Structured Abstracts of 'Regional Development and Economic Policy I.' session

Using EU development funds for the development of higher education in the NUTS 2 region through the example of a Hungarian university of applied sciences

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Background and introduction: The justification of this study is that the EU 2020 development cycle has come to an end, the strategic directions and developments of higher education have also been identified. The data available to us can create a diverse analytical focus, and the starting point of our research was a Hungarian higher education institution belonging to the NUTS 2 region of Central and Eastern Europe. All this is because the statistics of this development period – Széchenyi 2020 – have become available in Hungary for our region within the country, both as beneficiaries and as operational programmes.

Objective: Examining the open access database, we assume that universities compete with each other not only in the quality of education, which is supported by international education surveys and can be part of measuring national competitiveness (Duncan, 2014; Martens and Niemann, 2010; Morris, 2011; OECD, 2013a), but also for accessing development resources, which affects their long-term survival and future path. During our research, we seek to answer the question: do higher education institutions compete for development funds within the same country, also within the region?

Methodology: The research examines the interpretation of the connection between Hungarian development policy through the document entitled National Development and Regional Development Concept. In the next stage of the research unit, secondary data analysis is carried out, through individual filters. The EU resources and published operational programs of the 2014-2020 period are available in Hungary through a wide database. The data on the winning applications received during the development period can be analyzed: which region implemented what type of projects, how many projects, and how much support. The University of Dunaújváros, which is the focus of the study, received support for which projects as a beneficiary. Starting from the database obtained in this way, it can be examined whether the support of higher education institutions with project locations in the given Hungarian region for these same calls for proposals differs from each other - that is, whether they really compete for funds.

Results: Related to my topic, we assume that "just as there is competition for buyers on the market, cities compete for population, tourists, investors and companies in the 21st century" (Jakab - Konczosné 2015, 46). Universities compete for development funds.

Conclusions: The results point to the differences in development implemented by the regions. According to the statistics of the Széchenyi 2020 development programs, in the Central Transdanubia region, they account for 9% of the amount paid, approaching the case under study. Within this, the most significant proportion of developments was reported by the Regional and Settlement Development Operational Programs, which are 23% of all project implementations in terms of the amount paid. In the Central Transdanubia region, it can be stated that the EFOP schemes are among the sixth highest paid subsidies in the region out of the nine schemes. Regarding my analyses of these schemes, from a regional perspective, the results show that project implementations of different volumes can be identified among higher education institutions, which confirm the competition for development resources, i.e. the presence of competition between higher education institutions.

Limitations and future research directions: In future studies, it may be important to mention what kind of organizational culture may be behind the fact that the grants awarded to the region arrive with the same variance in response to the call for applications, who could have developed the submitted projects? Was a separate team created for this purpose, or did the higher education institutions work on it on their own? Could the development of the projects have a positive impact on the workforce, did certain institutions become the first based on the experiences of the submitted project work – were they able to increase the funding of individual projects with their experiences? Did the procedure result in a competitive advantage for the higher education institution concerned? Did the process provide the region with a competitive advantage?

Keywords: higher education, competition, development policy

Green city ambitions - innovative strategies for image building

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Background and introduction: Environmental protection and sustainable development are essential for greener and more competitive cities. Innovation in the field of environmental protection promotes green and sustainable urban development through investments, projects and innovative solutions.

Objective: The aim of the study is to summarize and analyse the possibilities, findings, and results of the concept of green cities as an environmentally friendly, sustainable urban development model. An important aspect is the integration of innovative, green solutions into the development of the city image.

Methodology: The study on the one hand is based on systematic literature review summarizing the results of previous researches on the topic. On the second hand, a good example of a Hungarian city will examined and presented. It gives evidence on how an innovative environmental program and climate strategy can make a city greener and thus more competitive, and what impact it has on building a city's image.

Results: The applicability of the research results can provide guidance for green projects in domestic and international cities.

Conclusions: By complex exploring the impact of various green city functions and solutions on sustainability, the analysis provides a comprehensive picture of how and to what extent green city concepts contribute to building the city image.

Limitations and future research directions: A future research direction could be to assess whether cities have strategic planning documents that specifically promote green cities and solutions, and if so, for what time frame they are designed. The research would allow us to categorize cities based on their green city strategies.

Keywords: environmental protection, green city, sustainability, competitiveness, city image

The Economical, Social, Political and Environmental impacts of the CATL battery factory regarding the city of Debrecen and its region

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Background and introduction: This study explores the economic, environmental, and social impacts of the CATL battery factory investment in Debrecen, Hungary. It examines local public opinion, political dynamics, and regulatory shortcomings. The research investigates whether the project intensifies economic convergence challenges, environmental degradation, and social tensions, using expert interviews and case comparisons as its foundation.

Objective: The aim of the research is to assess the potential consequences of the CATL battery factory in Debrecen, focusing on environmental risks, economic benefits, and social impacts. It seeks to understand how such foreign investments affect local communities, regulatory frameworks, and political dynamics in Hungary.

Methodology: Here is a 500-character summary of your research design including all three methods. The research applied a mixed-methods design: (1) a quantitative attitudinal survey gauging public opinion on CATL's investment; (2) qualitative observational research exploring generational and emotional differences in public reactions; and (3) in-depth interviews with local officials, experts, and stakeholders. Together, these methods assessed economic, environmental, and social dimensions of the battery plant

Results: The research found that 65% of respondents had a negative opinion of the CATL factory, 15% were neutral, and 20% positive. Most residents oppose the investment, citing environmental risks, weak regulation, and lack of transparency. Observational data showed younger people reacted more emotionally, while older generations focused on economic and ecological risks. Interviews revealed widespread distrust in official communication and regulatory oversight.

Conclusions: The research highlights significant public opposition to the CATL factory in Debrecen, driven by environmental, social, and political concerns. It reveals regulatory weaknesses, lack of transparency, and polarized public opinion. The study underscores the need for stronger communication, stricter oversight, and community engagement. Theoretically, it shows how foreign investment can deepen mistrust; practically, it urges reforms to balance development with local interests.

Limitations and future research directions: The research is limited by the factory's non-operational status, restricting access to real-time environmental or economic impact data. Survey and interview responses may reflect subjective perceptions. Future research should include longitudinal studies after the factory begins operation, environmental monitoring, and comparative analyses with similar projects to assess actual impacts and policy effectiveness.

Keywords: Catl, Debrecen, Environment Protection, Sustainability, EV cars, Battery

Model of Energy Transformation in Regional Areas

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Background and introduction: This article proposes a short-term energy transformation model focused on regions and the use of resources in them. This is considered a meaningful direction that would simultaneously allow us to solve current social problems. The model developed in the article suggests that energy transformation is possible when regional resources are concentrated to achieve faster implementation of actions.

Objective: To create a short-term energy transformation model focused on regional energy systems.

Methodology: Cluster analysis, Asset analysis, Multi-criteria analysis.

Results: Short-term energy transformation model verified for the Lithuanian case.

Conclusions: Small countries without fossil resources have every opportunity to create decentralized energy systems based on regional energy activities. The main focuses are resource conversion to install more production capacity, circular economy, and state contribution to strengthening electricity and gas networks.

Limitations and future research directions: Limitations are related to the lack of centralized data on regions in Europe. Future directions are related to research into the possibilities of energy transformation in agriculture in Europe and the USA.

Keywords: Energy transformation, Rural areas, Governance

Comparative Analysis of Small Towns in Bulgaria And Hungary – the role of small towns in the regional development

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Background and introduction: In Europe, we typically think of small towns that function as centres of a rural area, providing a marketplace, services, and jobs for the population of surrounding villages. In the development policy, they are rather overshadowed between villages and regional cities. Commonly, while the need to develop regional centres and villages is often heard, the role of small towns is neglected. At the same time, they play a prominent role in shaping the quality of life in rural areas.

Objective: The paper aims to elaborate a theoretical framework for comparative analysis of small towns in Bulgaria and Hungary. 1) Critical review of theoretical debate on the definition and the nature of small towns in the European context. 2) A thorough examination of the theoretical debate related to the concept and distinct features of small towns in Hungary. 3) A comprehensive analysis of the scholarly discourse that underpins the notions and unique characteristics of small towns in these countries.

Methodology: In order to be able to examine the processes in a common framework for the two countries, we have examined the main indicator construction techniques that are suitable for constructing functional dimensions. Four techniques (rank-based, normalisation-based, structure-based, reference-based) were used to construct the proxy indicators. The construction process involved the development of complex dimensions for typology from a wide range of initial variables through fit and consistency analysis.

Results: The intensive processes of depopulation, and spatial demographic and economic polarization in both countries, have changed the extent, structure, and stability not only of the villages but also of the urban network. As these negative trends have deepened in the last decades, we are witnessing consequently divergent changes in the number, size, and importance of the different urban settlement categories. The techniques introduced in the methodology chapter are suitable for the common assessment.

Conclusions: The intricacy of small towns' definitions shows the importance of contextual factors and the need for integrated classification based on population size, density, and functions, which is a subject of elaboration in the theoretical debate in European research. Small towns have crucial importance in peripheral and rural regions and serve as micro-regional hubs, playing a key role in regional and urban development. Although they are very rarely the subject of comprehensive research.

Limitations and future research directions: Small towns remain very often "hidden" from policymaking and academic research due to a shortage of available and comparative data, diverse institutional frameworks, and ontological complexity. In the second part of the common work the joint research team will prepare a detailed analysis of case studies in both countries.

Keywords: small towns, regional development, Bulgaria, Hungary

The Impact of Green Space Management Practices on the Climate Adaptation Potential of Urban and Suburban Areas

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Background and introduction: Urban and suburban green spaces, including private ones, are vital for communities' adaptation to climate change. Previous research shows that individuals view their private green spaces as distinct entities and often neglect their integration into the wider neighbourhood ecosystem. However, the quality of these green spaces influences the overall neighbourhood ecosystem, whilst individual management practices relate to the municipality's capacity for climate adaptation.

Objective: The research aimed to explore the role of environmental awareness in individual decisions regarding green space management practices in suburban areas. Another objective was to identify and evaluate policies that could promote individual behaviours supporting climate adaptation strategies at the municipal level.

Methodology: Behavioural economics provided the theoretical framework for the research. At the empirical level, surveys of residents were conducted in 12 suburban villages across 4 cities in Hungary, Romania, and Slovakia. Data analysis was performed according to the MADB (Motivation/Attitude Driven Behaviour) model.

Results: Our study revealed significant differences in private green space management practices based on the residents' origins. While long-term residents ("villagers") tend to value practical and ecological aspects, newcomers ("settlers") are more motivated by aesthetics, convenience, and social status. These differing perspectives impact local biodiversity, water management, and climate. Furthermore, social norms, emotional responses, and limited knowledge also shape behaviour.

Conclusions: The paper revealed that societal changes influencing existing social norms are vital for adopting environmentally friendly private green space management practices. Policies should encourage cultural change through education, incentives, community initiatives, and partnerships. Media and frameworks such as the Entente Florale Europe competition assist in shifting attitudes. Community gardens provide benefits, but also encounter legal and engagement challenges.

Limitations and future research directions: The paper is constrained by its regional focus on Central and Eastern Europe, which may affect generalisability. Self-reported data may also reflect social desirability bias. Future research may explore longitudinal behavioural changes, test interventions across diverse urban contexts, and examine how digital tools or gamification can support sustainable practices in private gardens. Cross-cultural comparisons could deepen insights into social norm dynamics.

Keywords: private green space management, attitudes and behaviour, climate adaptation, suburban area, urban ecological networks

The Role of Public Spending in Times of Crisis in the EU and Its Member States

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Background and introduction: The paper discusses the linkages between public spending and economic crisis situations. It examines spending in EU Member States as well as eventual changes in the EU budget. The hypothesis of the paper is that the role of public action (and, consequently, public spending) increases in times of crisis.

Objective: The objective of the paper is to show the effects of economic crises on the level of public spending, public deficit and public debt and on their share in GDP. Beyond the analysis of national budget trends, the paper also deals with the effects of economic crisis on EU finances.

Methodology: The paper is based on the analysis of macroeconomic data of EU Member States (GDP, public spending, public deficit, public debt) as well as of EU budget (and related finances) figures. It compares non-crisis periods with two periods of crisis: the 2007-2009 Global Financial Crisis and the COVID-19 recession. The results are based on the statistical analysis of these data.

Results: The analysis of the data supports the hypothesis: the volume or at least the share of public spending has increased in EU Member States during the crises tackled in the paper. An increase in EU finances (items not being part of but related to the EU budget) could also be observed as a reaction to the COVID-19 recession.

Conclusions: The results show a clear linkage between economic crisis and public spending. Based on this knowledge, specific rules, actions, long-term economic policy strategies can be designed in order to make the handling of crisis smoother and more sustainable,

Limitations and future research directions: The paper concentrates on one aspect of crisis management (public financing of economic policy actions). There are, of course, many other aspects; first of all, the content of these actions is of crucial importance. Potential future research directions include the detailed analysis of the content and effects of the measures taken during crisis times.

Keywords: Economic policy, European Union, public finance

Rethinking Industrial Policy for Global Supply Chain Resilience: A Comparative Analysis of National Strategies and International Spillovers

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Background and introduction: Global supply chains are under growing pressure from pandemics, geopolitics, and climate change. In this study, I explored how industrial policies—like subsidies, tariffs, and export bans—impact supply chain resilience and global welfare. Using a three-country model, I found that while national strategies can stabilize supply locally, they often create global ripple effects, highlighting the urgent need for smarter policy design and international cooperation.

Objective: The objective of this paper is to understand how different industrial policy tools affect global supply chain resilience. By simulating a three-country trade model under disruption risks, I aimed to explore the domestic benefits and international spillovers of policies like subsidies, tariffs, and export bans—ultimately to highlight how coordinated global action can better support stable and resilient supply networks.

Methodology: This study uses a three-country economic model simulating global supply chains under random disruptions. I analyzed the effects of four industrial policies—entry subsidies, production subsidies, input tariffs, and export bans—on welfare and supply volatility. The model incorporates risk, trade costs, and firm behavior, using simulations to measure outcomes across countries and policy scenarios.

Results: The results show that entry subsidies reduce supply volatility but are costly. Small production subsidies can improve global welfare, especially when applied symmetrically. Tariffs lead to a prisoner's dilemma, lowering welfare without improving stability. Export bans create inefficiencies and reduce overall welfare. Simulations reveal that uncoordinated policies often worsen global outcomes despite local benefits.

Conclusions: The model is simplified and doesn't capture multi-stage production or real-world political dynamics. It also assumes constant elasticity and perfect competition in final goods. Future research could expand to multi-country, multi-sector models and explore how different risk types and firm behaviors affect outcomes. Greater empirical work is also needed to validate theoretical spillovers and guide policy design.

Limitations and future research directions: The model simplifies global trade by focusing on three countries and two production stages, and assumes perfect competition and constant elasticity. It doesn't fully capture geopolitical dynamics or sector-specific complexities. Future research could explore multi-country, multi-stage networks, include firm heterogeneity, and assess policy impacts under varied disruption types and institutional settings for more realistic insights.

Keywords: Supply chain resilience;Industrial policy;Trade disruptions;Entry Subsidies;Production subsidies;Tariffs;Export Bans;