13th REDETE Conference

"Researching Economic Development and Entrepreneurship"

GEOPOLITICAL SHIFTS, ECONOMIC INTEGRATION AND REGIONAL RESILIENCE IN THE ADRIATIC–IONIAN REGION

Ancona, Italy
September 09–10, 2026

THE BOOK OF ABSTRACTS

Publisher:
Faculty of Economics, University of Banja Luka
Majke Jugovića 4, 78 000 Banja Luka
Republika Srpska, Bosnia and Herzegovina
Phone: +387 51 430 012. Fax: +387 51 430 053

Contents

1. Mirror Statistics as a Dual-Observer State Estimation Problem: Differential Equations, Kalman Filtering, and Identifiability of Irregular Migration Flows on the Western Balkans Route 5
   Bojan Baškot and Andrej Ševa

2. The Macroeconomic Effects of Crude Oil Shocks: Bosnia and Herzegovina 6
   Nikola Amidžić and Dragan Gligorić

3. Balancing Influence in the Adriatic–Ionian Region: A Geo-Economic Analysis of EU Integration Policies and China's Belt and Road Initiative under Conditions of Strategic Competition 7
   Kamran Khan

4. Human Capital Supply Capacity Under Demographic Pressure: Evidence from the University of Banja Luka 8
   Dragana Preradović Kulovac, Ernad Lepir and Danilo Rogić

5. Regional Cooperations' Adaptation to Geopolitical Changes: A Focus on the Mediterranean Macro-Region 9
   Cemre Betul Ay, Erblin Berisha and Giancarlo Cotella

6. Governance, Inclusion, and Innovation: Citizen's Participation in Cluj-Napoca's Smart City Strategy 10
   Elena Grad-Rusu

7. Financial Development as a Factor of Economic Resilience in the Western Balkans 11
   Duresa Kilaj and Argjent Berisha

8. Digital Divide and Economic Sovereignty in the Western Balkans: A Fourth-Generation Human Rights Perspective 12
   Jelica Gordanić

9. Empirical Study of the Degree Readiness for Climate Reporting of Insurance Companies in The Republic of Moldova in the Context of Accession to the European Union 13
   Grigoroi Lilia, Lupașcu Margareta and Chirilov Nelea

10. Exploring the Links Between ESG Crypto Valuation, Volatility, and Green Bond Performance in Greece 14
    Athanasios Tsagkanos, Ioannis Ch. Mitropoulos and George Gkolfis

11. Entrepreneurial Bricolage, SME Networks, and Post-Crisis Resilience 15
    Arjana Xhemajli Selimaj and Mirjeta Domniku

12. Geopolitical Shocks, Consumption Patterns, and Economic Resilience in the Western Balkans 16
    Aulonë Cenaj and Duresa Kilaj

13. The Hydropower Paradox: Geopolitical Risk, Renewable Diversification, and Energy Transition in Albania Compared to Other Western Balkan Countries 17
    Alesia Makaj

14. Navigating the Green Deal: An ethnographic study of post-mining aspirations in the Jiu Valley, Romania 18
    Popescu Tamara-Elena

15. Determinants of Customer Satisfaction in the Accommodation Industry 19
    Suada Ajdarpašić, Mimoza Luta, Rozafa Lataj and Alma Shehu

16. The Modernization of the Financial and Accounting System as a Prerequisite for Strengthening Institutional Resilience in Financially Autonomous Public Universities of the Republic of Moldova 20
    Liliana Țurcanu and Lilia Grigoroi

17. Macroeconomic Resilience and External Vulnerabilities of Western Balkan Economies under Geopolitical Shifts . . . 21
Dragana Domuzin

18. The Role of Concentration Policies in Vulnerability and Resilience to Economic Shocks . . . 22
Nikola Vidović and Vladana Ritan

19. Blockchain Adoption in the Agrifood Sector: A Comparative Analysis of Italy and the Czech Republic . . . 23
Valentina Giannini, Donato Iacobucci, Martina Orci and Zuzana Virglerova

20. Geoeconomics and Defence Spending: A Review and Trends in the Western Balkan Region . 24
A. Cekovic and S. Filipovic

21. Polycrisis and Trade Performance: Energy Dependency in the Western Balkans . . . 25
Adela Čeković and Jovo Ateljević

22. The impact of Donald Trump's policies on the share price movements of multinational companies . . . 26
Aleksa Poljašević

23. The Effect of Working from Home on Employee Performance . . . 27
Mimoza Luta, Suada Ajdarpašić and Mirjeta Domniku

24. Post-Pandemic societal priorities and the importance of Sustainable Development Goals. Evidence from a South European university (2022-2025) . . . 28
E. Athanasopoulou, G. Mavridoglou, M. Markou, A. Gospodini and N. Apostopoulos

25. Semantic Data Pollution, AI Governance, and SME Resilience under the EU AI Act . . . 29
Lamija Lemeš and Samir Lemeš

26. From Regional Open Innovation to Interregional Collaboration: The Puglia Open Innovation Platform as a Federated Governance Infrastructure . . . 30
Daniela Manuela Di Dio and Silvia Visciano

27. Climate Change, Global Supply-Chain Disruptions and the Insurance Industry: Implications for Regional Resilience in the Western Balkans . . . 31
Damir Mihanović, Martin Marić and Petra Kurbaša

28. The Turkish FDI and Currency Paradox: Institutional Confidence, Currency Volatility, and Comparative Lessons from Poland, the UAE, and Vietnam . . . 32
Dr. Muhammad Ali Shahzad

29. External Shocks and Local Finances: The Impact of the Energy Crisis on the Stability of Public Service Delivery . . . 33
Jelena Poljašević and Milica Marić Stokuća

30. Inputs Delivered, Outcomes Deferred: Evaluating State-Funded Technology Transfer in Serbia 34
Jovana Kojić, Milan Okanović, Miloš Milosavljević, Sanja Marinković and Valentina Vukmirović

31. Does Work from Home Create a Virtual Brain Drain? . . . 35
Giancarlo Lauto, Gouya Harirchi, Francesca Visintin and Alexia Ciroi

32. From Tourist Narratives to Mobility Analytics: A Reproducible Framework for Destination Planning . . . 36
Claudio Mantero, Andres Rodriguez and Luigi Dell'Olio

33. Evaluation of Fundamental Analysis and the Piotroski F-Score Strategy in the Greek Stock Market . . . 37
Georgios Mavridoglou, Dimitrios Sakalidis and Panagiotis Charalampakis

34. Digital Platforms as Drivers of Territorial Change: Cross-Border Tourism Dynamics in the Adriatic–Ionian Region . . . 38

Andjelina Marić Stanković, Danijel Pavlović and Marija Bratić

35. Digital Transformation of CRM: AI Integration and Data Governance Challenges in Southeast Europe . . . 39
Marija Jaćimović

36. Applying the EU partnership principle in enlargement countries: cross-border cooperation as a laboratory of multi-level governance . . . 40
Pietro Celotti, Dea Hrelja, Arianna Mori and Lisa Legrand

37. Mapping the Diffusion of Artificial Intelligence in Italian Firms: Evidence from Public Funding Data . . . 41
Giannini Valentina, Iacobucci Donato, Orci Martina, Perugini Francesco and Vianello Gabriele

38. The Influence of Banks' Sustainability Reporting on Their Contribution to Achieving the Goals of Sustainable Development . . . 42
Stela Radivojević

39. The Role of the Technology in Simplifying the Auditing Process . . . 43
Flamur Kelmendi and Rolanda Mula

40. From Microdata to Macro Forecasts: A Comparative Study of Aggregation Strategies and Benchmark Models in Social Protection Spending . . . 44
Andrej Ševa and Bojan Baškot

41. Greening the Hospitality Supply Chain: VET Innovation, Green Skills, and Regional Economic Resilience for the Adriatic–Ionian Region and the Western Balkans . . . 45
Simone Pagni and Carla Sabatini

42. Raising Public Awareness and Digitization in the Context of Sustainable Waste Management 46
Boris Novarlić, Jovo Ateljević, Draženko Bjelić and Scott E. Crosset

Mirror Statistics as a Dual-Observer State Estimation Problem: Differential Equations, Kalman Filtering, and Identifiability of Irregular Migration Flows on the Western Balkans Route

Bojan Baškot [1] * and Andrej Ševa [1]

[1] University of Banja Luka, Faculty of Economics andrej.seva@ef.unibl.org

*Corresponding author: bojan.baskot@ef.unibl.org

Abstract

We formalise the migration statistics mirroring problem as a continuous-time dual-observer state estimation system. A latent population process $N_c(t)$, the stock of nationality c present in Bosnia and Herzegovina at time t, evolves according to a system of first-order ordinary differential equations with an unobserved irregular outflow component $\mu_I(c,t)$. Two imperfect observation operators are available: the BiH domestic operator $\mathcal{H}_{\text{BiH}}$, which observes entries, official exits, and legal stock changes from eStranac and ISM, and the EU mirror operator $\mathcal{H}_{\text{EU}}$, which observes a function of μ_I reflected in Croatian and Hungarian Eurostat enforcement data.

We prove three principal results. (i) Identifiability: $\mu_I(c,t)$ is identified from the dual observation system if and only if the irregular outflow lies in the null space of $\mathcal{H}_{\text{BiH}}$ but not of $\mathcal{H}_{\text{EU}}$, a condition we call complementary null-space coverage, which holds under mild regularity conditions on the EU detection probability function $g(c,t)$. (ii) Pushback floor theorem: the EU mirror refusal count $R(c,t)$ constitutes a strict lower bound on the true irregular exit rate, with equality if and only if the border detection probability $g(c,t) \equiv 1$, a condition that cannot hold in the presence of informal returns. (iii) Optimal fusion: the Kalman–Bucy filter provides the minimum-variance unbiased estimate of the joint state $(N_I(c,t), \mu_I(c,t))$ given the dual observation stream, with the Kalman gain $K(t)$ characterising the relative information contribution of each observer at each instant.

We then embed the network capacity constraint from the Afghan smuggling market as an inequality constraint on the ODE system, and treat the Iran conflict shock as a linearised perturbation, deriving conditions for stability and return to equilibrium. The paper concludes with the numerical discretisation scheme that maps the continuous formulation onto the monthly ISM query framework described in the companion execution paper.

Keywords: mirror statistics, state estimation, Kalman–Bucy filter, identifiability, irregular migration, dual observer, Western Balkans, pushback, ordinary differential equations

JEL Classification: C51, C53, C32, F22

The Macroeconomic Effects of Crude Oil Shocks: Bosnia and Herzegovina

Nikola Amidžić [1]* and Dragan Gligorić [2]

[1] PhD student at the Faculty of Economics, University of Banja Luka, OPTIMA Group Ltd. Banja Luka

[2] Faculty of Economics, University of Banja Luka dragan.gligoric@ef.unibl.org

*Corresponding author: amidzicn@optimagrupa.net

Abstract

Recent geopolitical developments and energy market disruptions have amplified the macroeconomic relevance of crude oil price fluctuations for small open economies. Study examines how oil price shocks affect selected macroeconomic indicators in Bosnia and Herzegovina using quarterly data (2005-2024) and a VARX framework with impulse-response and variance decomposition analyses. The impulse-response analysis shows that oil price shock initially boosts GDP, but this effect is small, short-lived, and not statistically robust, and turns negative thereafter. The real effective exchange rate temporarily appreciates in the short run as a response to oil price shock, before stabilizing, while exhibited negative response of industrial production is not statistically significant. The variance decomposition results reveal a modest connection between domestic GDP, industrial production, and oil price movements, while oil price shocks represent a substantially larger share of real exchange rate variability. The findings provide relevant guidance for formulating economic policy, enabling the development of effective protective instruments and mechanisms of market supervision to mitigate adverse macroeconomic effects of external oil shocks.

Keywords: crude oil price shocks, macroeconomic effects, VARX model

JEL Classification: F41, O11, C32, Q43

Balancing Influence in the Adriatic–Ionian Region: A Geo-Economic Analysis of EU Integration Policies and China's Belt and Road Initiative under Conditions of Strategic Competition

Kamran Khan [1] *

[1] Research Engineer, Pakneftegaz, Islamabad, Pakistan

*Corresponding author: kamrankhan.azerbaijan@gmail.com

Abstract

This research examines the geo-economic contest between European Union integration policies and China's Belt and Road Initiative in the Adriatic–Ionian Region, analyzing how external strategic competition shapes regional economic architecture, institutional alignment, and developmental trajectories. The study addresses a critical gap in contemporary geo-economic scholarship by investigating how smaller regional states navigate overlapping external influences while pursuing sovereignty, economic modernization, and infrastructural connectivity. Employing a mixed-methods geo-economic framework, the research combines quantitative trade and investment data analysis with qualitative policy document review, institutional mapping, and comparative case studies across ten regional states. The methodology emphasizes structural dependency indicators, regulatory convergence metrics, and debt sustainability trajectories to measure influence balancing. Results indicate that EU integration mechanisms exert deeper institutional and regulatory penetration, whereas Chinese BRI investments deliver rapid, project-based infrastructure capital with conditional financial leverage. Regional states employ hedging strategies, strategically alternating between Brussels-led normative frameworks and Beijing's transactional financing to maximize developmental gains while mitigating asymmetric dependencies. The analysis concludes that strategic competition in the Adriatic–Ionian space does not produce zero-sum outcomes but rather generates complex multi-vector alignment patterns, wherein regional agency, institutional capacity, and economic diversification determine long-term geopolitical positioning. Policy implications emphasize the necessity for coherent EU regional financing architecture, transparent BRI project governance, and enhanced regional cooperation mechanisms to sustain balanced developmental trajectories under conditions of great power competition.

Keywords: geo-economics; strategic competition; Adriatic–Ionian region

JEL Classification: F02, F15, O19

Human Capital Supply Capacity Under Demographic Pressure: Evidence from the University of Banja Luka

Dragana Preradović Kulovac [1]*, Ernad Lepir [1] and Danilo Rogić [1]

[1] Faculty of Economics, University of Banja Luka ernad.lepir@student.ef.unibl.org danilo.rogic@student.ef.unibl.org

*Corresponding author: dragana.preradovic@ef.unibl.org

Abstract

The capacity of higher education institutions to produce human capital is a key prerequisite for economic resilience, yet in Bosnia and Herzegovina this capacity is being eroded by strong demographic pressures. This paper maps the human capital supply pipeline — from live births and natural population growth, through secondary school enrolment, to higher education enrolment at the national level and at the University of Banja Luka — and examines the structural position of the Faculty of Economics within that pipeline. Using publicly available demographic and administrative data, we construct descriptive projections for the period 2025–2044, reflecting the approximate time required for cohorts born today to reach higher education entry age. Our findings indicate a sustained shrinking of the domestic student supply, driven by declining birth rates, negative natural growth, and outward migration. All these factors together threaten the long-run enrolment capacity of higher education institutions in the region.

We argue that in this demographic environment, attracting international students represents not merely an institutional opportunity but a structural necessity for maintaining the human capital base required for regional economic resilience. The paper contributes to the evidence base informing higher education policy in Western Balkan transition economies and to the broader debate on territorial cohesion under conditions of demographic stress.

Keywords: human capital, demographic decline, higher education enrolment, regional resilience

JEL Classification: I23, J11

Regional Cooperations' Adaptation to Geopolitical Changes: A Focus on the Mediterranean Macro-Region

Cemre Betul Ay [1]*, Erblin Berisha [2] and Giancarlo Cotella [3]

[1] Politecnico di Torino, Interuniversity Department of Regional and Urban Studies and Planning (DIST), PhD Candidate

[2] Politecnico di Torino, Interuniversity Department of Regional and Urban Studies and Planning (DIST), Assistant Professor

[3] Politecnico di Torino, Interuniversity Department of Regional and Urban Studies and Planning (DIST), Full Professor

*Corresponding author: cemre.ay@polito.it

Abstract

European Union Macro-Regional Strategies(MRS) have emerged as an innovative governance framework, designed to address shared challenges across transnational spaces characterized by common geographical features. As social constructs operate within soft spaces, MRS functioning is not defined by fixed territorial boundaries but emerges through cooperative arrangements among the EU, participating states, and regions. With rising geopolitical challenges worldwide, including political and military conflicts, multi-level institutional reorganisations and persistent regional inequalities, cooperation mechanisms become increasingly central to the debate in territorial governance -particularly in the Mediterranean Region.

Introduced in 2014, the Eastern and Western Mediterranean Macro-Region has gained strategic importance in European policy discussions because of shared history and geography, along with persistent socioeconomic and political challenges. Even though the MRS for the Mediterranean(EUSMED) has not been established yet, the recent extension of Interreg funds and the rising political tension in the region have reignited the debate again.

In this contribution, we acknowledge that, as cooperation constitutes the keystone for building Macro-Regions, understanding their evolution in response to geopolitical changes has become increasingly important. In this light, we shed light on how cooperation frameworks have developed over time within the broader Mediterranean Macro-Region and how they have adapted in response to the geopolitical crises and shifting regional dynamics. We do so through the lenses of a historical institutionalist approach, allowing to identify the critical junctures generated by geopolitical changes, their unfolding and impact. Overall, the research examines how cooperation frameworks evolve and adapt to turbulent times within the fuzzy boundaries of macro-regional spaces.

Keywords: Mediterranean macro-region, geopolitical changes, cooperations

JEL Classification: R58, H77, D78

Governance, Inclusion, and Innovation: Citizen's Participation in Cluj-Napoca's Smart City Strategy

Elena Grad-Rusu [1] *

[1] Faculty of European Studies, Babeş-Bolyai University

*Corresponding author: elena.rusu@ubbcluj.ro

Abstract

This paper examines the role of civil society in the development and implementation of Smart City strategies in Cluj-Napoca, with a particular focus on citizen participation and collaboration with local authorities. Cluj-Napoca is one of the biggest cities in Romania and the most developed in smart city projects being a pioneer for numerous projects (first smart, first digital civil servant or first participatory budget street in the country). The research draws on both theoretical perspectives and empirical analysis, highlighting the evolution of the Smart City concept from technology-driven approaches to more human-centered models that prioritize civic engagement and social innovation. A particular attention is given to participatory governance models, including bottom-up approaches and helical frameworks of innovation, which position civil society as an active co-creator rather than a passive beneficiary.

To test the proposed hypotheses, the study analyzes strategic documents developed by the Cluj-Napoca municipality, alongside data collected through an online questionnaire administered to residents. The findings indicate that effective communication and consultation between authorities and citizens significantly enhance civic involvement in Smart City initiatives, while increased participation in the design phase fosters greater commitment to implementation. The paper concludes that sustainable Smart City development depends not only on technological advancement but also on the active engagement of civil society, which plays a crucial role in shaping inclusive, adaptive, and resilient urban environments.

Keywords: Smart City, citizen participation, urban strategies, local authorities

JEL Classification: R58

Financial Development as a Factor of Economic Resilience in the Western Balkans

Duresa Kilaj [1] * and Argjent Berisha [2]

[1] Faculty of Business and Economics, South East European University, Tetovo, North Macedonia

[2] Faculty of Business, Haxhi Zeka University, Peja, Kosovo[1] argjentberisha09@gmail.com

*Corresponding author: dk32331@seeu.edu.mk

Abstract

Financial development plays a crucial role in enhancing economic stability and resilience, particularly in developing economies exposed to geopolitical uncertainty and external economic shocks. The countries of the Western Balkans continue to face structural and financial challenges that affect the efficiency of financial markets and their capacity to respond to crises. In this context, the paper examines the role of financial development as a factor influencing economic resilience in the region. The paper is based on a theoretical and analytical approach. It relies on the review of existing academic literature, reports of international financial institutions, and regional studies related to financial development, economic resilience, and geopolitical challenges in the Western Balkans. The analysis indicates that financial sector development, access to finance, banking system stability, and regional financial integration contribute significantly to strengthening economic resilience. In addition, financial reforms, digitalization, and regional cooperation are identified as important factors for improving institutional and economic stability in the region. The paper highlights that financial development represents an important mechanism for strengthening economic stability and enhancing the ability of Western Balkan countries to adapt to global economic changes and geopolitical challenges.

Keywords: Financial development, economic resilience, financial integration

JEL Classification: O16, E44, G21, F36

[1]This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Digital Divide and Economic Sovereignty in the Western Balkans: A Fourth-Generation Human Rights Perspective

Jelica Gordanić [1] *

[1] Senior Research Fellow, Institute of International Politics and Economics, Belgrade

*Corresponding author: jelica@diplomacy.bg.ac.rs

Abstract

In the era of profound digital transformations, the concept of economic sovereignty became inextricably linked to digital and technological changes. Internet access, digital literacy and absence of digital divide had become serious preconditions for economic sovereignty. For the Western Balkan states, the digital divide emerges not only as a social inequality issue but as a fundamental threat to regional resilience, economic progress, and the EU membership. This paper argues that the gap in digital infrastructure and literacy in the Western Balkan undermines the capacity of local economies to participate equitably in global value chains. Drawing on the concept of fourth-generation human rights, the paper points out that the right to digital inclusion is a mandatory legal and structural prerequisite for economic sovereignty. Without a normative framework that guarantees digital access and data governance, Western Balkan states risk a form of digital peripheralization and serious economic challenges.

The paper explores how the digital divide affects the implementation of Smart Specialization Strategies (S3) and limits the potential of the EU Growth Plan for the Western Balkans. Finally, the author concludes that true economic sovereignty in the Western Balkan states can only be achieved by closing the digital divide, and ensuring that technological progress serves as a tool for national autonomy and regional cooperation.

Keywords: economic sovereignty, digital divide, Western Balkans, European Union, digital inclusion, fourth-generation human rights

JEL Classification: O33, F15, O11, K38

Empirical Study of the Degree Readiness for Climate Reporting of Insurance Companies in The Republic of Moldova in the Context of Accession to the European Union

Grigoroi Lilia [1]*, Lupașcu Margareta [1] and Chirilov Nelea [1]

[1] Academy of Economic Studies of Moldova chirilov.nelea.vladimir@ase.md

*Corresponding author: lilia.grigoroi@ase.md

Abstract

The recognition of the Republic of Moldova as a candidate country for accession to the European Union and the reconfirmation of this recognition by opening accession negotiation implies an obligation to transpose the EU acquis into national policies and regulations, including financial reporting, corporate governance and sustainability reporting. Whitin the convergence process, the insurance sector is emerging as on of the most directly affected by sustainability reporting obligations. The research problem aims to assess the degree of disclosure of information, required by ESRS E1, in the reports of insures from the Republic of Moldova under the conditions in which the transposition of the CSRD Directive (2020/2464/EU) becomes o commitment assumed within the framework of accession negotiations. To respond to this challenge, the authors quantitatively and qualitatively analyse the management reports of insurance companies licensed in the Republic of Moldova for the 2024 management year. In this context, the authors developed a compliance index, structured on the disclosure requirements of ESRS E1, coded on a trichotomous scale. The results indicate a very low degree of compliance, with insignificant variations from company to company. No insurer reports quantitative data on greenhouse gas emissions, energy consumption and/or emission reduction targets. The existing disclosures are predominantly narrative, vague and unverifiable, which is explained by the absence of a national regulatory framework, the lack of skills and technical capacities of insurance companies, as well as the inefficiency of the prudential supervision mechanism in the ESG segment. The authors conclude the study with recommendations addressed to all stakeholders regarding priority steps for alignment with ESRS E1.

Keywords: climate reporting, ESRS E1, insurance sector, CSRD, Republic of Moldova, EU accession, compliance index, content analysis

JEL Classification: Q56, M14, M41

Exploring the Links Between ESG Crypto Valuation, Volatility, and Green Bond Performance in Greece

Athanasios Tsagkanos [1]*, Ioannis Ch. Mitropoulos[1] and George Gkolfis[1]

[1] Department of Business Administration, University of Patras, University Campus – Rio, P.O. Box 1391, Patras 26504, Greece giannismitropoulosbkr@gmail.com

*Corresponding author: atsagkanos@upatras.gr

Abstract

This study investigates the influence of ESG cryptos in parallel with idiosyncratic volatility on Greek corporate green bond returns. While existing literature often examines the idiosyncratic volatility within traditional bond markets, our research focuses specifically on green bonds, an underexplored asset class. For the first time in relative literature, we analyze the effect of ESG crypto as well as with idiosyncratic volatility on green bond returns. To account for varying macroeconomic conditions, particularly the pronounced inflationary cycles in Greece, we apply Markov Switching Regression. Our initial findings reveal that the impact of ESG crypto and idiosyncratic volatility on Greek green bond returns is contingent on inflationary pressures. Furthermore, our model demonstrates that under inflationary regimes, increased ESG crypto valuation positively affects green corporate bond returns, while idiosyncratic volatility presents a negative effect. Conversely, during non-inflationary periods, investors respond positively to idiosyncratic volatility while the effect of ESG crypto is non-significant. The proposed model effectively captures idiosyncratic volatility and ESG crypto valuation, offering a significant contribution to explaining the excess returns of green corporate bonds. To further ensure the robustness of our regime-dependent findings and to capture the complex, state-dependent dynamics of the conditional volatility, we extend our analysis using the Markov-Switching Threshold Stochastic Volatility (MS-TSV) Model as a critical secondary mechanism. The MS-TSV model is specifically designed to address the asymmetrical and leverage effects frequently observed in financial time series volatility. It achieves this by expressing the parameters governing log-volatility as a function of an underlying, unobserved Markov chain, allowing the framework to simultaneously accommodate gradual shifts due to persistent economic forces and sudden changes triggered by abnormal events, such as market-wide policy shocks or rapid crypto market corrections. This dual-regime approach provides a more granular view of how uncertainty propagates through the Greek green bond market. The robustness findings derived from the MS-TSV analysis strongly corroborate the primary conclusions of our Markov Switching Regression. The MS-TSV consistently identifies two distinct volatility regimes that align closely with the high and low-inflation states previously established. Crucially, the MS-TSV confirms that under the high-volatility regime (mirroring inflation), the directional relationships remain invariant: increased ESG crypto valuation positively affects green corporate bond returns, while idiosyncratic volatility exerts a significant negative influence. Conversely, the low-volatility regime (non-inflationary) also affirms the initial results, showing that idiosyncratic volatility is positively priced by investors, and the effect of ESG crypto remains non-significant. This comprehensive robustness exercise, leveraging the superior flexibility of the MS-TSV model, significantly strengthens the reliability of our core finding: the market's pricing of both ESG crypto and idiosyncratic risk in Greek green bonds is fundamentally contingent upon the prevailing macroeconomic volatility regime.

Keywords: Corporate Green Bonds, ESG crypto, Idiosyncratic Volatility, Markov Switching Regression, Markov-Switching Threshold Stochastic Volatility (MS-TSV) Model

JEL Classification: C11, G10, G11, Q50

Entrepreneurial Bricolage, SME Networks, and Post-Crisis Resilience

Arjana Xhemajli Selimaj [1] and Mirjeta Domniku [1] *

[1] Faculty of Business, University Haxhi Zeka, Pejë, 30000, Kosovo[1] ariana.xhemajli@unhz.eu

*Corresponding author: mirjeta.domniku@unhz.eu

Abstract

This study investigates the strategic mechanisms through which Small and Medium-sized Enterprises (SMEs) achieve organizational resilience and drive localized economic regeneration in the aftermath of systemic crises. Departing from conventional resource-based views that emphasize optimal resource allocation, we propose a theoretical framework centered on entrepreneurial bricolage—the deliberate application of existing resources to novel challenges and opportunities. Employing a mixed-method approach, including longitudinal survey data from 1,200 SMEs across three European economies and 45 semi-structured interviews with founders and managers, we analyze how network-mediated bricolage facilitates adaptive capacity. Our findings reveal that SMEs exhibiting high bricolage orientation, coupled with embeddedness in decentralized trust-based networks, demonstrate significantly shorter recovery trajectories and higher post-crisis innovation outputs than those reliant on formal institutional support alone. Furthermore, we identify a contingent role for digital platform complementarity, which amplifies the scalability of bricolage-driven solutions without undermining local relational capital. The study contributes to entrepreneurship theory by reconciling bricolage with dynamic capabilities frameworks and offers actionable policy implications: targeted support for intermediary network orchestrators and micro-grants for experimental resource recombination. We conclude that SME resilience is not merely a function of financial buffers but emerges from socio-cognitive practices that transform scarcity into strategic advantage. These insights are critical for designing post-crisis recovery architectures that prioritize entrepreneurial agency over top-down resource redistribution.

Keywords: Entrepreneurial bricolage; SME networks; organizational resilience; post-crisis regeneration; dynamic capabilities

JEL Classification: L26, L14, O31, M21, R11

[1]This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Geopolitical Shocks, Consumption Patterns, and Economic Resilience in the Western Balkans

Aulonë Cenaj [1]* and Duresa Kilaj [1]

[1] Faculty of Business and Economics, South East European University, Tetovo, North Macedonia dk32331@seeu.edu.mk

*Corresponding author: ac32332@seeu.edu.mk

Abstract

This study delivers a comprehensive quantitative assessment of procedural administrative nontariff barriers (NTBs) faced by Bosnia and Herzegovina's manufacturing sector. Drawing on a structured web-based survey of 119 processing-industry firms, selected via stratified random sampling to ensure representation by size and sub-sector, respondents rated on a five-point Likert scale how often they encountered key procedural hurdles such as certification of origin delays, customs valuation disputes, sanitary and phytosanitary inspections, and importlicensing requirements. Findings indicate that over 60 % of firms report experiencing origincertification and valuation issues while more than half of respondents face frequent challenges with sanitary measures and license acquisition. To contextualize these firm-level insights, the study incorporates secondary data from the OECD Trade Facilitation Indicators and the World Bank's Logistics Performance and Trading Across Borders metrics, revealing that BiH continues to lag behind regional peers in digitalisaton of customs processes, and single-window implementation. These combined empirical results underscore the urgent need for policy reforms—such as streamlined documentation workflows, enhanced digitalization of customs procedures, and expanded use of risk-management techniques—to reduce administrative burdens, lower transaction costs, and improve the competitive position of BiH exporters and importers.

Keywords: procedural non-tariff barriers; quantitative survey; trade facilitation; Bosnia and Herzegovina; manufacturing sector

The Hydropower Paradox: Geopolitical Risk, Renewable Diversification, and Energy Transition in Albania Compared to Other Western Balkan Countries

Alesia Makaj [1]*

[1] Konrad-Adenauer-Stiftung, Albania

*Corresponding author: alesia.makaj@kas.de

Abstract

This paper examines how geopolitical energy shocks have interacted with Albania's energy transition, with particular attention to the period following the recent geopolitical uncertainties, such as the Russia-Ukraine war. Albania presents a distinctive case in the Western Balkans context: the country generates nearly all its electricity from renewable hydropower and leads the region on the WEF Energy Transition Index, yet it remained exposed to the 2022 European energy crisis through electricity import dependency during drought years, when it purchases power on a regional market whose prices track European gas costs. The paper asks whether this exposure catalysed a meaningful acceleration in energy diversification, in solar investment at the utility scale, and in commercial solar self-generation among businesses operating in the open electricity market.

Drawing on descriptive data from IRENA, the Energy Community Secretariat, WEF ETI, and publicly available energy market sources, the paper traces Albania's renewable energy trajectory and situates it in a comparative context alongside Western Balkans peers. It further examines Albania's position relative to EU energy chapter requirements, in light of the formal opening of the Green Agenda negotiating cluster in September 2025. The paper's contribution is exploratory and policy-analytical, offering a documented account of energy transition dynamics in a small, hydropower-dependent EU accession economy, a perspective underrepresented in the existing literature. The analysis is grounded in descriptive comparative methods, combining energy capacity and transition index data with policy document review to map trends across countries and over time. The findings carry implications for the EU Growth Plan for the Western Balkans and the EUSAIR energy pillar.

Keywords: energy transition, Albania, geopolitical risk, Western Balkans, solar PV, hydropower, EU accession, Energy Community

JEL Classification: Q42, Q48, F51, O13, Q56

Navigating the Green Deal: An ethnographic study of post-mining aspirations in the Jiu Valley, Romania

Popescu Tamara-Elena [1]*

[1] Doctoral School of Sociology, Faculty of Sociology and Social Work, Babeş-Bolyai University, Cluj-Napoca, Romania

*Corresponding author: tamara.popescu@ubbcluj.ro

Abstract

Entrepreneurial ecosystems have become the object of particular interest in research and policy over the past decade, as a thriving entrepreneurial ecosystem (EE) can spur innovation, job creation, and regional development. This has led to an increase in the number of methodological frameworks and indices aimed at measuring the quality of entrepreneurial ecosystems across countries, based on a common set of entrepreneurship conditions. However, a growing critique in the literature is that "one-size-fits-all" models may obscure local contextual differences. As a result, a need has been identified for context-specific local entrepreneurial ecosystem assessment tools that can provide nuanced insights, reflecting the heterogeneity of relevant factors within a country. The case of the Republic of Moldova illustrates this need.

To bridge this gap, a group of researchers from the National Institute for Economic Research of ASEM developed and tested a multidimensional assessment methodology for Moldova's EE. It was designed to cover eight key components of the ecosystem – Financing, Human

Capital, Infrastructure, Innovation, Entrepreneurial Culture, Markets, Legal Framework and Regulation, and Exposure to Internal and External Risks – broken down into 134 contextrelevant indicators. Using a nationwide survey of 204 entrepreneurs, we assessed each component via a composite coefficient that reflects entrepreneurs' evaluations. Based on the results obtained for each component of the EE, the Entrepreneurial Ecosystem Evaluation Coefficient (Kee) was calculated, representing the weighted average evaluation of the entrepreneurial ecosystem per component. The obtained results highlight specific strengths and weaknesses in Moldova's ecosystem and underscore the importance of localized diagnostic tools.

Keywords: entrepreneurial ecosystem; assessment framework; Republic of Moldova

Acknowledgments: The article was developed within the framework of Subprogram 030101 „Strengthening the resilience, competitiveness, and sustainability of the economy of the Republic of Moldova in the context of the accession process to the European Union".

Determinants of Customer Satisfaction in the Accommodation Industry

Suada Ajdarpašić [1]*, Mimoza Luta [1], Rozafa Lataj [1] and Alma Shehu [1]

[1] Faculty of Business, Haxhi Zeka University mimoza.luta@unhz.eu rozafa.lataj@unhz.eu alma.shehu@unhz.eu

*Corresponding author: suada.ajdarpasic@unhz.eu

Abstract

The aim of this study is to analyze the key factors influencing customer satisfaction in the accommodation industry in Kosovo, with a particular focus on important dimensions of management and service delivery. The study incorporates four independent variables: service promotion, customer complaints, initiatives aimed at enhancing the customer experience, and collaboration with other businesses, while customer satisfaction serves as the dependent variable. Data were collected through a structured questionnaire and analyzed using multiple linear regression analysis. The results indicate that service promotion and initiatives to improve the customer experience have a statistically significant and positive impact on customer satisfaction. In contrast, customer complaints and inter-business collaboration do not emerge as significant predictors in the model. The model explains approximately 49% of the variance in customer satisfaction, confirming the importance of management practices oriented toward service quality and innovation. This study contributes to the hospitality literature by providing empirical evidence on the determinants of customer satisfaction and by offering practical implications for improving performance in the accommodation sector.

Keywords: customer satisfaction, businesses, service, accommodation, Kosovo

JEL Classification: M31, L83, D12

The Modernization of the Financial and Accounting System as a Prerequisite for Strengthening Institutional Resilience in Financially Autonomous Public Universities of the Republic of Moldova

Liliana Țurcanu [1] and Lilia Grigoroi [1]*

[1] Academy of Economic Studies of Moldova turcanu.liliana@ase.md

*Corresponding author: lilia.grigoroi@ase.md

Abstract

In the current European context, marked by geopolitical uncertainty, economic transformations and the need to strengthen regional resilience, public universities are gaining an increasingly important role in supporting institutional, social and economic development. For the Republic of Moldova, currently advancing on its European integration path, the ability of universities to manage resources efficiently and provide relevant financial information becomes an essential element of modern public governance.

This paper examines the modernisation of the financial and accounting system as a factor contributing to the strengthening of institutional resilience in financially autonomous public universities. The research is based on the premise that financial autonomy can generate sustainable effects only when supported by effective mechanisms for planning, accounting, reporting and managerial decision-making. In this regard, the financial and accounting system is approached not merely as an administrative compliance tool, but as a strategic information infrastructure that supports transparency, accountability and institutional adaptability.

The research methodology includes an analysis of the national regulatory and institutional framework, an examination of financial reporting practices, and the identification of modernisation directions aligned with European trends in university governance. The findings highlight the need to strengthen management accounting, digitalise financial and accounting processes, and reorient reporting towards performance, sustainability and public accountability.

The paper concludes that modernising the financial and accounting system can enhance the capacity of public universities to respond to economic uncertainty and contribute actively to strengthening institutional and regional resilience.

Keywords: public higher education, financial autonomy, institutional resilience

JEL Classification: M41, I23, H83, M48, O52

Macroeconomic Resilience and External Vulnerabilities of Western Balkan Economies under Geopolitical Shifts

Dragana Domuzin [1] *

[1] MSc in Economics, PhD Student, Faculty of Economics, University of Banja Luka

*Corresponding author: dragana.domuzin@outlook.com

Abstract

Growing geopolitical uncertainty, disruptions in international trade, and increased exposure to external shocks have renewed attention to the resilience of small and open economies. The Western Balkan countries, characterized by a high degree of external dependence and pronounced structural vulnerabilities, face additional challenges in preserving macroeconomic stability within an increasingly volatile global environment. The subject of this paper is the analysis of the relationship between external vulnerabilities and the macroeconomic resilience of Western Balkan economies under conditions of geopolitical shifts.

The empirical analysis covers six Western Balkan economies: Albania, Bosnia and Herzegovina, Montenegro, Kosovo, North Macedonia, and Serbia during the period 2014–2024. The research is based on panel data obtained from World Bank databases and other relevant international sources. Macroeconomic resilience is examined through indicators of economic performance and stability, while external vulnerabilities are analysed using indicators of external debt, short-term debt, debt servicing, foreign exchange reserves, foreign direct investment, and trade openness. The methodological framework includes descriptive statistics, correlation analysis, and panel regression models.

The expected research findings are aimed at identifying the impact of external indebtedness, liquidity capacity, and trade exposure on the macroeconomic resilience of Western Balkan countries under conditions of geopolitical uncertainty. The results of the study may contribute to a better understanding of regional vulnerabilities and support the formulation of economic policies aimed at strengthening resilience and ensuring long-term macroeconomic stability.

Keywords: macroeconomic resilience; external vulnerabilities; Western Balkans; geopolitical shifts; trade openness

JEL Classification: B41; E00; E60; E62; F30; F40; F50

The Role of Concentration Policies in Vulnerability and Resilience to Economic Shocks

Nikola Vidović [1]* and Vladana Ritan [1]

[1] PhD student, University of Belgrade, Faculty of Economics and Academic assistant, University of Banja Luka, Faculty of Economics

*Corresponding author: nikola.vidovic@ef.unibl.org

Abstract

This study examines the relationship between the structure of public debt and the level of macroeconomic stability in the Western Balkan countries, with particular emphasis on the composition of debt by source of financing—namely, domestic versus external debt. The central hypothesis of the research is that countries with a higher share of external debt relative to domestic debt tend to exhibit lower levels of macroeconomic stability and face greater fiscal risk. Through the application of quantitative analysis and a comparative approach, the paper investigates key indicators of fiscal sustainability. The findings suggest that greater reliance on domestic borrowing can reduce exposure to external shocks, especially during periods of significant economic crises, thereby contributing to fiscal stability. The conclusions of this study may serve as a foundation for the formulation of more sustainable fiscal policies and the development of effective public debt management strategies in the Western Balkan region.

Keywords: Public debt structure; macroeconomic stability; domestic debt; external debt; fiscal risk

JEL Classification: L16, E32, F44

Blockchain Adoption in the Agrifood Sector: A Comparative Analysis of Italy and the Czech Republic

Valentina Giannini [1], Donato Iacobucci [1], Martina Orci [1] and Zuzana Virglerova [1]*

[1] Università Politecnica delle Marche

*Corresponding author: z.virglerova@staff.univpm.it

Abstract

Blockchain technology is increasingly considered a promising tool for improving traceability, transparency, and sustainability in agrifood supply chains. However, its adoption across European Union member states remains uneven and reflects broader differences in digital maturity, firm structure, and institutional support. This study compares blockchain adoption in the agrifood sector in Italy and the Czech Republic, representing a founding EU member state and a more recent member state. The analysis is based on two firm-level datasets constructed from business databases and web scraping of corporate websites. For Italy, data were collected from AIDA and complemented with information from Opencoesione and the TrackIT Blockchain project. For the Czech Republic, data were obtained from the CRIBIS database and corporate websites. The findings show a substantial gap between the two countries. In Italy, 10,861 agrifood companies with websites were identified, of which 85 adopted blockchain technology. In the Czech Republic, only 2,658 agrifood companies with websites were identified, and just one blockchain adopter was found. Italian adoption is spread across several regions and subsectors, while Czech adoption is limited to one large company located in Prague. The results suggest that blockchain implementation is strongly associated with firm size, digital readiness, access to public support, and organizational capacity. The study highlights the need for targeted policy measures, financial incentives, digital infrastructure, and cooperation between firms, technology providers, and public institutions to support wider blockchain adoption, particularly among small and medium-sized enterprises.

Keywords: agrifood sector, blockchain adoption, supply chain traceability, digitalisation, Italy, Czech Republic

JEL Classification: O33, Q18, M15

Geoeconomics and Defence Spending: A Review and Trends in the Western Balkan Region

A. Cekovic [1]* and S. Filipovic [1]

[1] Singidunum University, PhD Student and Teaching Assistant at Faculty of Business, Danijelova 32, Belgrade, Serbia sfilipovic@singidunum.ac.rs

*Corresponding author: acekovic@singidunum.ac.rs

Abstract

Geoeconomics, broadly understood as the strategic use of economic instruments to advance national interests and geopolitical objectives, has become a key analytical framework for examining the relationship between economic policy and security in the twenty-first century. Within this framework, defense spending is especially significant, linking fiscal governance to geopolitical strategy amid the rapid rise in global military expenditure since 2022. This paper reviews the literature, which shows that defense expenditures, public debt, and fiscal policy are often treated separately, with limited attention to their interconnections. Building on this review, the paper conducts a comparative trend analysis of defense expenditures in the Western Balkans from 2015 to 2024. The region is shaped by overlapping geoeconomic pressures, including EU accession, NATO expansion, Russian energy influence, and Chinese investments. The findings indicate a growing trade-off between fiscal sustainability and the expansion of security commitments, positioning defense spending as an emerging geoeconomic concern.

Keywords: geoeconomics; defence expenditures; Western Balkans; public debt; fiscal policy

JEL Classification: H56, H63, F52

Polycrisis and Trade Performance: Energy Dependency in the Western Balkans

Adela Čeković [1]* and Jovo Ateljević [2]

[1] Singidunum University, Belgrade

[2] University of Banja Luka, Faculty of Economics jovo.ateljevic@ef.unibl.org

*Corresponding author: acekovic@singidunum.ac.rs

Abstract

The crises of the 2020s have revealed a core vulnerability in the Western Balkans. These economies rely heavily on imported energy, especially Russian natural gas, but lack access to EU solidarity mechanisms that help member states manage price shocks. This paper examines how the interplay of energy import dependence, global commodity price shocks, and asymmetric EU market access has shaped trade outcomes in Serbia, Bosnia and Herzegovina, Montenegro, and North Macedonia from 2016 to 2024. Using official Eurostat and World Bank data, we construct a balanced panel of 36 country-year observations and estimate fixed-effects regression models that explain more than 93 percent of the variation in trade balances across the four economies. The results show that energy dependence and oil prices are significant drivers of deterioration in the trade balance, while foreign direct investment, contrary to expectations, tends to worsen rather than improve external balances because it flows predominantly into import-dependent sectors. Eurostat data show that Serbia's energy dependence surged from 33 to 45 percent after the war in Ukraine, far exceeding the EU-27's shift and even that of Croatia, a neighboring EU member with comparable energy exposure but with access to joint procurement and a diversified supply. These findings suggest that the Western Balkans' persistent trade deficits are not a temporary consequence of energy price volatility but a structural condition shaped by the region's position outside the EU's institutional and market architecture.

Keywords: polycrisis; Western Balkans; energy import dependency; trade balance; EU enlargement; supply chain resilience

JEL Classification: F14, Q43, F21

The impact of Donald Trump's policies on the share price movements of multinational companies

Aleksa Poljašević [1 *]

[1] Master student, University of Banja Luka, Faculty of Economics

*Corresponding author: aleksa.poljasevic@unibl.org

Abstract

Donald Trump's return to power marked the intensive application of protectionist measures, introducing a high level of uncertainty in the financial market. Numerous authors have investigated the impact of Trump's announcements on stock prices, taking into account different companies in terms of size and export/import character. Financial theories, as well as works on these topics, indicate that stock markets absorb large amounts of information, which in political situations significantly affects the fluctuations in stock prices, especially those of multinational companies. This paper draws on fundamental research on trade uncertainty and analyses how the presidential election and Donald Trump's statements and announcements have affected the market capitalization of MNCs. The primary goal of this paper is to quantify the immediate investor reaction to Trump's protectionist policies. The research is focues on different share price movements of top five US companies based on crutial events connected with Trump policies and political posts. For the observed time period, we took key events that have a possible impact on stock price fluctuations, such as: Official confirmations of candidate victories, Trump's statements on the introduction of new tariffs, announcements of cooperation with Elon Musk, and other similar statements. The time interval used is +-2 days before and after the announced event. The assumption is that companies with significant imports from China suffer greater price shocks. while larger companies with a diversified supply chain manage to stabilize their stock prices faster.

Keywords: Donald Trump, Tariffs, Stock Market, Share price, Multinational Companies, China, Trade

JEL Classification: D53, F23, G15

The Effect of Working from Home on Employee Performance

Mimoza Luta [1] *, Suada Ajdarpašić [1] and Mirjeta Domniku [1]

[1] Faculty of Business, University Haxhi Zeka, Pejë, 30000, Kosovo[1] suada.ajdarpasic@unhz.eu mirjeta.domniku@unhz.eu

*Corresponding author: mimoza.luta@unhz.eu

Abstract

This study examines the impact of working from home (WFH) on employee performance, focusing on target achievement, work-family conflict, psychological effects, autonomy, technological conditions, and preference for hybrid work. Data were collected through a structured questionnaire distributed to 36 employees of a technology company in Peja, Kosovo, and analyzed using descriptive statistics, correlation, and linear regression. Results show that WFH had a moderate to high impact on target achievement (47.2% moderate, 30.6% high), while 50% of respondents rated the psychological impact as moderate and 27.8% as high. A strong preference for the hybrid work model was observed, with 66.7% favoring a combination of home and office work. Linear regression revealed a modest positive correlation between WFH and performance ($R = .177$, $R^2 = .031$), indicating that WFH influences performance but is not the sole determining factor. The study concludes that while WFH offers autonomy and flexibility, it also presents challenges to psychological well-being and work-life balance. The hybrid model emerges as the most preferred and balanced approach. Organizations are recommended to invest in adequate technology, clear communication strategies, and employee well-being programs to optimize hybrid work arrangements.

Keywords: remote work, hybrid work, employee performance, work-family conflict, psychological impact, autonomy, Kosovo

JEL Classification: M12, M54, J24, D23, O15

[1]This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

Post-Pandemic societal priorities and the importance of Sustainable Development Goals. Evidence from a South European university (2022-2025)

E. Athanasopoulou [1]*, G. Mavridoglou [2], M. Markou[3], A. Gospodini[4] and N. Apostopoulos [5]

[1] PhD candidate, Department of Business and Organization Administration, University of the Peloponnese, Kalamata, Greece

[2] Assist. Professor, Department of Accounting and Finance, University of the Peloponnese, Kalamata, Greece

[3] Assoc. Professor, School of Architecture, National Technical University of Athens, Athens, Greece

[4] Professor, Department of Planning and Regional Development, University of Thessaly, Volos, Greece

[5] Assoc. Professor, Department of Management Science and Technology, University of the Peloponnese, Tripoli, Greece

*Corresponding author: e.athanasopoulou@go.uop.gr

Abstract

While numerous studies assess students' awareness of the SDGs, considerably less attention has been paid to how students prioritize individual SDGs and how these priorities may inform university sustainability strategies. The aim of this study is to explore students' prioritization of the SDGs and societal challenges in the post-pandemic context. The authors have designed a questionnaire to measure the knowledge of students regarding the SDGs and their attitude and behavior towards societal priorities. The questionnaire has been disseminated online to students of a Greek multi-campus regional and peripheral university, of different academic backgrounds, who participated anonymously. 577 responses were collected in two waves, 409 in 2022 and 168 in 2025, to validate the initial findings. Quantitative analysis identified the most important SDGs from the students' point of view, which are SDG3 (Good health and wellbeing) followed by SDG 2 (zero hunger). Also, the research documented the level of interest of the students regarding societal challenges. Students emphasized solidarity, public health, and support for vulnerable groups as key post-pandemic policy priorities. No substantial differences were observed between 2022 and 2025. The prominence of health, food security and solidarity suggests that students continue to view sustainable development through the lens of societal resilience and human wellbeing in the post-pandemic era. The findings suggest that students' priorities can provide valuable stakeholder input for sustainability governance and strategic planning in higher education institutions facing rapidly changing societal challenges.

Keywords: Sustainability strategy, SDGs, University students, societal priorities

JEL Classification: I23, Q01, D91, H83

Semantic Data Pollution, AI Governance, and SME Resilience under the EU AI Act

Lamija Lemeš [1]* and Samir Lemeš [1]

[1] University of Zenica samir.lemes@unze.ba

*Corresponding author: lamija.lemes@unze.ba

Abstract

The rapid proliferation of generative Artificial Intelligence (AI) has introduced a systemicvulnerability known as Semantic Data Pollution (SDP), where synthetic, hallucinated, and contextually degraded data contaminates public and private databases. This phenomenoninduces recursive model collapse, threatening European digital sovereignty and compliance with the stringent data governance mandates of the EU AI Act, particularly for resource-constrained Small and Medium-sized Enterprises (SMEs). While massive tech conglomerates possess the capital to clean and verify their data, SMEs are disproportionately vulnerable to legal liability and uncompetitiveness. To bridge this gap, this paper propose a conceptual framework describing the propagation of semantic data pollution within SME information systems. We propose the conceptual middleware architecture called Lightweight Semantic Firewall for SMEs (SME-LSF), a containerized, local-CPU-deployable middleware architecture. The SME-LSF utilizes a cost-effective, three-stage filtering pipeline combining metadata/provenance checks, statistical language profiling (via Zipf's Law and perplexity boundaries), and ontological verification coupled with Retrieval-Augmented Validation (RAV). This framework generates audit-ready JSON-LD compliance ledgers to fulfill EU AI Act requirements. Finally, the paper outlines strategic recommendations for open-source ecosystems, advocating for publicly funded European Data Commons, standardized domain ontologies, and accessible trust toolkits to

preserve digital sovereignty and democratize data pollution mitigation.

Keywords: Semantic Data Pollution; EU AI Act; SME-LSF

From Regional Open Innovation to Interregional Collaboration: The Puglia Open Innovation Platform as a Federated Governance Infrastructure

Daniela Manuela Di Dio [1]* and Silvia Visciano [2]

[1] Ph.D. Student, Complex Systems Engineering, University of Salento

[2] Ph.D.; Regione Puglia s.visciano@regione.puglia.it

*Corresponding author: danielamanuela.didio@unisalento.it

Abstract

To drive real territorial growth, Smart Specialisation Strategies (S3) cannot just live on paper they need concrete operational tools to bring them to life. This study explores how regional Open Innovation (OI) platforms can bridge that gap, focusing on Italy's Puglia Region. Driven by Regional Law No. 4/2025 and aligned with the SmartPuglia 2030 strategy, the Puglia Open Innovation Platform (OIP) successfully blends public policy, community engagement, and digital coordination into a single framework. In doing so, it tackles a systemic flaw shared by many innovation hubs: a fragmented ecosystem where crucial actors, skills, funding, and local needs remain isolated, blocking valuable cross-border partnerships. Using a qualitative case-study

approach backed by ecosystem mapping, benchmarking, and first-hand insights from 142 regional stakeholders, we break down the platform's core engine: its semantic model. By introducing a shared taxonomy for actors, services, and S3 priority domains, this semantic layer acts as a common operational language. It turns high-level strategic priorities into actionable data, ensuring technical interoperability while laying the groundwork for structured matchmaking and network analysis. Puglia's example shows that regional Open Innovation platforms are more than digital portals; they work as vital public governance infrastructures for S3 delivery. However, their real-world impact hinges on institutional capacity, inclusive architecture, and the maturity of local relationships. Ultimately, the paper proposes a scalable blueprint of federated regional platforms linked by compatible semantic layers—offering a practical pathway for cross-border innovation across the Adriatic–Ionian and Western Balkan regions.

Keywords: open innovation; smart specialisation; federated governance; semantic interoperability; knowledge graph.

JEL Classification: O38; R58; H83

Climate Change, Global Supply-Chain Disruptions and the Insurance Industry: Implications for Regional Resilience in the Western Balkans

Damir Mihanović [1]*, Martin Marić[2] and Petra Kurbaša[2]

[1] University North, Croatia

[2] Marko Marulić University of Applied Sciences, Croatia martin.maric@veleknin.hr petra.kurbasa@veleknin.hr

*Corresponding author: dmihanovic@unin.hr

Abstract

This paper analyses how climate change and global supply-chain disruptions are reshaping the risk profile of the insurance industry and why insurers should be treated as strategic actors in regional resilience. The focus is the Western Balkans and the Adriatic-Ionian space, where climate exposure, import dependence, limited fiscal space and relatively low insurance penetration interact. The paper uses a qualitative policy-analysis approach supported by secondary data on global natural-catastrophe losses and a case study of crop and plantation insurance in Croatia between 2019 and 2024. The findings show that climate shocks and supply-chain disruptions reinforce each other through reconstruction-cost inflation, business-interruption exposure, agricultural vulnerability and widening insurance protection gaps. The Croatian case illustrates how a climate-sensitive line of business can quickly become volatile when claims approach or exceed collected premiums. The paper argues that the insurance industry must move beyond the passive compensation of losses toward a broader resilience role: risk modelling, prevention incentives, public-private risk-sharing, parametric insurance and long-term investment in resilient infrastructure. The conclusion proposes policy measures for the Western Balkans, including regional data systems, catastrophe-risk pools, agricultural insurance schemes, supply-chain stress testing and insurer investment in adaptation. The contribution of the paper is to connect climate risk, supply-chain resilience and insurance protection gaps within one regional policy framework.

Keywords: climate change; supply chains; insurance industry; protection gap; regional resilience; Western Balkans; agricultural insurance

The Turkish FDI and Currency Paradox: Institutional Confidence, Currency Volatility, and Comparative Lessons from Poland, the UAE, and Vietnam

Dr. Muhammad Ali Shahzad [1] *

[1] DBA Ottoman Advisory & Research, Istanbul, Turkiye

*Corresponding author: Muhammad.ali@ottomanservices.com

Abstract

Foreign Direct Investment (FDI) is a major driver of capital formation, technology transfer, industrial upgrading, employment creation, and integration into global value chains. Despite its strategic location, large domestic market, diversified industrial base, advanced infrastructure, and formal investment incentives, Türkiye continues to attract lower FDI inflows than its economic potential suggests. This paper examines this contradiction as the Turkish FDI and currency paradox: a condition in which strong locational advantages coexist with persistent investor hesitation caused by currency volatility, policy inconsistency, bureaucratic complexity, and institutional confidence gaps. Using a qualitative comparative case study approach, the paper compares Türkiye with Poland, the United Arab Emirates, and Vietnam, each representing a distinct model of FDI attraction. Poland demonstrates the importance of EU-aligned legal certainty and institutional predictability; the UAE highlights streamlined regulation, free zones, digital governance, and sector-focused investment promotion; while Vietnam illustrates the role of export-oriented industrial policy, manufacturing competitiveness, and policy continuity. Guided by Dunning's Eclectic Paradigm and Institutional Theory, the study draws on secondary data from international organizations, national investment agencies, policy reports, and academic literature. The findings suggest that Türkiye's FDI challenge is not a lack of investment potential, but a credibility gap between policy design and policy implementation. The paper concludes that stronger institutional transparency, stable policy expectations, simplified investment procedures, and renewed confidence in the local currency are essential for improving Türkiye's FDI performance.

Keywords: Foreign Direct Investment, Currency Volatility, Institutional Confidence, Investment Policy

External Shocks and Local Finances: The Impact of the Energy Crisis on the Stability of Public Service Delivery

Jelena Poljašević [1]* and Milica Marić Stokuća [1]

[1] Faculty of Economics, University of Banja Luka, milica.maric@ef.unibl.org

*Corresponding author: jelena.poljasevic@ef.unibl.org

Abstract

Modern economic crises, particularly the recent energy crisis and inflationary pressures, directly reflect on the budget stability of local self-government units, and consequently, on the citizens' quality of life. While rising inflation, on one hand, generates growth in indirect tax revenues (VAT), external shocks, on the other hand, cause a drastic increase in expenditures—primarily through inflated costs of energy, overhead materials, public services, as well as pressure on public sector wage growth. The intensity of these effects varies among local communities, depending directly on their budgetary structure and level of development.The paper analyzes the revenue and expenditure structure, as well as the current (operating) balance of local communities in Republic of Srpska from 2020 to 2025. The research aims to determine the extent to which the energy crisis and inflation (focusing on 2023 and 2024) threatened the stability of local public service delivery. Using the method of budgetary data analysis, municipalities are classified into two categories for comparative purposes: by their level of economic development (developed, medium-developed, and underdeveloped) and by their degree of dependence on VAT as the primary revenue source that grew fastest during the inflationary wave. The results of the study provide insight into fiscal resilience mechanisms and offer recommendations for preserving the continuity of public services under conditions of macroeconomic instability.

Keywords: public services, external shocks, inflation, budget stability, operating balance, local government

Inputs Delivered, Outcomes Deferred: Evaluating State-Funded Technology Transfer in Serbia

Jovana Kojić[1*], Milan Okanović[1], Miloš Milosavljević[1], Sanja Marinković[1] and Valentina Vukmirović[2]

[1] University of Belgrade, Faculty of Organizational Sciences milan.okanovic@fon.bg.ac.rs milos.milosavljevic@fon.bg.ac.rs sanja.marinovic@fon.bg.ac.rs

[2] Institute of Economic Sciences valentina.vukmirovic@ien.bg.ac.rs

[*]Corresponding author: jovana.kojic@fon.bg.ac.rs

Abstract

Public investments in technology transfer have grown significantly in Western Balkan countries on their path toward European Union membership, yet evidence on the effectiveness of such support in transition and developing economies remains scarce. In this process, Serbia has received significant support from international donors, particularly the European Union. This study evaluates the Technology Transfer Programme of the Innovation Fund of Serbia using a mixed-evidence research approach that combines objective measurement of outcomes of 56 funded projects over the period from 2016 to 2025 with a perception survey conducted among 34 project leaders. The analysis revealed three key findings. First, financial resource expenditure and advancement in technological readiness levels do not result in commercialisation, as most projects end without an established partnership with industry or a developed business model. Second, user satisfaction is exceptionally high, but shows no association with actual commercial performance, thus forming a satisfaction paradox in which users measure progress relative to their initial state rather than against expected commercial outcomes. Third, the type of research organisation and the ability of the advisor to establish relevant contacts are the key factors that separate projects with stronger from projects with weaker commercialisation outcomes. The findings call into question the assumption that financial and institutional state support alone is sufficient to achieve commercial outcomes in economies classified as emerging innovators.

Keywords: technology transfer; innovation fund; success evaluation; Serbia; emerging innovators

Does Work from Home Create a Virtual Brain Drain?

Giancarlo Lauto [1]*, Gouya Harirchi[1], Francesca Visintin[1] and Alexia Ciroi[1]

[1] University of Udine gouya.harirchi@uniud.it francesca.visintin@uniud.it alexia.ciroi@uniud.it

*Corresponding author: giancarlo.lauto@uniud.it

Abstract

The diffusion of remote work has fundamentally altered the relationship between labour markets and geographical boundaries, enabling firms to access talent without requiring physical relocation, paving the way to the macro-level phenomenon of virtual brain drain. This paper focuses on the individual-level dimension of the phenomenon and examines how work-from-home (WFH) arrangements shape individual job choice. Drawing on employer branding theory and the means-end chain framework, we conceptualize job choice as a hierarchical process in which job attributes generate anticipated benefits that are evaluated against higher-order values. We test this framework using a choice-based conjoint experiment conducted on a sample of 500 ICT professionals working in Italy. Respondents repeatedly chose among hypothetical job offers varying along six attributes: salary, mode of work, organizational climate, autonomy, training intensity, and company type.WFH arrangements are a major driver of job choice, but their importance depends critically on workers' current work mode. For individuals already engaged in hybrid or fully remote work, WFH emerges as the dominant attribute, often outweighing substantial salary increases. For in-presence workers, by contrast, salary remains the primary determinant of choice. Importantly, fully remote workers display a significantly stronger preference for multinational employers than local firms, even when controlling for salary, although this attribute has a secondary role in job choice.

Overall, the study shows that virtual brain drain is not primarily driven by wage differentials or explicit intentions to exit national labour markets, but by the reconfiguration of attribute-benefit-value chains in individual job choice under remote work conditions.

Keywords: job choice; work-from-home; human capital

JEL Classification: [JEL not provided]

From Tourist Narratives to Mobility Analytics: A Reproducible Framework for Destination Planning

Claudio Mantero [1]*, Andres Rodriguez [2] and Luigi Dell'Olio [2]

[1] Horários do Funchal, Transportes Públicos S.A., Funchal, Portugal; Department of Transports and Technology of Project and Processes, Universidad de Cantabria, Santander, Spain

[2] Department of Transports and Technology of Project and Processes, Universidad de Cantabria, Santander, Spain

*Corresponding author: claudio.mantero@alumnos.unican.es

Abstract

Tourist mobility is a key determinant of destination performance, influencing accessibility, visitor experience, and the spatial distribution of tourism impacts. However, its analysis remains constrained by fragmented data sources and a lack of reproducible methodologies capable of transforming qualitative travel information into operational planning metrics. In particular, narrative-based data collected through airport surveys is rarely exploited beyond descriptive analysis.

This study develops a transparent and reproducible mixed-methods framework that converts qualitative travel narratives into structured mobility indicators. The empirical application focuses on Madeira (Portugal), drawing on a three-year airport survey (2021–2023) comprising 1,862 tourists and 3,632 reported trips. The methodology integrates qualitative coding, geocoding of trip sequences, network-based routing using OpenStreetMap, and the estimation of mode-specific travel times and costs based on explicitly documented parameters and tariff structures.

The resulting dataset enables the computation of network-constrained distances, travel times, and generalized costs across transport modes, supporting both descriptive analysis and behavioural modelling. Findings reveal the structural dominance of car-based mobility, alongside significant time penalties associated with public transport, shaping tourist movement patterns and accessibility within the destination.

Beyond its empirical insights, the study contributes a replicable methodological protocol that bridges qualitative and quantitative approaches, effectively "opening the black box" of tourism mobility analysis. The framework supports evidence-based policy design, including modal-shift strategies, integrated ticketing systems, and accessibility improvements, offering decision-relevant insights for sustainable destination management, particularly in complex and geographically constrained contexts.

Keywords: Tourist mobility; Airport survey data; Narrativetometrics; Mixed-methods framework; Travel time estimation; Generalized cost modelling; Discrete choice models; Destination planning

JEL Classification: C81; R41; L83; Z32, D12

Evaluation of Fundamental Analysis and the Piotroski F-Score Strategy in the Greek Stock Market

Georgios Mavridoglou [1]*, Dimitrios Sakalidis [2] and Panagiotis Charalampakis [3]

[1] Assistant Professor, Department of Accounting and Finance, University of the Peloponnese

[2] MSc, Department of Accounting and Finance, University of the Peloponnese

[3] PhD, Independent Researcher

*Corresponding author: ge.mavridoglou@go.uop.gr

Abstract

This study evaluates the effectiveness of fundamental analysis, specifically the Piotroski F-score stock selection strategy, within the Greek stock market. Focusing on large-capitalization companies of the Athens Stock Exchange (ASE), the research investigates whether the utilization of published accounting data can distinguish financially strong from weak companies, leading to systematic abnormal returns. The methodology synthesizes findings from the examination of the FTSE/Large Cap index stocks for the period 2012–2025, as well as from a targeted sample of 27 listed companies out- side the banking sector for the period 2015–2023. The analysis of historical returns demonstrates that investing in stock portfolios with a high F-score (7–9) significantly outperforms benchmark indices. Specifically, the high F-score strategy on the FTSE/Large Cap index records an average annual outperformance of 22.18%. Simultaneously, high F-score portfolios offer 10.42% higher returns compared to the corresponding low F-score (0–3) portfolios. The combined application of the F-score with valuation multiples, such as the P/E (Price- to-Earnings) and P/BV (Price-to-Book Value) ratios, further improves stock selection. A portfolio combining a high F-score with low P/E and P/BV achieves an average annual return of 36.14%, significantly exceeding the 11.80% return of the ASE General Index for the corresponding period. The statistical significance of these return differences is confirmed through parametric and non-parametric tests, such as the Paired T-Test and the Wilcoxon Signed-Rank Test. These findings challenge the full application of the Efficient Market Hypothesis (EMH) in the Athens Stock Exchange. In conclusion, the Piotroski F-score strategy, especially when accompanied by fundamental valuation indicators, constitutes a powerful, statistically valid, and practically exploitable tool for identifying opportunities in the Greek capital market.

Keywords: Piotroski F-score; Fundamental Analysis; Athens Stock Exchange; FTSE/Large Cap Index; P/E and P/BV Ratios

JEL Classification: M41, G11, G14, G12

Digital Platforms as Drivers of Territorial Change: Cross-Border Tourism Dynamics in the Adriatic–Ionian Region

Andjelina Marić Stanković [1]*, Danijel Pavlović[2] and Marija Bratić[3]

[1] Department of Economic Sciences, State University of Novi Pazar, Vuka Karadžića 9, 36300 Novi Pazar, Serbia, amstankovic@np.ac.rs

[2] Academy for Hospitality, Tourism and Wellness, 11000 Belgrade, Serbia, dadeck@gmail.com

[3] Department of Geography and Tourism, Faculty of Science and Mathematics, University of Niš, Višegradska 33, 18000 Niš, Serbia, marijabraticturizam@gmail.com

*Corresponding author: [corresponding author not provided]

Abstract

In recent years, digital transformation has significantly reshaped the way tourist destinations are created, promoted, and experienced. Platforms such as Airbnb, Booking.com, and other digital intermediaries are no longer merely accommodation booking channels; they have become influential actors shaping the spatial organization of tourism, the visibility of destinations, and local and regional development processes. In this context, this paper examines the role of digital platforms in shaping new territorial dynamics within the Adriatic–Ionian region, with particular emphasis on their contribution to the development of cross-border tourism. The Adriatic–Ionian region represents a distinctive area characterized by diverse models of tourism development, varying levels of institutional integration, and pronounced regional disparities. While some coastal destinations have become globally recognized tourism hubs, many border and peripheral areas continue to face limited visibility and underutilized development potential. In this context, digital platforms may serve as a mechanism for strengthening connections between destinations and generating new tourism flows. At the same time, however, they may also contribute to a further concentration of tourism in locations that are already well-established, attractive, and easily accessible.The primary objective of this paper is to examine how digital platforms influence the spatial distribution of tourism activities and whether they contribute to strengthening cross-border tourism cooperation in the Adriatic–Ionian region. The research is based on a comparative analysis of selected tourism areas, drawing on a review of the relevant scientific literature, strategic documents, development policies, and available statistical data on tourism flows and accommodation capacities. Particular attention will be devoted to the question of whether digital platforms contribute to more balanced territorial development or, conversely, deepen existing disparities between established tourism centers and less visible regions. The paper is based on the assumption that digital platforms should not be viewed solely as technological innovations, but rather as new actors that participate in shaping tourism spaces, regional relations, and development strategies.The contribution of this paper lies in connecting two contemporary research areas the digitalization of tourism and territorial development through an analysis of the specific context of the Adriatic–Ionian region, which encompasses both European Union member states and Western Balkan countries undergoing the process of European integration.

Digital Transformation of CRM: AI Integration and Data Governance Challenges in Southeast Europe

Marija Jaćimović [1]*

[1] Junior Product Specialist

*Corresponding author: marija.jacimovic@asee.io

Abstract

The contemporary business environment is characterized by the increasing application of digital technologies, accelerated digital transformation, a strong focus on customers and their needs, as well as the growing use of artificial intelligence (AI). This paper analyzes the application of AI in Customer Relationship Management (CRM) systems and its impact on improving customer relationships and generating greater benefits for enterprises in the Western Balkans. The study aims to examine how AI integration contributes to more efficient collection and analysis of customer data, service personalization, and communication optimization. The paper employs methods of analysis and synthesis of relevant literature, comparative analysis of existing solutions and practical examples, along with a historical approach to present the evolution of CRM systems and the gradual introduction of AI into business processes. The research highlights the advantages that AI brings to CRM systems, as well as the challenges arising during its implementation, with particular emphasis on the specificities of Southeast European enterprises, including fragmented data infrastructure, legacy systems, lack of digital skills, and regulatory issues. The results show that integrating AI into CRM systems can significantly enhance understanding of customer needs, increase customer satisfaction, and reduce operational costs. However, successful implementation requires organizational culture change, investment in workforce training, and development of robust data management strategies tailored to the regional context.

Keywords: digital transformation, customer relationship management (CRM), artificial intelligence, data management, Southeast Europe, service personalization

JEL Classification: O33, M31, M15, O52, P20

Applying the EU partnership principle in enlargement countries: cross-border cooperation as a laboratory of multi-level governance

Pietro Celotti [1], Dea Hrelja [1], Arianna Mori [1]* and Lisa Legrand [1]

[1] T33 S.r.l. - Socio unico, p.celotti@t33.it d.hrelja@t33.it a.mori@t33.it l.legrand@t33.it

*Corresponding author: a.mori@t33.it

Abstract

EU cross-border, transnational and interregional cooperation programmes between Member States and EU candidate countries increasingly function as instruments of EU integration. This thesis reflects the experience of candidate countries - Albania, Bosnia and Herzegovina, Georgia, Moldova, Montenegro, North Macedonia, Serbia, Türkiye and Ukraine - in European Territorial Cooperation (Interreg) programmes, highlighting how these frameworks support institutional learning and familiarisation with EU governance practices.

Under EU cohesion policy, the partnership principle requires the involvement of national, regional and local authorities, economic and social partners, civil society and academia throughout the policy cycle, from programme design to implementation, monitoring and evaluation. Participation in Interreg governance therefore exposes administrations and non-governmental actors in candidate countries to practices of multi-level governance, consultation, coordination and transparent decision-making.

Evidence from Interreg programmes suggests that cooperation along the EU's external borders creates structured arenas for more inclusive territorial governance, including in Ukraine despite its exceptional circumstances. Shared decision-making across borders and governance levels fosters familiarity with EU regulatory standards while strengthening the role of nonnational actors. At the same time, persistent constraints remain, including centralised governance systems, uneven civil society participation, limited administrative capacity.

By embedding candidate countries in shared governance structures with Member States, European Territorial Cooperation acts as a preparatory space for future regional policy management, supporting the strengthening of administrative capacity and the progressive alignment with the Union's regulatory and programming frameworks.

Keywords: Multi-level governance; European Territorial Cooperation; EU enlargement

JEL Classification: R58, H77

Mapping the Diffusion of Artificial Intelligence in Italian Firms: Evidence from Public Funding Data

Giannini Valentina[1]*, Iacobucci Donato[2], Orci Martina[2], Perugini Francesco[2] and Vianello Gabriele[2]

[1] Università Telematica Pegaso

[2] Università Politecnica delle Marche

*Corresponding author: v.giannini@univpm.it

Abstract

Artificial Intelligence (AI) is increasingly recognised as a pervasive and cross-sectoral technology, reshaping firms' processes and competitive dynamics. While AI adoption has grown rapidly, empirical evidence largely relies on surveys, offering limited insight into firms' actual AI use. This study contributes to the literature by mapping AI adoption among Italian firms using population-level administrative data, focusing on a national context characterised by a high prevalence of small and medium-sized enterprises.

Based on the Diffusion of Innovation framework, the analysis investigates which AI technologies and application domains are most prevalent and how their diffusion evolves over time. The empirical study is based on an original dataset built from the Italian State Aid Register (2014–2025), identifying AI-related projects through a multi-stage text-mining procedure applied to project titles and descriptions. Beneficiary firms are matched with AIDA–Bureau van Dijk data to enrich firm-level information.

The results reveal heterogeneous and evolving patterns of AI adoption, spanning data-driven analytics, general-purpose AI, and emerging domains such as generative AI, robotics, and natural language technologies. The findings highlight sectoral and territorial disparities and provide policy-relevant insights on the role of public support in shaping AI diffusion.

Keywords: Artificial Intelligence (AI), Technology Diffusion, Application Domains, Public Funding Data, Technology Mapping

The Influence of Banks' Sustainability Reporting on Their Contribution to Achieving the Goals of Sustainable Development

Stela Radivojević [1] *

[1] MSc in Economics

*Corresponding author: steloni.radivojevic@gmail.com

Abstract

In 2015, the member states of the United Nations (2015) adopted the 2030 Agenda, which sets out 17 Sustainable Development Goals (SDGs), creating a necessary framework within which countries are expected to work toward eradicating poverty, reducing inequality, and combating climate change. Banks and other financial institutions have been identified as key actors that can significantly contribute to the accelerated implementation of the 2030 Agenda.

The subject of this paper is non-financial reporting by banks, specifically sustainability reporting with a particular focus on the provision of information related to risks. The aim is to examine whether banks in Bosnia and Herzegovina have aligned their operations with the principles of sustainable development and how they are preparing to comply with the latest requirements of the Sustainability Reporting Directive. It also explores how banks inform the users of their reports about the ways they manage climate-related risks.

The research was conducted using a structured questionnaire sent to authorized representatives of banks. It included banks in Bosnia and Herzegovina that are part of a banking group, have assets exceeding one billion BAM, and more than 300 employees. The research confirmed that information provided in non-financial reports, especially those related to climate risk management, enables insight into whether a bank's operations are aligned with the achievement of sustainable development goals. The application of sustainability standards positively influences the implementation of various sustainability activities as well as the consideration of ESG factors in bank operations. The results of the research show that banks are continuously analyzing and improving their social impact through strategic alignment with the needs of individuals and society, indicating a high level of awareness regarding social responsibility and its integration into business strategy.

ESG factors play a relevant role in managing key financial risks, but there are differences among banks in the degree of formalization and application of this approach. Banks that more seriously consider the impact of ESG risks on liquidity and credit risk are also those that proactively conduct stress testing scenarios.

Keywords: non-financial reporting, sustainable development goals, ESG, risk management, sustainability standards

JEL Classification: G21

The Role of the Technology in Simplifying the Auditing Process

Flamur Kelmendi [1] and Rolanda Mula [1*]

[1] [Affiliation not provided] kelmendiflamur556@gmail.com

[*]Corresponding author: ro.landaa@hotmail.com

Abstract

This paper examines the growing role of technology in simplifying and modernizing auditing processes. The main objective is to analyze how modern technologies—such as audit software, artificial intelligence, data analytics, and automation—affect the efficiency, transparency, and accuracy of the auditing process.

The methodology applied combines theoretical and practical approaches. A literature review and scientific meta-analysis of traditional and digital auditing were conducted. In addition, a questionnaire was developed as a data collection instrument to analyze auditors' opinions regarding the impact of technology on simplifying the auditing process.

The findings indicate that the use of technology in auditing significantly reduces the time requiredfor data processing, enables faster identification of anomalies, and improves the quality of auditors' decision-making. Increased transparency and a reduction in human errors were also observed.

The practical implications of the study include concrete recommendations for organizations aiming to integrate technology into their auditing functions in order to achieve greater efficiency and lower operational costs. The originality of the paper lies in the combination of theoretical analysis and a concrete case study, providing a clear overview of the practical application of technology in auditing.

Keywords: audit, information technology, automation, efficiency

From Microdata to Macro Forecasts: A Comparative Study of Aggregation Strategies and Benchmark Models in Social Protection Spending

Andrej Ševa [1] * and Bojan Baškot [1]

[1] Faculty of Economics, University of Banja Luka

*Corresponding author: andrej.seva@ef.unibl.org

Abstract

Simple benchmark models, such the seasonal naïve method, exponential smoothing (Error, Trend, Seasonality – ETS), autoregressive and ARIMA models, and the Theta method, are the standard reference points against which more complex forecasting approaches are judged, yet the conditions under which they remain competitive, and those under which richer information overtakes them, are incompletely understood in applied public finance. We study this using monthly child benefit expenditure in Republika Srpska (Bosnia and Herzegovina), a short aggregate series of 103 observations underpinned by 1.18 million individual payment records. We compare four strategies of increasing informational richness: top-down, bottom-up, a feature-enriched aggregate in which machine-learning models receive microdata-derived predictors, and hybrid minimum-trace (MinT) reconciliation. We perform this under expanding-window cross-validation in which every predictor is observable at the forecast origin. Because the payment calendar produces recurring near-zero months that destabilise percentage errors, we also compare four treatments of these anomalies and report weighted and scaled errors (WAPE, MASE). Two findings emerge. First, simple benchmarks remain preferable: ETS is the most accurate model under every treatment (WAPE 13.9%, MASE 0.755 under exclusion), MinT reconciliation is statistically indistinguishable from it, and a seasonal autoregression is competitive while a plain AR(1) is the least accurate model. Second, transaction-level microdata, once restricted to origin-available information, add no predictive value at the aggregate level: no feature-enriched model enters the Model Confidence Set. The choice of anomaly treatment is itself decisive for correct model ranking.

Keywords: benchmark forecasting; exponential smoothing; forecast reconciliation; machinelearning; social protection expenditure

JEL Classification: C22; C53; H53; H75

Greening the Hospitality Supply Chain: VET Innovation, Green Skills, and Regional Economic Resilience for the Adriatic–Ionian Region and the Western Balkans

Simone Pagni [1] * and Carla Sabatini [1]

[1] Fondazione Toscana Sostenibile s.pagni@ftsnet.it

*Corresponding author: carla@ftsnet.it

Abstract

The Adriatic–Ionian Region and the Western Balkans face severe geo-economic challenges, where geopolitical shifts and inflation disrupt regional value chains. Tourism and hospitality are vital economic pillars here, yet highly vulnerable to external resource volatility.

This paper argues that the twin transition cannot rely solely on top-down regulations; it also requires a bottom-up approach centered on developing practical green skills within micro, small, and medium-sized enterprises (MSMEs). According to recent updates from the European Centre for the Development of Vocational Training (CEDEFOP), greening occupational profiles through Vocational Education and Training (VET) is a core driver for resilience, affecting up to 40% of current jobs.

Drawing on the Erasmus+ GreenHost Project (grant agreement number: 2024-1-PL01-KA220-VET-000254911), this study analyses how localised green toolkits and gamified curricula can empower hospitality staff to realign supply chains. Results indicate that workforce-led green procurement shifts consumption toward localised, short-circuit models, shielding regional economies from transnational logistical bottlenecks.

This approach aligns with Topic 2 of the EU Strategy for the Adriatic and Ionian Region (EUSAIR) - Sustainable Tourism Pillar, which identifies green capacities as strategic tools to mitigate geopolitical uncertainty.Ultimately, the paper positions the GreenHost framework as a scalable model for the Adriatic–Ionian Region and Western Balkans convergence, demonstrating how bottom-up environmental sustainability translates into macroeconomic resilience.

Keywords: Regional resilience; Green Skills, Chain disruption

JEL Classification: R11, J24, L83, O18

Raising Public Awareness and Digitization in the Context of Sustainable Waste Management

Boris Novarlić [1] *, Jovo Ateljević [1], Draženko Bjelić [2] and Scott E. Crosset [3]

[1] University of Banja Luka, Faculty of Economics jovo.ateljevic@ef.unibl.org

[2] University of Banja Luka, Faculty of Technology drazenko.bjelic@tf.unibl.org

[3] Centre at Toggle Learning Fairlie, Scotland, United Kingdom scott@cetap.ba

*Corresponding author: boris.novarlic@student.ef.unibl.org

Abstract

Countries in transition do not have a clear mechanism regarding adequate and timely disposal of waste. Lack of financial resources and insufficient education of citizens represent the primary problem in building a sustainable waste management system. On the other hand, insufficiently developed communal infrastructure and the absence of advanced technological solutions constitute a potential obstacle in the transition of the communal sector. The Green Agenda of the European Union represents an extremely ambitious plan for climate neutrality, with a special emphasis on a low-carbon and sustainable economy until 2050. Bosnia and Herzegovina (BiH) should use its chance to join European streams with a special goal, which is a healthy living environment and the reduction of pollutants resulting from waste disposal. The aim of this paperis to encourage the role of citizens in raising public awareness and digital solutions in improving the system for proper separation of waste at the point of origin. The active role of citizens in building a sustainable system for comprehensive waste management is the first step in the circular economy process. The case study presented in this paper emphasize the importance of continuous public education in fostering more efficient resource utilization, as opposed to the conventional linear practice of waste disposal without intermediate treatment. Raising environmental awareness, using digital platforms and interactive digital systems, promotes the utilization of secondary raw materials from waste and adaptation to European directives on carbon neutrality in the long term.

Keywords: public awareness; circular economy; decarbonization; digital technologies; Green Agenda