

SCIENTIFIC ARTICLES

Title: The delimitation of areas of strategic intervention in Poland: A methodological trial and its results

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Abstract: This main aim of this study is the examination and discussion of a conceptual and theoretical model for Poland's areas of strategic intervention. Following a review of the current strategic documents at national and regional levels, it is possible to propose two basic categories of areas of strategic intervention: 1) growth areas (territories with natural or socioeconomic properties particularly favourable for development); and 2) problem areas (territories with unfavourable features and socioeconomic and/or natural processes). Among the problem areas it is possible to distinguish three main types: the social, the economic and the natural, albeit with the possibility of applying an even more detailed typology that allows for combinations of these types. Scientific findings can be combined with the results of empirical research to encourage the proposal of a new method of delimiting areas of strategic intervention. The identification of growth areas is primarily based on expert knowledge, which is clearly qualitative. In turn, the processes by which problem areas are delimited is quantitative in nature, reflecting analyses of selected diagnostic indicators that take social, economic and natural issues into account. The results which were obtained relate to the concept of endogenous development, as well as the assumptions under pinning policies of territorial cohesion.

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Title: Technological relatedness, knowledge space and smart specialization: The case of Germany

Authors: Jana VLČKOVÁ, Nikola KASPŘÍKOVÁ, Markéta VLČKOVÁ

Abstract: The level of technological specialisation in the regions of Germany is assessed in this paper, as well as how such specialisation has evolved over time. Further, in three selected regions (Munich, Düsseldorf and Oberes Elbtal/Osterzgebirge), the knowledge space is explored in detail and compared to existing smart specialisation strategies. Average relatedness and knowledge space based upon EPO patent applications are used to measure the specialisation and technology trajectories of the German regions. Between three periods 1988–1992 and 2008–2012, the specialisation of Germany based on EPO patent applications increased by 10%, despite a decline in many regions. Machinery and transportation industries have increased their significance. The assessment of regional smart specialisation strategies in the three German states shows that the methodology in terms of the identification of prospective industries is largely variegated and insufficiently developed. More attention should also be given to the choice of an appropriate geographical level of aggregation for analysis. Knowledge relatedness and knowledge complexity could be used as methodological tools for selecting prospective industries in smart specialisation strategies.

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Title: A cohort perspective on the fertility postponement transition and low fertility in Central Europe

Authors: Branislav ŠPROCHA, Pavol TIŠLIAR, Luděk ŠÍDLO

Abstract: Fertility postponement and the concomitant decline in fertility levels are the most prominent trends in the demographic behaviours of the former Eastern Bloc countries in Central Europe. A number of studies have analysed period fertility development but the cohort perspective is often neglected. The postponement transition has evolved over a long time span and affected many cohorts, so the cohort approach is appropriate for studying long-term changes in fertility tempo and quantum. A cohort analysis engenders an analysis in detail of the onset, dynamics and ultimate extent of this process. Using the cohort benchmark model, we have been able to pinpoint differences in postponement and recuperation levels and have combined it with projection scenarios. Thus we have been able to model the hypothetical trajectory of the completed cohort fertility rate. Our analysis highlights differences in the timing of the onset of the postponement transition, its trajectory and extent, as well as in the recuperation of postponed childbearing. These findings suggest differences in completed fertility across the selected four Central European countries are likely to continue and perhaps increase.

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Title: Discovering extinct water bodies in the landscape of Central Europe using toponymic GIS

Authors: Jindřich FRAJER, David FIEDOR

Abstract: Due to global climate change and anthropogenic pressures on the landscape, one of the current geographical problems is retention of water in agricultural landscapes. One possibility to tackle this issue is the construction of artificial water bodies, which has historical traditions in the form of fishponds in Central European landscapes. Unfortunately, many such water bodies were transformed into arable lands during the 18th and 19th centuries. In this study, the identification and spatial distribution of these extinct water bodies is subject to examination, using place names in a GIS environment. Some 375 place names were selected from the official database of place names in the Czech Republic. This set of names was compared to current maps, as well as to old maps from the Habsburg monarchy from 1783–1880 (1st, 2nd and 3rd Military Survey). The map resources were used to find out if a place name was related to an extinct fishpond, and in which period the pond ceased to exist. Using spatial statistics, the existence of areas with a high concentration of place names referring to extinct ponds is demonstrated. It has also been established that areas linked to fishpond extinction in the same period now face more frequent droughts. Thus, the set of place names can be used to identify not only extinct water bodies, but also to serve as being potentially useful in other analyses using GIS, as well as in the public sphere (reclamation).

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Title: An integrated AHP and PROMETHEE approach to the evaluation of the attractiveness of European maritime areas for sailing tourism

Authors: Leszek BUTOWSKI

Abstract: As a subject of scientific investigation, evaluations of the attractiveness of tourist destinations have had a relatively long history, particularly among geographers and regional economists. Based on mathematical and psychological principles and using methods that combine the Analytical Hierarchy Process (AHP) and the Preference Ranking Organization Method for Enrichment Evaluation (PROMETHEE) approach, this research project constructs an evaluation structure used for the assessment of European coastal and offshore areas for sailing tourism. A case study with a three-level evaluation structure has been defined and tested. It contains: at the top of the hierarchy an overall objective defined as the attractiveness of the European coastal and offshore areas for sailing tourism; six criteria of evaluation (on the second level); and ten coastal areas (at the bottom level). This structure covers almost all the coasts around Europe, as they were the subjects of evaluation and comparison. The evaluation was carried out by a group of experts who made the assessment taking into account previously determined criteria with weights. The findings indicate that the AHP-PROMETHEE method may be a useful tool to evaluate the attractiveness of different destinations. It can be also used for practical purposes, particularly to determine strengths and weaknesses, as well as the competitive position, of given coastal areas in relation to others.

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