presence of local consumption amenities (major monuments, theatres, and restaurants). Firms also tend to be more productive when located closer to sources of consumption amenities, although the evidence is less compelling.

Results are robust to a number of robustness checks, as well as to the use of Instrumental Variables, with soil composition and historical population density as the two main instruments. Instead, we find little evidence of a relative decline of the importance of production externalities with respect to consumption amenities.

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Does Ridesourcing Provide Equitable Accessibility?

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Abstract

In this study, we conduct a comprehensive evaluation of the accessibility offered by ridesourcing services. We measure ridesourcing accessibility by applying gravity-based metrics that include the attractiveness and travel impedance factors. We use transportation network providers' data for Chicago to calculate the average travel times between origins and destinations for ridesourcing trips. Travel impedance factors are computed based on the real travel times. Both the employment volume by sector and points of interest locations are used to measure the opportunity attractiveness. We estimate accessibility for three types of non-work destinations: healthcare facilities, restaurants, and grocery stores, and compare the accessibility between ridesourcing and transit. Given the presence of spatial autocorrelation in our data, we estimate both ordinary least squares regression models and spatial autoregressive models to examine the associations between ridesourcing accessibility and census tract-level demographic and socioeconomic indicators. We find that ridesourcing has a less equitable distribution compared to transit, based on the median household income of census tracts and minority populations. Ridesourcing accessibility is also negatively associated with the percentages of three age groups (0 – 5, 6 – 17, and 65 plus) but positively associated with the percentage of zero-vehicle households. These results provide guidance for policy makers on the inequities associated with new mobility options and how best to offer improved accessibility for disadvantaged populations.

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Are Historic Districts A Backdoor for Segregation? Yes and No

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Abstract

Historic districts preserve the heritage of designated areas and attract tourism income. However, these districts also come with restrictions and increased housing prices that could cause segregation. We study how two historic district programs impact residential segregation in Denver. We find that homebuyers are more likely to be White within historic districts, but that the official historic designation has no effect on this probability. Similarly, we find that most transactions flow from White sellers to White buyers, regardless of official designation. Thus, while historic districts tend to be more segregated, official designation does not seem to amplify this existing problem.

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Russian Arctic regions and COVID-19 challenges

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Abstract

The regions of the Russian Arctic, due to a younger population and a less densely populated space, as a whole, showed a lower (COVID-dependent) excess mortality rate in 2020 than the rest of Russia. However, against the background of generally better COVID-situation within the Arctic zone of the Russian Federation itself, inside the Arctic the picture was highly contrasting. First, the regions where resource “growth poles” and the rotational work organization were the first to face a pandemic back in the spring of 2020. Several shift camps of Arctic resource corporations “blazed” to such an extent that a local quarantine regime was introduced in order to avoid contamination of the rest of the Arctic region. Then, general recommendations were adopted on restrictions for shift camps during a pandemic of the state agency for control of the epidemiological situation (Rospotrebnadzor). Against this background, many Arctic regions introduced stricter restrictions on shift camps, up to a two-week quarantine for everyone who came here from outside. However, the regional peak of excess mortality was observed in the Arctic territories not in the first wave, which captured the most contact-intensive and permeable regions of the center, large urban agglomerations of the country, but already in the summer and autumn of 2020, during the second wave, which came here with some lag behind more densely populated areas. In general, larger urban regions of the Arctic have suffered from the pandemic more than sparsely populated and small urban regions, for example, the Chukotka Autonomous Okrug, rural Yakutia, etc. In the Republic of Sakha-Yakutia, for example, in the main regional law on covid restrictions, the Law on High Preparedness, it was expressly stated that all quarantine measures do not affect “areas with limited terms for the delivery of goods”, that is, roadless, remote, inaccessible.

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Russian central regions and the Arctic periphery under the COVID-19 2020 pandemic

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Abstract

The usual approach to assessing the spread of a pandemic in space is through the cells of administrative-territorial entities, regions and municipalities. Our approach is completely different. We were interested in the place of the city, the region in the system of settlement of the country. The most important result of the 2020 pandemic, manifested in the Russian space, was that it further exacerbated the gap between the centers and the periphery of Russia. The consequences of the pandemic, its perception, discipline in the implementation of official restrictions differed radically between the centers and the periphery of the country. The centers reacted according to the formats of neighboring European states: the thoroughness of the implementation of restrictions, the re-profiling of hospitals, bans on mass events, etc. On the other hand, the peripheral territories, while formally duplicating the restrictions of the federal authorities, in fact observed them much weaker, with a certain serenity towards mortal risk.

With this approach, the Russian pandemic space reveals the negative effects of large urban agglomerations, the phenomena of mass migrations from large cities to summer cottages during a pandemic, etc.

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Typology of the Russian and Arctic regions under the conditions of Covid-19 pandemic

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Abstract

Intensive socio-economic interactions are a prerequisite for the innovative development of the economy, but at the same time, they are a cause of increased epidemiological risks. The same spatial processes, features of the labor market and sectoral structure, as well as government policy measures that contribute to an increase in the density and intensity of socio-economic contacts in an urbanized area, can both increase economic returns and increase risks in the event of a crisis. The pandemic forces us to reconsider many of the views on socio-economic development, innovation processes, the viability of territories, and the role of territorial structures of the economy and society in these processes.

A set of local conditions affects the intensity of socio-economic interactions and the stability of the region. The intensity of interactions influences the severity of the impact of a pandemic. Excess mortality is the most revealing and accessible indicator reflecting the severity of the pandemic in the region. Thus, the regions can be divided into types by the nature of socio-economic interactions that explain the level of excess mortality.

When developing the typology, statistical methods of data analysis were used - factorial and regression, cluster analysis, as well as spatial analysis of open data. The typology was based on indicators characterizing: migration flows, the socio-demographic composition of the population, income level and data on the structure of employment of the population, the level of economic development of the region and digitalization, the level of transport, climate, commercial activity, the provision of medical care, the number of search queries for the selected keywords. In total, about 170 indicators were considered, for each of which an individual relationship with the target variable was analyzed, after which a shortlist of 95 key factors was formed.

The excess mortality was modeled on the Manski model, which allows one to take into account the local and global effects of the neighborhood of regions. The final model, explaining the level of excess mortality by region, determined the role of climatic and socio-economic factors.

Based on the factors selected by the model and the target variable, the regions were divided into types. The results obtained can serve as the basis for several new fundamental and applied research, in particular, they are planned to be used to develop territorially differentiated measures to regulate socio-economic interactions, labor markets, and the sectoral structure of the local economy, aimed at achieving a balance between economic development and minimizing epidemiological risks.

