

SCIENTIFIC ARTICLES

Authors: Janetta NESTOROVÁ DICKÁ, Patrícia GUROVÁ

Title: The sustainability of social care in Slovakia: Modelling the existing network of residential social facilities for future senior populations

pp: 66-85

Abstract: The possible availability of residential long-term care for seniors in the regions of Slovakia in the period to 2040 is evaluated in this contribution. The study identifies risk in the availability of residential care concerning the future development of the senior population. To highlight the potential risk for regions, three model projections are used. A factor analysis with two-by-two classifications was employed to identify the risk in the regions in terms of the availability of residential care. Due to the expanding senior population in Slovakia, maintaining the current capacity of residential facilities would significantly deteriorate the availability of social services. If the current ratio of residential care capacity to the size of the senior population is maintained, the number of beds will have to increase by 56% by 2040. Demographic ageing is a current challenge for public policy and requires searching for solutions to ensure the quality of social care for the elderly in every society. Our research shows that the risk in the regions of Slovakia varies depending on the existing capacity of residential facilities and the forecasted senior population.

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Authors: Branislav ŠPROCHA, Anna FITALOVÁ

Title: Late motherhood and spatial aspects of late fertility in Slovakia

pp: 86-98

Abstract: Shifting childbearing to later reproductive ages is reflected in all European populations. Late motherhood also changes, from the point of view of parity structure, since nowadays, the beginning of reproductive pathways is increasingly realised at the age of 35 and over more often. The regional dimension of this phenomenon is significantly overlooked, however. The main aim of this paper is to explore how the level and the impact of late motherhood has changed from a spatial perspective. We use Slovakia as a case study population characterised until the end of the 1980s by an early beginning of reproduction and its concentration in the first half of the reproductive period, and by relatively significant socio-economic, cultural and demographic differences. At the same time, we point out the changes in late motherhood in terms of parity structure. Finally, through linear regression models, we try to identify which of the selected factors may condition the differences in share of late fertility and the significance of first births at advanced reproductive ages.

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Authors: Vladimír BALÁŽ, Tomáš JECK, Miroslav BALOG

Title: A geography of creative networks: The case of a small European economy

pp: 99-115

Abstract: This research project analyses the effects of networking by creative and conventional enterprises at regional and inter-industry levels. It relies on a unique dataset provided by the Slovak Creative Voucher Scheme and has some novel elements. We used direct evidence of industry locations from projects developed by creative industries rather than proxies. Network analysis was applied to establish major patterns in regional and inter-industry cooperation by creative and conventional firms. Regression models were used to analyse the network structure. The findings from quantitative analyses were complemented with evidence from qualitative methods. The network included a wide variety of cooperating partners. A sample of creative firms supported by the Creative Voucher Scheme cooperated with partners from no less than 60 industries. Spatial proximity was a key condition for cooperation, enabling face-to-face contacts and the development of a trusting relationship between creative firms and their clients.

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Authors: Tomasz KOMORNICKI, Rafał WIŚNIEWSKI, Karol KOWALCZYK

Title: Modal split of passenger traffic: The Polish section of EU external borders

pp: 116-133

Abstract: Despite the ongoing processes of territorial integration, especially in Europe, there are still borders that fulfil their original function, namely that of a barrier. In some cases, this function has even been strengthened. Such is the case with Poland's eastern border, which is also the external border of the EU and of the Schengen Area. This article presents the modal split of passenger traffic under conditions of frequent changes in the functions and permeability of borders, against the background of the key drivers behind the volumes of border traffic, i.e. the geopolitical, socio-economic, and infrastructural factors, both in relation to road, rail and border infrastructure. All sections of the border display some marginalisation of railway transport. The Polish eastern border is characterised by a sustained high share of bus transport, which pertains to all sections under analysis. The long waiting times for clearance when travelling in private cars was probably one of the factors behind the creation of the market for collective transport. Private transport is most dominant on the Polish-Russian border, while the largest share of crossings by bus is recorded on the Belarusian border.

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Authors: Vilém SPÁLOVSKÝ, Stanislav RUMAN, Milan TRIZNA

Title: A comparison of the hydrodynamic characteristics of surface runoff generated by flash floods in geologically different areas of the Bohemian Massif (crystalline rocks) and the western Carpathians (flysch)

pp: 134-148

Abstract: The geological environment is undoubtedly one of the basic factors that influence the formation of surface runoff. The extent to which this factor can also affect the hydrodynamic characteristics of flash floods, which is also indirectly associated with flood risk, is the main topic of this study. In two geologically different areas of the Bohemian Massif (crystalline rocks predominate) and the western Carpathians (flysch rocks predominate), a total of 40 watersheds characterised by sharing a certain hydrological analogy were selected (20 watersheds from the Massif and 20 from the Flysch zone). In each of these watersheds, 1-year, 10-year and 100-year flash flood return periods were constructed using the two-dimensional hydrodynamic model Iber. The outputs from this model included raster datasets of areas, depths, and flow velocities

during inundations. Subsequently, these rasters were analysed and compared with an emphasis on differences within the individual geological study areas. The outputs showed clear differences in the individual hydrodynamic characteristics (e.g. the average inundation area during Q_{100} was 29.07% larger in the Flysch than in the Massif). Overall, the Flysch zone appeared to be far riskier in terms of flash floods than in the case of the Bohemian Massif.

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