Leader2050 Conference

Future Competencies in the Face of Sustainable Development Challenges, Systemic Resilience, and Ecological and Socio-Economic Crises

Book of Abstracts

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List of Abstracts

Ceren Dirik Ayvaz, Kırıkkale University, Türkiye

Cem Menten, Hacettepe University, Türkiye

Title: Assessing the Quality of Energy Investments in the Energy Transition: A Regional Analysis

Abstract:

This study is based on the view that regional energy transition performance should be evaluated not only by the volume of total clean energy investment, but also by the composition of the investment portfolio. Accordingly, the aim of the study is to determine the extent to which different regions direct their energy investments toward cleaner, more transition-aligned, and more sustainable areas, and to compare regions in terms of the quality of their energy investments. In this study, the quality of energy investments is defined as the extent to which investment portfolios are directed toward cleaner and more transition-compatible areas. The analysis covers seven regions: North America, Central and South America, Europe, Africa, the Middle East, Eurasia, and Asia Pacific. The study uses data for the 2022–2024 period, which are not based on forecasts and contain relatively fewer zero values; the dataset is compiled from the International Energy Agency's World Energy Investment 2025 datafile. Since the investment scales of the regions differ considerably, the variables are transformed into share and intensity indicators by dividing them by each region's "total investment (billion USD, market exchange rates)" to improve comparability. In this context, "fossil fuels share", "coal (unabated) generation share", "oil and natural gas (unabated) generation share", and "oil and gas upstream intensity" are treated as cost-oriented criteria, while "clean fuels share", "nuclear share", "renewables share", "battery storage share", "electricity networks share", "energy efficiency share", "other end-use share", and "transitional fossil fuels intensity" are treated as benefit-oriented criteria. Given that energy investment quality is a multidimensional concept involving both cost- and benefit-oriented criteria, a multi-criteria decision-making (MCDM) framework is considered appropriate for the analysis. In this context, the correlation coefficient and standard deviation (CCSD) method is used to determine criterion weights. For ranking the regions, the measurement of alternatives and ranking according to the compromise solution (MARCOS) method is preferred. The findings show that

Europe ranks first across all three years – 2022, 2023, and 2024 – while North America maintains its position in second place. Asia Pacific and Central and South America exhibit similar performances in the middle group, whereas Eurasia, Africa, and especially the Middle East are ranked in the lower positions. Notably, although Asia Pacific has approximately twice the total investment volume and clean energy investment volume of Europe in all years, the MCDM analysis results show that Europe ranks first every year. This finding indicates that the quality of energy investments depends not only on how much is invested in clean energy, but also on how the overall investment portfolio is composed. In this respect, the study offers a comparative framework for evaluating regional energy investments in terms of quantity as well as the alignment of investment composition with energy transition goals.

Key words: energy investments, energy transition, clean energy, multi-criteria decision-making, CCSD, MARCOS

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Małgorzata Baran, Civitas University, Poland

Title: Employee Well-Being and Work Engagement – an Employee-Centered Perspective

Abstract:

The aim of the study was to examine the relationship between employee well-being and work engagement, with particular attention to the role of workplace conditions in shaping this linkage. Employee well-being was conceptualized as a key mechanism through which selected dimensions of organizational climate may enhance work engagement and support sustainable employee development in the workplace. Additionally, the study assessed whether the strength of these relationships varied depending on employees' job tenure and organizational size. Theoretical background Drawing on the psychological climate framework, the study considered six workplace dimensions-supportive management, role clarity, contribution, recognition, self-expression, and challenge – as factors associated with employee well-being and, consequently, with higher work engagement. This perspective assumes that employee well-being is not only an individual outcome but also an important pathway linking work environment characteristics with positive work-related functioning.

The cross-sectional study involved 1,052 employees. Employee well-being was measured with a highly reliable instrument ($\alpha = 0.91$), and work engagement was assessed using a standardized scale. Mediation analyses were conducted to examine the extent to which employee well-being explained the relationship between workplace factors and work engagement ($a \cdot b$ effect). Moderation analyses were then performed to determine whether job tenure and organizational size strengthened or weakened these relationships.

Across all models, employee well-being significantly mediated the relationship between workplace conditions and work engagement, while significant direct effects were also maintained. The highest explained variance in work engagement ($R^2 = 0.508$) was observed in the model including challenge. Job tenure revealed differentiated patterns: for example, in the group with 3–5 years of tenure, the indirect effect of supportive management on work engagement via employee well-being was statistically insignificant, whereas it remained significant in the other groups. Organizational size also moderated the strength of the well-being–engagement relationship, with stronger effects observed in small enterprises. Conclusions / Discussion The study confirms that employee well-being is a key mechanism underlying work engagement. The findings suggest that organizations seeking to enhance engagement and support sustainable employee development should simultaneously invest in employee well-being and account for contextual factors such as tenure and company size. From a practical perspective, the results highlight the importance of a holistic HR approach that integrates supportive work conditions with employee-centered well-being initiatives.

The article offers a novel perspective by applying a moderated mediation model to explain how employee well-being translates into work engagement and how this relationship is shaped by workplace context. The findings contribute to the literature on positive organizational functioning and provide practical implications for HRM and organizational development.

Key words: employee, well-being, work engagement, psychological climate

Track Session: HRM-SIW: Human Resource Management for a Sustainable and Inclusive Workplace

Sıdıka Başçı, Ankara Yıldırım Beyazıt University, Türkiye

Title: Climate Change Impacts on Traditional Food Systems and Health in Türkiye

Abstract:

Climate change poses escalating risks to food security, health, and livelihoods, particularly for local communities whose subsistence systems are closely tied to climate-sensitive ecosystems. Rising temperatures, shifting precipitation patterns, droughts, and extreme weather events increasingly disrupt traditional food systems, weaken nutritional security, and intensify health vulnerabilities. Despite their disproportionate exposure, these communities remain underrepresented in climate–health research and insufficiently addressed in policy frameworks. This study investigates the impacts of climate change and climate-induced disasters on traditional food systems, dietary practices, and health outcomes in selected communities in Türkiye. Focusing on regions dependent on dryland agriculture, pastoralism, and customary food practices, the research examines how environmental stressors such as water scarcity, soil degradation, and declining agricultural productivity threaten both food availability and the continuity of traditional knowledge systems. Adopting a comparative, multi-site research design, the project analyses how similar climate shocks generate divergent outcomes across different ecological and socio-economic contexts. Methodologically, the study integrates modified grounded theory with an adapted life cycle impact assessment framework, enabling the identification of locally defined priorities, system boundaries, and resilience mechanisms. Rather than framing these groups solely as vulnerable, the research recognizes them as active agents of resilience, documenting their contributions to food system continuity and community wellbeing during climate crises. The findings aim to inform policy by identifying context-specific, inclusive, and culturally grounded strategies for climate adaptation, disaster risk reduction, and food security. By linking empirical insights to knowledge-to-policy and knowledge-to-innovation pathways, the study provides actionable recommendations to support more resilient, equitable, and locally responsive food and health systems.

Key words: Climate-Sensitive Health Risks, Nutrition and Food Systems, Community-Based Adaptation

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Ghazwa Basma, Jan Evangelista Purkyně University in Ústí nad Labem, Czech Republic

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Karim Suhail Al Souk, **Abdulmannan Rouhani & Valentyna V. Pidlisniuk**, Jan Evangelista Purkyně University in Ústí nad Labem, Czech Republic

Title: Waste-Derived Amendments for Brownfield Phytomanagement under Arundo donax Establishment

Abstract:

Arundo donax L. (giant reed) is a rhizomatous, high-biomass perennial proposed as a suitable candidate for the phytomanagement of contaminated soils due to its stress tolerance, active rhizosphere, and biomass valorization potential. The North Bohemian region of the Czech Republic comprises numerous post-industrial and post-mining brownfields. The high cost of site regeneration encourages the use of phytomanagement approaches. This study aims to evaluate the establishment of A. donax on a construction-impacted brownfield in Chomutov, Czech Republic. Biochar and a recycled digestate-based organic amendment ("separát"), both considered waste-derived amendments, applied alone or in combination, were evaluated for their capacity to support soil functional recovery and improve soil health indicators within a brownfield phytomanagement strategy. To this end, a field experiment was established, consisting of 12 subplots arranged in a randomized design with four treatments: plant-only control, biochar, separát, and biochar + separát. Soil physicochemical (soil pH, nutrient availability, and cation exchange capacity) and biological (enzyme activities, microbial activity) parameters were determined in the laboratory at the beginning and end of the first growing season. Plant morphological parameters (fresh weight, dry weight, and dry matter content) and physiological parameters (Fv/Fm and Qy [Y(II)]) were also assessed. Preliminary results demonstrated positive effects of Arundo donax and the amendments on the investigated soil parameters. Agrochemical analyses indicated increased available P and K in amended treatments compared with baseline conditions, while soil pH remained relatively stable. Plant morphological parameters indicated greater biomass production in amended plots, with the highest mean fresh and dry weights recorded under biochar, followed by separát and biochar + separát, compared with the control, while dry matter content remained similar across treatments (approximately 65–67%). Plant physiological measurements showed stable Fv/Fm values across treatments (≈0.79–0.81), whereas Qy (Y(II)) tended to increase in amended plots, suggesting improved photosynthetic efficiency. Soil health was assessed using nematode

communities. Biochar showed the strongest effect on nematode community structure, with higher abundances of fungivores, omnivores, and predators, whereas bacterivores and plant-parasitic nematodes remained unaffected. This suggests a shift toward a more structured soil food web, with enhanced ecological functioning. Overall, the findings indicate that these waste-derived amendments can support brownfield phytomanagement and fit within a circular economy approach by contributing to soil functional recovery, biomass production, and soil and ecosystem resilience.

Key words: amendments, Arundo donax, brownfield, circular economy, phytomanagement, soil health indicators

Track Session: OWV: Organic Waste Valorisation within the Circular Economy Pathway

Carlotta Benedetti, University of Macerata, Italy

Title: The evolving role of the university in providing up-to-date sustainable skills: the case of Florida Gulf Coast University

Abstract:

This research explores the evolving role of higher education institutions as pivotal agents of change for local cohesion and regional sustainable development, with a specific focus on social sustainability. While many universities limit their sustainability efforts to research and infrastructure, this study highlights the importance of experiential and practice-based learning as a means to foster community cohesion and social justice. Through the analysis of the Florida Gulf Coast University (FGCU)'s commitment, the paper analyzes how institutional tools, such as the "Service Learning" program, among others, integrate students into the local fabric of the area, in particular, the Southwest Florida one. Utilizing qualitative methodology, based on literature reviews and face-to-face interviews with key academic actors, the research demonstrates that these "living laboratory" approaches not only enhance students' career readiness and ethical grounding but also directly address regional needs and improve the community in which they are enforced. FGCU provides an example in which sustainability is conceived as a tool for the creation of social justice. The findings suggest that by institutionalizing such practices within strategic plans, universities can effectively bridge the gap between academia and society, equipping future decision-makers with the necessary skills to tackle complex global and local sustainability challenges.

Key words: higher education for sustainability; experiential learning; service learning; social sustainability; university-community engagement

Track Session: SDG-LA: Sustainability Literacy in Action: Education, Engagement, and Behavioral Change

Agnieszka Bera, WSB Merito University in Wrocław, Poland

Title: Contemporary Expectations Towards Leaders: Exploring Preferred Leadership Characteristics

Abstract:

Modern organizations increasingly require leaders to combine effective management with strong interpersonal and communication skills. Previous research suggests that employee expectations of leaders are evolving from a primarily task-oriented approach toward more relational and developmental leadership behaviors. The purpose of this study is to analyze expectations of superiors based on selected dimensions of managerial behavior related to communication, trust, support, development, and work organization. The aim of the study was to identify the most valued leadership traits and examine potential differences between selected groups of respondents. The results may contribute to a better understanding of preferred leadership behaviors in contemporary work environments and provide practical implications for leadership development and management education.

Key words: leadership expectations; managerial behavior; relational leadership; employee support; leadership development

Track Session: Poster Session

Petra Berg, University of Vaasa, Finland

Title: Mythologized Progress, Systemic Vulnerability: A Marketing Systems Perspective on Security Risks in the Nordic Energy Transition

Abstract:

The Nordic countries are global frontrunners in sustainability transitions, yet their accelerating shift toward electricity-based digitalized energy systems (EBDES) is generating systemic vulnerabilities that current governance frameworks fail to address. This paper examines how the twin transition - the simultaneous pursuit of sustainability and digitalization in energy systems - reshapes strategic security risks in the Nordic energy sector and argues that a marketing systems perspective reveals dynamics that conventional technical and policy analyses overlook. We conceptualize the digitalized energy system as a transforming marketing system (Layton, 2007; 2019), an adaptive configuration of actors, institutions, infrastructure, and exchange relationships through which energy is produced, distributed, and consumed. As this system undergoes reconfiguration through IT/OT convergence, smart grids, and distributed energy resources, it creates dependencies that expose the entire system to cyber-enabled disruptions, hybrid threats, and cascading failures. From a macromarketing standpoint (Mittelstaedt et al., 2014), these cybersecurity vulnerabilities constitute systemic externalities of the twin transition, e.g. negative consequences generated by the market system's own transformation that are not internalized by current governance arrangements. Drawing on Breitschopf et al.'s (2023) multi-system interactions framework and empirical evidence from Finland, Sweden, and Norway, the paper identifies three systemic tensions: (1) digital dependency outpacing security governance, (2) workforce and competency gaps at the IT/OT boundary, and (3) the risk that security measures imposed without attention to justice concerns undermine the social legitimacy of the transition. We argue that dominant discourses of technological progress and digital modernization render these vulnerabilities invisible framing digitalization as inherently beneficial while obscuring the systemic risks that accumulate at the interfaces between energy, ICT, and governance systems. We conclude that resilience and sustainability are co-constructed outcomes inseparable from the institutional and discursive conditions of the marketing systems in which they are pursued. A marketing systems lens attentive to externalities, provisioning failures, and the discursive construction of market realities offers a necessary complement to engineering and policy approaches for understanding how security leadership must evolve in the context of sustainability transitions.

Key words: marketing systems; macromarketing; systemic externalities; twin transition; energy cybersecurity; Nordic energy systems; sustainability transitions; hybrid threats

Track Session: SRTS: Sustainability, Resiliency and Total Security in the Evolution of Electricity-Based Digitalized Energy Systems

Anna Bernaciak, Poznan University of Economics and Business, Poland

Wojciech Trempała, Kazimierz Wielki University, Poland

Title: Eco-Reproductive Anxiety, Anthropocentric Worldview, and Climate-Motivated Childlessness Among Polish Adults

Abstract:

Climate change is increasingly invoked in public discourse as a motivation for avoiding parenthood, yet the psychological profile of individuals who endorse climate-motivated childlessness remains poorly understood. Drawing on ecopsychology, terror management theory, and ecological identity frameworks, this study examines the prevalence, correlates, and predictors of climate-motivated childlessness (CMC), operationalised as endorsement of the statement "I do not have / do not want to have children" for climate-related reasons, in a large Polish adult sample (N = 1,018). Results reveal a counterintuitive finding: CMC is predicted not by ecocentrism but by anthropocentrism (B = +0.231, $p < 0.001$), ecological doom (B = +0.572, $p < 0.001$), and powerlessness as a climate emotion (B = +0.192, $p = 0.009$). Ecocentrism shows a weak negative association in bivariate analysis ($r = -0.069$, $p = 0.027$) and is non-significant in multivariate models. Endorsers of CMC report lower life satisfaction (M = 3.04 vs. 3.24; $t = -2.97$, $p = 0.003$) and substantially higher ecological doom (M = 3.59 vs. 2.80; $t = +13.12$, $p < 0.001$; $d = 0.95$) than non-endorsers. Climate-specific fear and ecocentric nature valuation are unrelated to CMC. These findings suggest that CMC reflects a generalised existential pessimism rooted in anthropocentric doom, a perception of civilisational threat, rather than ecological grief or nature-connected concern. The results contribute to ongoing debates about eco-reproductive anxiety, BirthStrike movements, and the psychological mechanisms linking climate change to intimate life decisions.

Key words: eco-reproductive anxiety; climate-motivated childlessness; anthropocentrism; ecological doom; birth-strike; ecopsychology; terror management theory; Poland; pronatalism

Track Session: PA-GTU: Psychological Antifragility: Growing Through Uncertainty

Grzegorz Borkowski, Ewelina Ząb & Helena Dudycz, Wroclaw University of Economics and Business, Poland

Title: AI Project Risks as a Probability Amplifier of Systemic Vulnerability

Abstract:

Artificial intelligence systems have become embedded across nearly all sectors of the economy, increasingly functioning as critical components of digital infrastructures. While risk management in AI development is typically addressed at the project level, focusing on issues such as data quality, bias, model drift, or human-in-the-loop oversight, far less attention has been paid to how these localized risks may escalate beyond organizational boundaries. This conceptual paper argues that AI project risks can operate as probability amplifiers of systemic vulnerability. Seemingly contained design shortcomings, may not remain confined to a single project once AI systems are deployed at scale. In digital environments where identical models are integrated into multiple applications, platforms, or services, a single weakness can be replicated across organizations. As a result, risks that originate locally may become synchronized, increasing the likelihood of broader disruptions and undermining systemic resilience. The paper develops a conceptual explanation of how AI project risks may escalate into broader systemic exposure. Rather than treating such risks as isolated technical or ethical failures, it analyzes the mechanisms through which they scale, replicate, and interact across interconnected digital environments. An illustrative scenario from the IT sector shows how a weakness embedded in a widely deployed model can simultaneously affect multiple organizations, increasing the likelihood of cascading disruptions.

Key words: AI project risk; systemic vulnerability; probability amplification; digital infrastructure; cascading disruptions

Track Session: PASR: Modelling Probability Amplifiers of System Risk

Djula Borozan, Josip Juraj Strossmayer University of Osijek, Croatia

Burak Pirgaip, Hacettepe University, Türkiye

Title: Climate Risk and Corporate Payout Policy: Evidence from Dividends and Share Repurchases

Abstract:

This study investigates how climate change risk shapes corporate payout policies, with a particular focus on share repurchases as a flexible, discretionary channel of capital distribution. Drawing on signaling, stakeholder, agency, trade-off, and resource-based theories, we examine whether and how climate-related uncertainty alters firms' willingness and capacity to return cash to shareholders. Using a panel of publicly listed U.S. non-financial firms over the period 2004–2022, we employ complementary empirical frameworks – including left-censored Tobit and double-hurdle models augmented with control-function approaches – to separately identify the decision to distribute payouts and the intensity of those payouts once initiated. By doing so, we distinguish between extensive-margin and intensive-margin effects of climate risk on payout behavior, while addressing endogeneity concerns and unobserved heterogeneity. Across specifications, we find that climate change exposure does not significantly affect the likelihood of initiating payouts but consistently and economically reduces the intensity of share repurchases once firms decide to repurchase shares. This constraining effect is particularly pronounced among smaller and financially constrained firms, firms operating in climate-sensitive industries, and firms with weaker environmental performance, and it persists during macroeconomic downturns. In contrast, dividend payments appear largely insulated from climate risk, reflecting their stronger commitment and reputational anchoring. Taken together, the findings highlight that climate risk primarily operates through discretionary payout channels rather than committed ones, reshaping capital allocation priorities under environmental uncertainty. The results provide new evidence on the role of climate risk in corporate financial policy and offer important implications for regulators, investors, and managers concerned with financial resilience in a climate-exposed economy.

Key words: climate change exposure; exogenous shocks; share repurchases; dividends; corporate finance; U.S. firms

Track Session: PASR: Modelling Probability Amplifiers of System Risk

Laurenc DeVita, Research Centre for System Risk Management, United States

Title: Uncertainty for everyone; a brief but broad discussion of the devil in the details

Abstract:

Our task of managing for a difficult future would be simple if we knew what was going to happen. For this reason, the process of prediction is central to all efforts toward resilience and sustainability. However, there are problems in the process: the future is elusive; we try to study something that has not happened yet. This discussion of uncertainty highlights the nature of the devil in our details.

Key words: uncertainty; prediction; resilience management; sustainability planning; future-oriented decision-making

Track Session: SSR-ST: Systemic Security Risks in Sustainability Transitions – Geopolitical, Informational and Strategic Dimensions

André Dorsman, Vrije Universiteit Amsterdam, the Netherlands

Wim Westerman, University of Groningen, the Netherlands

Title: Energy grids in 2026

Abstract:

The European energy transition requires major investment in electricity grids. This paper discusses the case of TenneT, the Dutch state-owned transmission system operator, and its activities in Germany. It shows that the valuation of grid infrastructure differs substantially from an accounting perspective and a finance perspective. The paper identifies four main issues: limited upside potential due to regulated prices, long-term investment obligations combined with uncertain future demand, restrictions on public funding, and political and regulatory risk in cross-border state-owned infrastructure. It also questions whether investments in TenneT Germany are attractive for private and institutional investors, including pension funds. The paper concludes that cross-border grid investments are strongly shaped by regulation and politics, making their financial risk higher than accounting results may suggest.

Key words: electricity grid investment; energy transition; regulated infrastructure; transmission system operators; political and regulatory risk

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Robin van Emous & Rytys Krušinskas, Kaunas University of Technology, Lithuania

Title: Digitalization and Environmental Impact in the EU

Abstract:

Over the last centuries, the global impact of digitalization and its impact on energy systems has been transmissible. By following this change we aim to further explore the relation between digitalization and energy dynamics at both country and firm level. By incorporating a wide set of variables we estimate the impact of digitalization on energy intensity at the country level and explore the moderating influence of renewable energy on the environmental impact of digitalization. At the firm-level we contribute to the existing body of literature by exploring sectoral differences, implement a new proposed measurement for digitalization and explore differences between EU and global firms. Fixed effects OLS regression is employed to estimate the impact of digitalization at the country level. Additionally, we estimate the moderating role of renewable energy on the relation between digitalization and carbon emissions. We constructed a firm-level sample for which we estimate the sectoral impact of digitalization on energy intensity and scope two carbon emissions, for which we also explore the differences between EU and global firms. To add robustness to the results we employ panel quantile regression on the country-level relation between digitalization and carbon emissions to analyze the differences between countries with either high or low levels of energy intensity. Our main results show that ICT sector size and relative business expenditures on R&D in the ICT sector (BERD) can lower energy intensity, for which the mitigating impact is stronger for countries with higher energy intensity. Our second set of results provides evidence that the renewable energy payoff is higher for countries with a higher intensity for ICT sector size, digital capital, and BERD. The sectoral results provide evidence that digitalization can lower energy intensity and scope two emissions for several sectors.

Key words: digitalization; energy intensity; renewable energy; carbon emissions; EU firms

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Bartosz Fortuński, Opole University, Poland

Title: The Impact of European Union Trade with the United States, China, Russia, and India on Actual CO_2 Emissions

Abstract:

EU energy policy until 2020 focused on three main objectives, one of which was to reduce greenhouse gas (GHG) emissions by at least 20% compared to 1990 levels. Among greenhouse gases, carbon dioxide (CO_2) is the most significant contributor to global emissions and is widely recognized as a global environmental challenge. This article analyzes the impact of trade between the European Union and the United States, China, Russia, and India on actual CO_2 emissions over the period 2000–2020.

Based on the Current–Open CO_2 Emissions model, the study demonstrates that foreign trade between the EU and its major partners – the United States, China, Russia, and India – had a significant impact on both their own and the EU's CO_2 emissions during the analyzed period. The research framework is grounded in the circular flow model, allowing for a comprehensive assessment of emissions embodied in international trade.

The results indicate that trade relations with these economies significantly affected actual CO_2 emissions in all countries included in the study. This effect is explained by four key factors: gross domestic product (GDP), the share of exports in GDP, the share of imports in GDP, and officially reported CO_2 emissions. These variables contributed to substantial differences between official (production-based) and actual (consumption-based) CO_2 emissions across all analyzed countries.

Key words: international trade; CO2 emissions; embodied emissions; consumption-based emissions; EU trade policy

Track Session: SRTS: Sustainability, Resiliency and Total Security in the Evolution of Electricity-Based Digitalized Energy Systems

Agnieszka Gawor, WSB Merito University in Wrocław, Poland

Karolina Dyrla-Mularczyk & Daria Cerazy, WSB Merito University in Wrocław, Poland

Title: Aesthetic Competence of Leaders as a Humanistic Resource for Future Leadership: Conceptualization and Empirical Exploration

Abstract:

Aesthetic Leadership conceptualizes leadership as a sensory, emotional, and meaning-making practice rather than a purely analytical process (Hansen, Ropo, & Sauer, 2007). Building on research in organizational aesthetics, which highlights the role of sensory cues, aesthetic perception, and symbolic processes in shaping organizational action (Baldessarelli, Stigliani, & Elsbach, 2022), this study introduces aesthetic competence as a humanistic psychological resource relevant to leaders navigating complexity and uncertainty.

Aesthetic competence is defined as a multidimensional capacity including sensory awareness, embodied and intuitive perception, aesthetic sensitivity, narrative and metaphorical sensemaking, and the ability to shape symbolic aspects of organizational life. Although aesthetic perspectives on leadership are well developed conceptually (e.g., Duhamel, Niess, & De Geuser, 2023), quantitative tools assessing individual differences in leaders' aesthetic functioning are lacking. To address this gap, the study develops the Aesthetic Competence Scale for Leaders (ACS-L).

The research explores relationships between aesthetic competence, emotional intelligence (Jaworowska & Matczak, 2001), and generalized self-efficacy (Juczyński, 2001) as an indicator of perceived agency. Emotional intelligence is proposed as a mechanism linking aesthetic competence with leaders' adaptive functioning in relational and symbolic complexity.

Data are being collected using a survey-based design among leaders from business, education, NGO, and public sectors. Analyses include exploratory psychometrics and mediation models. The presentation will focus on the conceptual framework, scale development, and preliminary findings.

Key words: aesthetic competence; aesthetic leadership; organizational aesthetics; emotional intelligence; leadership scale development

Track Session: AMMA: Humanistic Approach to Future Leadership - Art of Management and Management of Art

Behrooz Gharleghi, Najla Shafighi & Sara R. Ramzani, GISMA University of Applied Sciences, Germany

Title: Green Innovation and Technology Readiness: Sustainable Development in the Global South

Abstract:

The aim of this paper is to empirically examine the impacts of green innovation and technological readiness on the level of CO2 emission in the Global South. The data spans from 2008 to 2021 for 23 developing countries in Latin America, Africa, Asia, and East Asia. Pooled Mean Group is applied to find such impacts. The empirical findings reveal that in the long run green innovation has a significant negative impact and ICT trade has a positive impact on CO2 emissions in developing countries. In order to observe the impact of technological readiness and green innovation, four interaction terms are examined: technological readiness and 'high technology export', technological readiness and 'trade in low carbon technology products', green innovation and 'high technology export', and green innovation and 'trade in low carbon technology products'. The results show that the interaction terms associated with technological readiness have a significant and negative impact on CO2 emissions while the green innovation interactions found to have a positive impact. Such long run impacts show different patterns in developed nations, i.e., only technological readiness and ICT trade are found to be significant and negative, and none of the interaction terms were significant. The policy implication of our findings implies that Southern countries should integrate more of technological related factors for environmental protection for long run. The findings further suggest that developed nations must slow down the emission pace or boost activities which are related to green innovation.

Key words: CO2 emission; ICT trade; FTRI; sustainable development; global south

Track Session: SDG-LA: Sustainability Literacy in Action: Education, Engagement, and Behavioral Change

Lachezar Grudev, University of Applied Sciences Zwickau, Germany

Title: International Trade and Balance of Payments Deficit: The Inflation as the Missing Link

Abstract:

My paper claims that the current US policy is based on prejudices that originate in mercantilist thinking, which treats trade as a strategic zero-sum game. This thinking has dominated American academia since the 1970s through a fallacious application of game theory to explain competition between domestic and foreign companies. My paper demonstrates that competition means to compete for customers and that, in order to make profits, entrepreneurs should convince the customers that they can serve their needs in the best possible way. By maximizing their profits, entrepreneurs promote such a distribution of production among different countries that brings about production with the lowest opportunity costs. These profits and thus the allocation of resources can be affected by the central bank's policy. By steering the interest rate, the central bank is interested in lowering the burden of government expenditures and securing the satisfaction of the government's demand for capital. Governments' continuous increase in demand for capital creates inflation, which does not allow those companies that do not have government contracts to maintain or renew their capital. The inability to substitute for new capital decreases labor productivity and thus increases labor costs. The stronger increase in prices compared to productivity is responsible for the permanent balance of payment deficits. The recent surge in gold price is an indication of this inflation, from which only Russia benefits. So, the problem of the US balance of payments is not somewhere abroad, but exactly in her own house.

Key words: international trade; balance of payments; inflation; mercantilism; central bank policy

Track Session: RE-OP: Resilient Europe: an Ordoliberal Perspective

Betul Hande Gursoy Haksevenler & Mehmet Ali Yildir, Marmara University, Türkiye

Title: Urban Climate Governance in Istanbul: Identifying Systemic Challenges and Policy Pathways through District-Level Analysis

Abstract:

Urban climate governance is increasingly recognized as a critical dimension of systemic risk in large metropolitan areas. This study examines Istanbul as a case of uneven climate capacity across district municipalities. Through a climate capacity index developed for Istanbul's 39 district municipalities, the research reveals differences in climate change mitigation and adaptation performance and examines how these differences affect the Istanbul Metropolitan Municipality's policy alignment with its 2050 carbon neutrality target. To explain the quantitative analysis findings, the study is supported by qualitative data obtained from semi-structured interviews with representatives from public institutions, local governments, civil society organizations, and the private sector. The interview findings show that the capacity differences observed at the district level are closely related not only to technical or financial resources but also to lack of coordination between central and local governments, data sharing problems, institutional capacity inequalities, and fragmentation in the governance structure. The study reveals that these governance problems function as systemic risk-increasing factors for urban systems and emphasizes that the current governance structure is a fundamental determinant limiting the effectiveness of climate policies. In this context, policy pathways that strengthen multi-level governance, enable data integration, and support local capacity are proposed. This study offers a holistic assessment framework that integrates quantitative and qualitative methods to not only measure the performance of urban climate governance but also reveal the structural problems shaping that performance.

Key words: urban climate governance, systemic risk, multi-level governance, Climate Capacity Index, stakeholder interviews, Istanbul

Track Session: SSR-ST: Systemic Security Risks in Sustainability Transitions – Geopolitical, Informational and Strategic Dimensions

Batoul Hamade, Josef Trogl & Ghazwa Basma, Jan Evangelista Purkyně University in Ústí nad Labem, Czech Republic

Princella Lumor, JUNIA Science and Technology for a Sustainable Future, France

Lucie Oravová, Slavomir Adamec, Andrea Vernerová & Karim Suhail Al Souki, Jan Evangelista Purkyně University in Ústí nad Labem, Czech Republic

Title: Cultivation of Perennial Ryegrass and White Clover on Brownfield Soils: Effects on Soil Microbial Activity and Biomass Production for Animal Feeding

Abstract:

The use of herbaceous plants cultivated on brownfield soils represents a promising strategy for combining soil restoration with biomass production for animal feeding. Perennial ryegrass (Lolium perenne) and white clover (Trifolium repens) are widely utilized in phytoremediation due to their supporting functional traits and cost-effectiveness. Ryegrass is valued for its rapid establishment, extensive root system, and ability to enhance microbial degradation of soil contaminants, while white clover contributes through biological nitrogen fixation, adaptability to nutrient poor conditions, and high-quality biomass production. Both species exhibit fast growth, high biomass yield, and the capacity to improve soil structure and stimulate microbial activity, making them effective for restoring contaminated soils. A fully randomized design experiment with four replicates per treatment was conducted under a semi-controlled conditions using brownfield soil collected from Chomutov (Czech Republic) spiked with contaminated soil. The carried-out study evaluated the effects of perennial ryegrass (Lolium perenne) and white clover (Trifolium repens) cultivation, combined with soil amendments (1% biomass ash and biochar, applied individually), on the soil microbiology. Soil samples were analyzed for key enzymatic activities (protease, phosphatase, β-glucosidase, and arylsulphatase), fluorescein diacetate hydrolytic activity (FDHA), and selected agrochemical parameters. Unplanted soil served as a control to assess the individual and combined effects of vegetation and amendments. The results showed a significantly higher microbial activity in the soil cultivated with perennial ryegrass and white clover compared to the control soil. The applied amendments helped improving both microbial activity and thus soil quality. In conclusion, plantation of Lolium perenne and Trifolium repens, especially in combination with soil amendments, positively influences soil properties and supports sustainable land management.

Key words: Trifolium repens, Lolium perenne, soil amendments, soil quality, enzymatic activity

Track Session: OWV: Organic Waste Valorisation within the Circular Economy Pathway

Eva Hoke & Romana Heinzová, Tomas Bata University in Zlín, Czech Republic

Title: Future logistics competence as a factor in the competitiveness and resilience of supply chains

Abstract:

The article focuses on the identification and analysis of future competencies for the logistics profession in a dynamically changing socio-economic environment. Technological progress, globalisation, digitalisation, and the development of artificial intelligence are fundamentally transforming the form of logistics processes, work organisation, and requirements for worker qualifications. In this context, there is a growing need for new educational approaches, leadership development and systematic preparation of young people, especially members of Generation Z, for the conditions of Industry 5.0. The aim of the article is to define the key hard and soft competencies of future logistics and assess their importance for the competitiveness of human capital and the resilience of supply chains. Methodologically, the study is based on a questionnaire survey of university graduates in logistics and crisis management. The empirical part of the article is based on the analytical report Logistics 2040, which serves as a framework for developing future scenarios for the logistics sector. The result of the research is competency matrices for individual scenarios that reflect the requirements of Industry 5.0 and serve as a tool for both education and personnel practice, as well as for strategic human resource management.

Key words: future logistics competencies; supply chain resilience; Industry 5.0; logistics education; human capital competitiveness

Track Session: LC-CC: Leadership Competences in the Face of Complex Challenges

Muhammad Iqbal, National University of Modern Languages, Pakistan

Title: A Cognitive-Motivational-Relational Model of Performance Review Affect and Justice

Abstract:

The study aims to examine the growing emphasis on implementing an effective organizational performance management system that highlights the important role of managers in performance review meetings. The study includes the cognitive flexibility of managers, the affective feelings of employees, and their perceptions of justice toward performance reviews. The scenario-based, seven-wave online experiment involved 146 Pakistani undergraduates. During the experimental activities (T1 through T4), we collected data using scenario-based readings (R1 and R2) and three videos (V1, V2, and V3) extracted from a short film. The data analysis approach included the use of the general linear model (GLM). The results indicate that managers who are more flexible in their thinking during performance discussions help employees feel that things are fairer and create more positive feelings. The importance of psychological adaptability in managerial roles, particularly in performance feedback contexts, has implications for employee engagement and their alignment with organizational goals. The study also emphasizes the significance of a single performance review touchpoint in shaping key work-related outcomes.

Key words: performance review; cognitive flexibility; organizational justice; employee affect; managerial feedback

Track Session: HRM-SIW: Human Resource Management for a Sustainable and Inclusive Workplace

Karolina Jakubowska, WSB Merito University in Warsaw, Poland

Title: From “Sage on the Stage” to “A Guide on the Side”. The Transition of the Teacher’s Role in Modern Education

Abstract:

This study examines the evolution of the teacher’s role from a traditional to a modern perspective. In the past, the educator was considered the primary source of knowledge and the superior who shared his wisdom and experience. In a teacher-centred approach, students remained passive and fully relied on the instructor. The modern teacher's role has significantly reshaped. Nowadays, teachers are positioned as learning facilitators, mentors, and advisors who promote creativity, critical thinking, and collaboration. In a contemporary, student-centred approach, the focus is on learners' emotional well-being, lifelong learning, and digital literacy. Since the accessibility of information has increased, thanks to the internet and artificial intelligence, the educator has stopped being the main giver of knowledge in the learning process. AI enables a tailored learning experience to provide flexible learning opportunities to everyone. In addition, a teacher is required to be proficient with digital technologies and to know how to purposefully incorporate them into their teaching. Additionally, the study highlights teacher leadership as a practical response to the realities of today’s education. Teacher leaders build trust across the school community, promote collaboration, and support long-term school improvement. As modern education is no longer just about what students know, but how they handle their emotions, by prioritizing well-being, schools create an environment where curiosity can thrive without the paralysing fear of failure. In conclusion, the shift from a teacher-centred to a student-centred approach is not undermining the teacher’s authority but a promotion to a more advanced, greater value social role.

Key words: teacher role transformation; student-centered learning; teacher leadership; digital literacy; artificial intelligence in education

Track Session: AI-ESG: Artificial Intelligence, Education and the Sustainable Development Goals

Bogna Janik, WSB Merito University in Poznań, Poland

Title: Evaluation of Corporate Sustainability of Pension Investment Funds

Abstract:

The study examines the corporate sustainability risk and three indicators: environmental, social, and governance, to analyze the distributions of US equity pension fund groups differentiated by market capitalization (small-, mid-, and large-cap) and investment style. The data was obtained on Sustainalytics, and the analysis covers two periods: the first from January 1 to December 31, 2024, and the second from January 1 to December 31, 2025.

Cluster analysis was employed to identify groups of retirement funds with similar characteristics within a dataset of 1,147 funds, and to identify differences or similarity patterns across two periods, as measured by the Corporate Sustainability Score (CSS), which reflects the level of risk, and Environmental (E), Social (S), and Governance (G) Scores, which reflect the progress of indicated goal achievement.

The results indicate that small-cap funds exhibit the highest risk, as measured by the CSS indicator, regardless of their dominant investment style, across both analyzed periods. During these periods, the risk associated with small-cap funds increased, whereas it decreased for large-cap funds.

Environmental standards were more strongly adhered to by large-cap and mid-cap funds. In turn, mid-cap and large-cap funds achieved the highest values in the social and governance areas; however, a downward trend was observed for large-cap funds.

Key words: corporate sustainability risk; pension investment funds; ESG scores; cluster analysis; equity fund capitalization

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Radosław Jarema, WSB Merito University in Gdańsk, Poland

Title: Inclusive Talent Management: A Systematic Review

Abstract:

For over two decades, talent management has been continuously present in the academic literature, representing one of the fastest-growing areas of scholarly activity within the discipline of management studies. Both the academic community and organizational practice now widely acknowledge the key role of talent management in building sustainable competitive advantage. At the same time, talent management has become an area of increasing importance for an ever-wider range of organizations.

The literature periodically proposes new approaches to talent management, some of which appear to be dead ends for the field, while others have attracted growing attention from both business and non-business organizations. One of the proposed concepts that is gaining increasingly widespread application across various types of organizations is inclusive talent management, offering an attractive opportunity to identify and utilize the individual talents of all employees.

Through a systematic review, the paper aims to examine whether this approach has already become one of the mainstream practices in talent management, or whether it is losing ground compared to other talent philosophies and practical solutions.

Key words: inclusive talent management; talent management philosophy; systematic literature review; employee potential; sustainable competitive advantage

Track Session: HRM-SIW: Human Resource Management for a Sustainable and Inclusive Workplace

Muhammad Kamran, Civitas University, Poland

Tahir Mumtaz Awan, University of Sargodha, Pakistan, School of Business Sciences, University of Witwatersrand, South Africa

Mudassira Sarfraz, Civitas University, Poland

Muhammad Abdul Rauf Shah, University of Mianwali, Pakistan

Title: Digital Labor, Flexible Work Practices, and Urban Sustainability in Poland: Examining the Mediating Role of Digital Innovation

Abstract:

Purpose The study aims to explore the intricate relationship between digital labor, flexible work-life, and urban sustainability, focusing on the mediating role of digital innovation. As digital transformation reshapes work environments and urban ecosystems, understanding how digital labor and work flexibility influence sustainability is crucial. This research seeks to bridge gaps in existing literature by examining how digital innovation facilitates sustainable urban development, ensuring economic, social, and environmental benefits. Methodology A quantitative research approach was employed to ensure a systematic analysis of the proposed relationships. Data were collected through an online survey administered to individuals residing in Poland. A two-stage approach was adopted for model testing using Partial Least Squares Structural Equation Modeling (PLS-SEM) with a Variance-Based (VB) method. Findings The results confirm all hypothesized relationships, demonstrating that digital labor and flexible work-life positively impact urban sustainability, with digital innovation acting as a critical mediator. The findings highlight the transformative potential of digital innovation in fostering sustainable urban environments by enhancing economic efficiency, social inclusivity, and environmental responsibility. The study highlights the role of digital technologies in facilitating work-life balance and optimizing urban resources, ultimately contributing to sustainable urban growth. Implications The research has both theoretical and practical implications. Theoretically, it extends the literature on digital labor and innovation by incorporating urban sustainability as a key outcome. Practically, the findings offer valuable insights for policymakers, urban planners, and business leaders, guiding strategies to enhance digital infrastructure, support flexible work arrangements, and promote sustainability-oriented digital innovations. The study emphasizes the need for integrated policies that leverage digital transformation to create resilient and sustainable urban ecosystems.

Key words: digital labor, flexible work-life, digital innovation, urban sustainability; structural equation modelling

Track Session: HRM-SIW: Human Resource Management for a Sustainable and Inclusive Workplace

Mehmet Baha Karan, Hacettepe University, Türkiye

Title: The Narrative Foundations of Energy Competition in the Eastern Mediterranean: Türkiye, Greece, Cyprus, and the Great Powers

Abstract:

This article examines Eastern Mediterranean natural gas not as a material energy resource, but as a multi-layered political narrative reshaping regional geopolitics. Contrary to the widespread assumption that hydrocarbon discoveries trigger new conflicts, the study argues that pre-existing disputes, particularly between Türkiye, Greece, and the Republic of Cyprus, including those in Northern Cyprus, are rearticulated, intensified, and legitimized through the energy discourse. Drawing on neoclassical realism, securitization theory, and the geoeconomic-narrative approach, the article demonstrates that natural gas has become strategically important primarily through discursive and institutional processes rather than based on economic feasibility.

The analysis shows that, despite high extraction costs, infrastructure constraints, and long-term demand decline caused by the global energy transition, Eastern Mediterranean gas has consistently been framed as a "game-changing" element. This discursive inflation has served as a political tool for internal mobilization, hardening foreign policy, and alliance management. While regional actors instrumentalized energy discourses for internal legitimacy and external bargaining, major powers – particularly the United States and the European Union – tolerated and selectively reinforced these discourses not as real solutions to energy security problems, but as low-cost tools for managing regional competition.

The findings show that energy-focused tensions in the Eastern Mediterranean cannot be resolved solely through technical projects or infrastructure initiatives. Instead, securitized discourses that transform limited energy resources into symbols of existential threat and strategic inevitability must be changed. By highlighting the political work performed by energy discourse, the article contributes to the energy geopolitics literature by shifting the focus from material resources to the discourses that define their strategic meanings.

Key words: energy geopolitics; Eastern Mediterranean; securitization; energy discourse; neoclassical realism

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Tekiner Kaya, Nevsehir Haci Bektas Veli University, Türkiye

Title: Strategic Evaluation of Logistics Performance in G20 Economies Under Uncertainty: A Stochastic Approach

Abstract:

Logistics has long evolved beyond being merely a transportation activity, becoming a strategic lever that determines the competitive advantage of nations in the global trade arena. Effective supply chain management, streamlined customs processes, infrastructure quality, and digital traceability are pivotal elements directly influencing a country's integration capacity into global value chains. In this context, the Logistics Performance Index (LPI), published biennially by the World Bank, serves as a fundamental benchmark for comparing national logistics ecosystems. However, LPI data are survey-based, reflecting the subjective perceptions of logistics professionals and inherently containing margins of error. Particularly for G20 economies, which represent over 80% of global trade, analyzing the underlying dynamics and sensitivity of logistics performance can offer critical insights to decision-makers. The primary objective of this study is to re-evaluate the logistics performance of G20 countries through a mathematical model that accounts for potential data deviations and uncertainties in decision-maker preferences. While traditional Multi-Criteria Decision-Making (MCDM) methods typically rely on deterministic data inputs and subjective criteria weights, this research aims to integrate systemic uncertainty as an intrinsic part of the model. By seeking answers to the question, "Which G20 country is a logistics leader under which criteria weights and with what probability?", the study intends to compare national logistics profiles on a more robust ground. The latest World Bank LPI 2023 report is utilized as the dataset for the research. The analysis incorporates six core components: Customs, Infrastructure, International Shipments, Logistics Competence, Tracking & Tracing, and Timeliness. Methodologically, the Stochastic Multicriteria Acceptability Analysis (SMAA-2) which is recognized as a powerful tool for decision-making under uncertainty is preferred. To model the inherent uncertainty of survey-based data, 5% error margin is assumed for each performance score. Furthermore, to eliminate subjectivity in preference information, a missing preference information approach is adopted, and a Monte Carlo simulation with 10,000 iterations covering all possible weight combinations is performed. The analysis aims to yield three primary sets of findings for G20 countries. First, Rank Acceptance Indices (RAI) will be used to calculate the probability of each country occupying specific rank positions. This will determine, for instance, the probability of a country remaining in the top three despite 5% fluctuations in data, rather than relying solely on its raw score. Second, through Central Weight Vectors (CWV), typical criteria weight profiles that drive each country to its best performance will be identified. This will reveal whether a country's success is infrastructure-oriented or process-oriented. Finally, the statistical significance of the resulting rankings will be measured

using Confidence Factors. This study shifts the evaluation of G20 logistics performance from a deterministic approach to a stochastic dimension. The results provide decision-makers with a probabilistic perspective on vulnerabilities within logistics systems and areas with high development potential. The unbiased and sensitive analysis results provided by the SMAA-2 method can serve as a guide for drafting national logistics master plans and prioritizing strategic investment decisions.

Key words: Logistics Performance Index (LPI), G20, SMAA-2, Monte Carlo simulation, uncertainty, decision making

Track Session: PASR: Modelling Probability Amplifiers of System Risk

Przemysław Kitowski, WSB Merito University in Gdańsk, Poland

Title: Resilience of Global Supply Chains: Strategic Storage vs Just-in-Time Logistics in Wartime Conditions

Abstract:

Global supply chains have been widely optimized according to lean logistics and Just-in-Time (JIT) principles, prioritizing efficiency, cost reduction, and minimal inventory levels. However, recent geopolitical tensions and wartime disruptions have exposed structural vulnerabilities in highly optimized logistics systems, particularly within critical sectors such as pharmaceuticals and energy. These developments have renewed interest in the role of strategic storage and redundancy within supply chain design.

This study presents a structured conceptual and literature-based analysis of supply chain resilience under wartime conditions. The research is based on a systematic review of scholarly and policy literature addressing lean logistics, national security logistics, disruption dynamics, and resilience strategies. Particular attention is devoted to disruption mechanisms affecting critical supply chains, including transport interruptions, production bottlenecks, and demand shocks, as well as vulnerabilities associated with maritime chokepoints such as the Strait of Hormuz, the Suez Canal, and the Red Sea region.

Rather than reporting empirical results, the paper develops a conceptual framework that contrasts Just-in-Time logistics with strategic storage approaches in the context of high-impact disruptions. The proposed framework integrates insights from existing literature on redundancy, stockpiling strategies, and digital supply chain visibility. The study also identifies key research gaps and outlines directions for future empirical investigation concerning resilience metrics, cross-sector dependencies, and coordination between civilian and national security logistics systems.

Key words: supply chain resilience; strategic storage; Just-in-Time logistics; wartime disruptions; critical supply chains

Track Session: Poster Session

Małgorzata Kluska-Nowicka & Agnieszka Springer, WSB Merito University in Poznań, Poland

Marzena Kluska-Maier, U.S. Air Force Institute of Technology, USA

Title: Equality and Inclusivity Climate and the Sequential Process of Workplace Violations: The Moderating Role of Employee Knowledge

Abstract:

Purpose: The aim of this article is to empirically verify the relationship between a climate of equality and inclusivity in an organization and the occurrence of interpersonal violations of varying intensity, with particular emphasis on the mechanism of escalation of minor violations into more serious forms and the role of procedural knowledge as a potential moderator of these relationships. The study addresses a research gap regarding the integration of an equality-oriented climate, microaggressions, and more serious violations into a single empirical model, considering the specific nature of rare and binary forms of abuse in the higher education environment.

Methodology: The study was based on quantitative survey data collected from 526 employees at five universities. Multi-item scales were used to measure the climate of equality and inclusivity, procedural knowledge, and first- and second-degree violations. The measurement structure was verified using confirmatory factor analysis. Relationships between constructs were analyzed using correlation analyses and regression models of mediation and moderation, with particular attention to the sequential nature of violations and rare events with low occurrence rates.

Findings: Confirmatory analysis confirmed the validity of the operationalization of all constructs under study. The results of structural analyses showed that a higher-rated climate of equality and inclusivity is significantly associated with a lower frequency of first-order violations, which in turn are a strong predictor of second-order violations. No significant moderating effects of procedural knowledge were found either in the relationship between the climate of equality and first-degree violations or in the relationship between first- and second-degree violations. Mediation analysis, however, revealed a full mediating effect, indicating that the impact of an egalitarian climate on more serious interpersonal violations is realized exclusively through the reduction of microaggressions and first-order violations.

Research limitations/implications: The study relied on self-report data, which may entail risks of subjective perceptual distortions and methodological common variance. The cross-sectional nature of the data precludes unambiguous conclusions regarding the directions of causal relationships between the climate of equality and inclusivity, first-order violations, and more serious interpersonal violations. An additional limitation is the rarity of events comprising the VIO II construct, which largely consists of binary indicators, thereby limiting the

variance of the variable and the stability of estimates for complex effects, particularly and interaction effects. The use of latent reliability measures (tetrachoric alpha) allowed for an adequate assessment of measurement consistency; however, the distribution characteristics of this variable may hinder the generalization of results. The lack of significance of the moderating effects of procedural knowledge should be interpreted with caution, as it may be related both to the measurement properties of the dependent variable and to the fact that the dynamics of the escalation of serious violations may be more strongly determined by situational and structural factors not included in the model. Furthermore, the study's focus on the higher education sector limits the generalizability of the results and points to the need for replication in other types of organizations.

Theoretical contribution: The article makes a theoretical contribution to research on the climate of equality and inclusivity by proposing and empirically verifying a sequential model of the escalation of interpersonal violations, in which microaggressions and first-degree violations serve as a key mediating mechanism. The study's findings specify that the impact of an equitable climate is realized primarily at the level of everyday microinteractions, whereas escalation to more serious violations is structural and is not modified by individual procedural knowledge. Practical implications: The study's findings indicate that strengthening the experienced climate of equality and inclusivity constitutes an effective strategy for reducing minor interpersonal violations, which – if left unaddressed – can escalate into more serious forms of abuse. The findings underscore the importance of preventive measures focused on everyday organizational norms and practices, rather than solely on responding to extreme cases. This set of results can support the design of equality and prevention policies in both higher education and other organizational sectors.

Originality/value: The originality of the article lies in the integration of literature on the climate of equality and inclusivity, microaggressions, and the escalation of interpersonal violations into a single empirically tested sequential model. The study adds value by distinguishing between low- and high-intensity violations and by including rare, binary forms of abuse in the quantitative analysis. An additional contribution is the empirical testing – rather than mere assumption – of the moderating role of procedural knowledge at various stages of the process, which allows for a more precise determination of its significance in models explaining norm-violating behavior in organizations.

Key words: equality and inclusion climate; workplace microaggressions; first-order and second-order violations; procedural knowledge; workplace misconduct escalation

Track Session: GBL-NP: Gender Balance in Leadership – New Perspectives on Management in Times of Socio-Economic Challenges

Agnieszka Kotala, WSB Merito University in Wrocław, Poland

Title: Energy Price Forecasting with Statistical Methods, Machine Learning, and Neural Networks: Implications for Corporate

Abstract:

This article addresses the issue of electricity price forecasting as a key factor influencing cost risk in enterprises. The aim of the study is to assess the effectiveness of selected statistical methods, machine learning algorithms, and neural networks in short- and medium-term energy price forecasting and to identify the implications of these forecasts for cost risk management in organizations. The study utilizes a comparative approach, encompassing classical statistical models, machine learning methods, and models based on artificial neural networks capable of modeling time series. The analysis was conducted using historical data from the Polish energy market, taking into account macroeconomic variables and seasonal factors. The article emphasizes that integrating various modeling approaches can lead to more effective energy cost risk management in enterprises. The study's conclusions have significant implications for financial management practices and energy cost hedging strategies, particularly in the context of the growing volatility of energy markets and the challenges of the energy transition.

Key words: energy price forecasting; machine learning; neural networks; energy cost risk; Polish energy market

Track Session: AI-ESG: Artificial Intelligence, Education and the Sustainable Development Goals

Weronika Kowal & Joanna Hołub-Iwan, Military University of Land Forces (Kościuszko), Wrocław, Poland

Title: The influence of commanders' cognitive models on team management processes and effectiveness

Abstract:

The aim of the article is to present the role of cognitive models (reasoning) as an important factor influencing leadership effectiveness in military command. An important goal of the article is also to identify different cognitive models. The study is based on the Theory of Mental Self-Government developed by Robert J. Sternberg, which assumes that thinking styles reflect preferred ways of organizing cognitive activity and solving problems. These styles influence how leaders interpret information, make decisions, and coordinate team activities in complex operational environments. The theoretical framework is complemented by the Big Five personality model, highlighting the role of traits such as conscientiousness, openness to experience, and emotional stability in leadership behavior. Additionally, the Creative Behavior Style Model (STZ) proposed by A. Strzałecki is incorporated, emphasizing the importance of ego strength, cognitive flexibility, internal locus of control, self-realization, and life acceptance in creative problem solving and adaptive decision making. The paper also refers to the concept of self-management (Hughes & Lloyd), which underlines the role of self-control, self-regulation, and self-determination in directing one's behavior. The empirical part of the study is based on qualitative research conducted using in-depth interviews (IDI) with military personnel, allowing for the exploration of individual cognitive models and their impact on leadership practices. Integrating these perspectives suggests that leadership effectiveness depends not only on formal competencies but also on cognitive styles, personality traits, and self-regulatory capacities that shape how commanders manage teams and respond to demanding operational contexts.

Key words: military leadership; cognitive models; team management; command effectiveness; self-regulation

Track Session: LC-CC: Leadership Competences in the Face of Complex Challenges

Aldona Kucner, WSB Merito University in Wrocław, Poland

Title: Determinants of Entrepreneurial Discoveries in Enterprises Participating in Participatory Processes: The Case of the Entrepreneurial Discovery Process (EDP)

Abstract:

Entrepreneurial discoveries, understood as the identification of new business opportunities, are often at the core of innovation and competitive advantage. Such discoveries may emerge through interaction with external stakeholders, particularly in participatory processes where enterprises, researchers, business support institutions, public authorities, and representatives of society exchange knowledge and jointly discuss future development directions. One such process is the Entrepreneurial Discovery Process (EDP), an important mechanism of civic and economic participation within the European Union's smart specialisation framework.

This concept focuses on the determinants of entrepreneurial discoveries in enterprises participating in the EDP. The study addresses the question of why some enterprises leave participatory meetings with valuable ideas and innovation opportunities, while others fail to identify signals that could strengthen their competitiveness. The main research objective is therefore to identify the conditions and factors that enable enterprises to recognize entrepreneurial opportunities during participation in collaborative, multi-stakeholder processes.

The study will be based on a literature review and Qualitative Comparative Analysis (QCA). By examining the configurations of conditions that support or hinder entrepreneurial discoveries, the research aims to contribute to a better understanding of how participatory processes can foster innovation, knowledge exchange, and enterprise competitiveness.

Key words: entrepreneurial discovery process; participatory processes; entrepreneurial opportunities; smart specialization; qualitative comparative analysis

Track Session: Poster Session

Katarzyna Kulig-Moskwa & Mateusz Rak, WSB Merito University in Wrocław, Poland

Title: From Compliance to Strategic Transformation: Evolution and Operational Models of the Chief Sustainability Officer (CSO) Role

Abstract:

The dynamic development of legal regulations in the ESG area, particularly the implementation of the EU's CSRD directive, alongside increasing market pressure from stakeholders, forces a redefinition of governance structures in modern enterprises. The Chief Sustainability Officer (CSO) is becoming a central figure in this transformation. This article aims to identify, analyze, and classify the structural models and operational roles that the CSO assumes within organizations.

Key words: Chief Sustainability Officer; ESG governance; CSRD compliance; sustainability transformation; organizational roles

Track Session: Poster Session

Zbigniew Kuryłek, WSB Merito University in Wrocław, Poland

Daniel Papla & Rafał Siedlecki, Wroclaw University of Economics and Business, Poland

Title: Complexity and Contagion in Energy Markets Based on Shannon and Transfer Entropy

Abstract:

Problems related to analysing energy prices, forecasting their changes, and assessing the impact of the green economy are well known, yet they remain current and highly relevant. In today's "turbulent" times, there is no doubt that forecasting electricity prices is not reserved solely for participants in commodity or financial markets (such as day traders), but is also essential for energy planning and policy-making (see Papla and Siedlecki, 2024). In this article, we examine the issue of entropy during periods of transition from a normal economic situation (2015–2019) to the pandemic period (2020–2021), and further to the period of Russia's attack on Ukraine (2022–2023), as well as the contagion between electricity markets. The research presented in the article is based on an analysis of electricity prices in countries undergoing advanced energy transition, such as the European Union, Norway, the United Kingdom, Japan, and Canada, as well as in countries without a declared or only partially implemented transition, such as the USA, China, Egypt, the UAE, and India. The daily data cover the period from 1 January 2015 to 30 December 2025. In the article, we employ Shannon entropy and transfer entropy methods to investigate the randomness and contagion (interdependencies) of electricity prices and markets.

Key words: entropy; electricity; green energy; green economy; sustainable development

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Justyna Kuświk, WSB Merito University in Wrocław, Poland

Beata Pająk-Patkowska, Adam Mickiewicz University, Poland

Title: Selected psychological determinants of subjective political efficacy

Abstract:

The subjective sense of political efficacy is one of the key predictors of citizens' participation in public life and their willingness to engage in political action. The literature on the subject distinguishes two dimensions of political efficacy: internal political efficacy, which refers to an individual's belief in their own ability to understand and influence political processes, and external political efficacy, which refers to the belief that political institutions are responsive to citizens

The aim of the presented study is to analyze the relationship between the subjective sense of political efficacy and the level of political activity undertaken, and to identify selected psychological determinants of this relationship.

The study was conducted among adults with varying levels of political engagement. The Political Efficacy Short Scale (PESS) was used to measure the sense of political efficacy, which allows for the assessment of both the internal and external dimensions of this construct

The study also took into account psychological variables that could serve as resources conducive to civic engagement, such as psychological resilience, self-esteem, and selected personality traits. Resilience was measured using the KOP-26 questionnaire, which defines it as a set of personal, family, and social competencies that support coping with difficulties and adapting to changing conditions. It is assumed that individuals with higher levels of political activity will be characterized by higher levels of internal political efficacy and a more favorable psychological resource profile, in particular higher self-esteem and greater resilience. The analyses include a comparison of three groups of respondents and a determination of the strength and direction of the relationship between the variables analyzed. The results obtained may contribute to a deeper understanding of the psychological determinants of political activity and the role of individual resources in shaping the sense of influence on political processes.

Key words: subjective political efficacy; political activity; psychological resilience; self-esteem; civic engagement

Track Session: PA-GTU: Psychological Antifragility: Growing Through Uncertainty

Julita Markiewicz-Patkowska, WSB Merito University in Wrocław, Poland

Title: Tourism as a Form of Experiential Learning in Older Age – Its Significance for Health and Well-Being in the Context of Sustainable Development

Abstract:

Population ageing increasingly underscores the need to identify solutions that integrate education, health, and the quality of life of older adults. In this context, particular attention should be given to the interconnection between the Sustainable Development Goals—Goal 4 (lifelong learning) and Goal 3 (health and well-being). In relation to the senior population, these goals exhibit a complementary and mutually reinforcing character. The aim of this study is to present tourism activity as a form that integrates educational and health-related dimensions through the mechanism of experiential learning. The analysis is based on the results of original quantitative research conducted using a diagnostic survey method among 845 individuals aged 60 years and over. Women constituted the majority of the sample (65%), while the largest subgroup comprised respondents aged 60–70 years (57%), with statistically significant differences observed in the sample structure ($p < 0.001$). The findings indicate that participation in tourism, particularly when it is regular and cognitively engaging, is associated with higher self-rated health. In the subject literature, this relationship is further extended to encompass physical, psychological, and social well-being. This is confirmed by international studies demonstrating, among other outcomes, a reduction in loneliness and depression, as well as a slowing of cognitive decline among older adults. The interpretation of the results draws upon Antonovsky's concept of salutogenesis and the psychological well-being model developed by Ryff and Singer, both of which emphasize the importance of individual resources, activity, and engagement in determining health outcomes. Within this framework, tourism may be understood as an environment conducive to strengthening these resources, while simultaneously constituting a space for learning embedded in experience. The educational dimension of tourism manifests itself through the process of discovering new places and cultures, reflecting on experiences, and developing cognitive and social competencies. As a form of non-formal education, it aligns with the concept of lifelong learning, supporting intellectual activity and adaptive capacities among older adults. Research also highlights the role of cognitive curiosity and tourism experience as factors that enhance individual functioning in later life. From the perspective of sustainable development, this implies that tourism activity among seniors contributes to health-related outcomes, particularly through improved self-rated health. It also constitutes a domain of experiential learning that strengthens both cognitive and social potential. The integration of these two dimensions allows tourism to be interpreted as a mechanism for the simultaneous implementation of SDG 3 and SDG 4 – not

merely through their parallel occurrence, but through a shared pathway of influence grounded in activity, experience, and engagement.

Key words: senior tourism; experiential learning; healthy ageing; lifelong learning; sustainable development goals

Track Session: SDG-LA: Sustainability Literacy in Action: Education, Engagement, and Behavioral Change

Irem Metin-Orta, Atilim University,Türkiye

Anna Zgrzywa-Ziemak, WSB Merito University, Wroclaw, Poland

Selin Metin Camgöz & **Bülent Çekiç**, Hacettepe University,Türkiye

Katarzyna Walecka-Jankowska, Wroclaw University of Science and Technology, Wroclaw, Poland

Agnieszka Bera, WSB Merito University, Wroclaw, Poland

Cem Menten, Anıl Boz Semerci & Kazım Barış Atıcı, Hacettepe University,Türkiye

Title: From Awareness to Action: Relationships Among Sustainability Literacy, SDG Knowledge, Attitudes, and Sustainable Behaviors

Abstract:

This study is grounded in the conceptual framework of Sustainability Literacy, which posits that a combination of knowledge, skills, and attitudes is essential for empowering individuals to address global challenges (Barth et al., 2007). It integrates this with the United Nations Sustainable Development Goals (SDGs) framework, suggesting that familiarity with these 17 universal targets serves as a bridge between individual daily behaviors and global sustainability outcomes (United Nations, 2015). Accordingly, the present study proposes a comprehensive research model to investigate whether sustainability literacy and specific knowledge of the SDGs translate into sustainable daily practices, and to what extent this relationship is explained by personal attitudes. Specifically, we hypothesized that both general sustainability literacy and SDG-focused knowledge would positively correlate with favorable attitudes toward sustainable development and sustainable daily behaviors. Furthermore, we expected that favorable attitudes would predict sustainable daily practice. Adopting a quantitative approach, we have chosen a convenience sample of undergraduate students living in Türkiye and Poland and have asked them to complete an online survey assessing participants' sustainability literacy, SDG knowledge, attitudes, and self-reported behaviors. The findings aim to provide empirical evidence for educators and policymakers on whether academic or framework-specific knowledge (SDGs) is more effective in fostering long-term behavioral shifts. By clarifying the role of attitudes, this research will offer insights into designing more impactful sustainability communication strategies to address the underlying psychological drivers of change.

Key words: Sustainability Literacy, Sustainable Development Goals (SDGs), Attitudes, Sustainable Behavior

Track Session: SDG-LA: Sustainability Literacy in Action: Education, Engagement, and Behavioral Change

Agnieszka Miarecka, University WSB Merito in Gdańsk, Poland

Title: Resilient Leadership through Paradox Management: the key competence for a complex future

Abstract:

This work-in-progress dissertation explores paradox management and resilient leadership (defined as an adaptation- and growth-oriented leadership style) as a foundational leadership competence for managing increasing complexity. The study reflects the observation that leaders face contradictory demands defying traditional, linear decision-making. Contemporary organizations face uncertainty, simultaneity, and competing strategic expectations, yet existing leadership theories often underestimate the management of such tensions. Although studies in both areas have advanced, the fragmented literature fails to explain how leaders develop paradoxical thinking and resilient leadership to influence diverse outcomes. This gap underscores the need to investigate paradox management in relation to resilient leadership, particularly to understand how these intertwined competencies jointly shape leaders' capacity to manage complexity, sustain performance under pressure, and adaptively respond to contradictory demands.

To address these theoretical gaps, this study adopts a mixed-methods design combining qualitative interviews with a survey. The qualitative phase examines how leaders experience and interpret paradoxes in practice and how they develop the resilient leadership style, while the quantitative stage validates these mechanisms across a broader sample. Initial literature review indicates that paradoxical cognition, emotional composure, and behavioral adaptability are instrumental in balancing competing demands. However, inconsistent metrics in resilient leadership hinder theoretical synthesis. This arises because earlier research focused primarily on the leader's psychological resilience, viewing it simply as the ability to resist stress, rather than the adaptive framework proposed here. This dissertation integrates these insights into a conceptual model and generates empirical evidence that clarifies how leaders develop and apply paradox-related capabilities and resilient leadership in complex organizational contexts.

Key words: paradox management; resilient leadership; leadership complexity; paradoxical cognition; behavioral adaptability

Track Session: LC-CC: Leadership Competences in the Face of Complex Challenges

Mateusz Musiał, University of Opole, Poland

Title: Taxonomy of Systemic Risks in Cryptocurrency Markets: A Systematic Literature Review

Abstract:

The rapid growth of cryptocurrency markets has introduced novel channels of systemic risk that remain insufficiently classified in the academic literature. This paper presents a systematic literature review aimed at identifying and categorizing systemic risks associated with the functioning and use of crypto-assets. Following the PRISMA 2020 protocol, the study analyzes peer-reviewed articles published between 2015 and 2025, sourced from the Scopus and Web of Science databases. Building on existing frameworks, including the IMF crypto-asset taxonomy (2023), the review proposes a multi-level classification that distinguishes between market-level risks (e.g., volatility contagion, liquidity fragility), infrastructure-level risks (e.g., smart contract vulnerabilities, protocol exploits), and institutional-level risks (e.g., regulatory arbitrage, exchange insolvency, stablecoin de-pegging). The analysis reveals that while individual risk categories – particularly volatility spillovers and contagion between crypto and equity markets – are extensively documented using methods such as CoVaR, GARCH-family models, and connectedness indices, the systemic interdependencies between decentralized finance protocols and traditional financial markets remain underexplored. The proposed taxonomy offers a structured framework for researchers and policymakers seeking to assess the threats that crypto-assets may pose to monetary and financial stability. Directions for future empirical research, including survey-based measurement of systemic risk perception among market participants, are discussed.

Key words: systemic risk taxonomy; cryptocurrency markets; crypto-assets; financial stability; systematic literature review

Track Session: Poster Session

Filip Nemec, University of Žilina, Slovakia

Milan Fiľa, College of Applied Psychology in Prague & Terezin, Czech Republic

Title: Performance-Oriented Organizational Culture and Sustainable Leadership Identity: A Paradoxical Framework for Systemic Resilience in the Automotive Sector

Abstract:

Performance-oriented cultures, dominated by Key Performance Indicators (KPIs) and short-term efficiency, represent the primary governance mechanism in the automotive sector. However, escalating ESG pressures and systemic risks challenge the viability of these traditional models. This study examines the interaction between performance-driven organizational cultures and the construction of sustainable leadership identities. Drawing on organizational culture theory, identity work, and paradox theory, the research conceptualizes leadership identity as a dynamic outcome of competing institutional logics. The automotive sector, characterized by high capital intensity and radical sustainability transitions, serves as a critical context. Findings suggest that performance-based control systems often function as normative devices that narrow managerial focus, creating paradoxical tensions with sustainability mandates. Rather than integrating these demands, organizations frequently institutionalize conflict, leading to risk ignorance and reduced adaptive capacity. The paper proposes a conceptual framework to navigate these tensions, contributing to the discourse on sustainable leadership and systemic resilience. It argues that unless sustainability is embedded into management control systems, the paradox will continue to undermine long-term organizational viability.

Key words: HR, leadership; sustainable leadership; organizational culture; kpis; automotive sector; paradox theory; systemic resilience

Track Session: LC-CC: Leadership Competences in the Face of Complex Challenges

Sibusisiwe Ruth Nyoni, Florah Modiba, David Bogopa & Stephen Mago,
Nelson Mandela University, South Africa

Title: E-Governance Without Access: Digital Institutional Exclusion and the Lived Realities of Township Entrepreneurs

Abstract:

Digital transformation has become a central component of state modernisation strategies across developing economies. In South Africa, e-governance initiatives are intended to improve service delivery, enhance administrative efficiency, and broaden economic participation. However, the shift toward digital governance has introduced new forms of exclusion for small businesses operating in marginalised communities. This paper examines how township-based SMMEs experience the transition toward e-governance, focusing on entrepreneurs in Walmer Township in Gqeberha. Drawing on qualitative evidence from a broader study on township economies, the paper explores how structural constraints such as limited internet connectivity, high data costs, restricted access to digital devices, and low levels of digital literacy shape entrepreneurs' interactions with online government systems. Although many state services now require digital registration, electronic compliance, and online applications, township entrepreneurs often struggle to navigate these platforms. Even where access exists, usability challenges remain significant. Government portals frequently rely on English-only interfaces, complex administrative terminology, and system designs that assume levels of education and technological familiarity that do not reflect township realities. The paper conceptualises these dynamics as digital institutional exclusion, a process in which state-led digital transformation advances more rapidly than the social, infrastructural, and linguistic capacities of marginalised communities. This mismatch creates barriers to participation and undermines the inclusive goals of digital governance. Rather than expanding economic opportunity, e-governance systems risk reinforcing existing inequalities when accessibility and user experience are not adequately considered. Positioned within debates on digital transition and sustainable governance, the study argues that future-ready leadership requires a people-centred approach to technological transformation. Sustainable e-governance must move beyond technological availability toward meaningful accessibility. The paper proposes practical pathways for inclusive digital governance, including multilingual platforms, simplified administrative interfaces, local digital support structures, and improved municipal-level implementation. By foregrounding the lived experiences of township entrepreneurs, the study contributes to emerging discussions on sustainability competencies for the future, demonstrating that inclusive digital governance is essential for equitable economic participation toward 2050.

Key words: E-governance; Digital transition; Township economies; Digital institutional exclusion; SMMEs; Inclusive governance; Sustainable development

Track Session: PA-GTU: Psychological Antifragility: Growing Through Uncertainty

Karolina Oleksa-Marewska, WSB Merito University in Poznań, Poland

Title: Digital Readiness as a Core Leadership Competency: Bridging Today with Tomorrow

Abstract:

The rapid shift toward remote and hybrid work has fundamentally redefined leadership, challenging traditional notions of presence, influence, and effectiveness. While classical leadership models emphasized physical proximity and direct interaction, contemporary leaders are required to 'be present at a distance, leveraging digital technologies to sustain communication, collaboration, and trust in daily work. In this evolving context, the paper introduces Digital Readiness as a crucial yet underexplored competency within the set of Leadership Core Competencies, which, along with building trust and credibility, effective communication, and self-development, are seen as fundamental competencies of leaders managing hybrid and remote teams (Oleksa-Marewska et al., 2026). The primary objective of this paper is to conceptualize digital readiness as a leadership competency consisting of cognitive, affective, and behavioral components. It reflects leaders' openness to technological innovation, curiosity and willingness to experiment, as well as proactive and adaptive behaviors in virtual environments. As such, it extends beyond the ability to use digital tools, representing instead a mindset that integrates technology with organizational values, trust-building, and employee well-being. Drawing on a large-scale quantitative study conducted in 2022 among 3,266 remote and hybrid employees across nine countries, the research investigates how Digital Readiness complements other core competencies in shaping leadership effectiveness. The findings suggest that Digital Readiness can enhance leadership effectiveness and play a mediating role between leaders' actions and employees' outcomes, such as engagement, knowledge sharing, and willingness to stay in the organization.

Key words: digital readiness; leadership competencies; hybrid work; remote leadership; technology-enabled communication

Track Session: LC-CC: Leadership Competences in the Face of Complex Challenges

Monika Paradowska, University of Wrocław, Poland

Title: Reconfiguring Behavioural Determinants of Sustainable Urban Transport under Systemic Disruptions: A Multi-Level Conceptual Framework

Abstract:

This paper addresses an under-theorised problem in the international literature on sustainable urban mobility: while behavioural determinants of transport choices are well documented, their dynamic reconfiguration under systemic disruptions remains insufficiently conceptualised. Existing models tend to treat behavioural determinants as relatively stable and insufficiently sensitive to dynamic contextual disruptions, limiting their explanatory power under conditions of crisis and uncertainty.

The aim of this study is to develop a multi-level conceptual framework explaining how systemic disruptions reconfigure the relative, perceived weight, hierarchy, and behavioural effectiveness of determinants shaping sustainable urban transport behaviour. The paper integrates insights from transport behaviour research, socio-technical systems theory, and resilience studies to conceptualise disruptions as mechanisms reshaping decision-making environments across micro (individual), meso (infrastructure), and macro (policy) levels.

The core contribution is a process-based model of dynamic reconfiguration. The framework identifies key stages through which disruptions influence behaviour: exposure, perception and interpretation, shifts in perceived accessibility and opportunity structures, reweighting of determinants, and behavioural responses, followed by stabilisation or reversion.

The paper formulates conceptual propositions regarding when disruptions amplify or suppress sustainable transport choices and when they lead to adaptive versus regressive outcomes. It also outlines a research agenda for empirical testing using longitudinal and mixed-method approaches.

The findings contribute to a dynamic, multi-level understanding of behavioural determinants under disruption and highlight the need for adaptive, resilience-oriented transport policies supporting sustainable transition.

Key words: sustainable urban mobility; transport behaviour; systemic disruptions; behavioural determinants; socio-technical resilience

Track Session: PASR: Modelling Probability Amplifiers of System Risk

Raul Parts, University of Tartu, Estonia

Title: Green Deal, Recovery and Resilience Facility, and Strategic Resilience in Small Open Economies: A Comparative Analysis of the Baltic States

Abstract:

The European Union's industrial policy framework, centred on the Green Deal (GD) and the Recovery and Resilience Facility (RRF), assumes that green and digital investments can enhance both competitiveness and strategic resilience. This assumption is particularly challenging in small and highly open economies, where external dependency and limited domestic value creation may constrain policy outcomes. The Baltic states share important structural characteristics as small and highly integrated economies, while also displaying differences in policy coherence, institutional coordination, and strategic priorities. The Estonian case highlights tendencies toward regulatory over-implementation, while the comparative perspective allows for the exploration of whether similar dynamics emerge in other contexts. The analysis focuses on three key dimensions. First, it examines whether formal alignment with European Union objectives is associated with structural upgrading and stronger resilience. Second, it explores the relative role of digitalisation and green transition measures in shaping productivity growth and value chain positioning. Third, it analyses how institutional capacity, policy coordination, and strategic coherence influence the effectiveness of these policy instruments. The article engages with the question of whether European Union industrial policy functions as a conditional opportunity structure rather than a guaranteed driver of transformation in small open economies. It contributes to the literature on industrial policy, European integration, and small state political economy. This article examines how Estonia, Latvia, and Lithuania translate the GD and RRF frameworks into national industrial policy, and whether this leads to meaningful improvements in competitiveness and strategic resilience. The analysis follows a comparative design and is based on qualitative analysis of national Recovery and Resilience Plans, Green Deal implementation frameworks, sectoral strategies, and expert interviews.

Key words: Baltic States, Green Deal, Recovery and Resilience Facility, strategic resilience, competitiveness, industrial policy, small open economy, value chain upgrading

Track Session: RE-OP: Resilient Europe: an Ordoliberal Perspective

Agnieszka Pawlak-Wolanin & Krzysztof Kuźniak, WSB Merito University in Wrocław, Poland

Title: The use of VR technology in the teaching process at a university as an element of ESG strategy implementation

Abstract:

The lecture addresses the issue of the use of virtual reality (VR) technology in the teaching process at a university in the context of the implementation of the ESG (Environmental, Social, Governance) strategy. The aim of the study is to analyze the potential of VR as a tool supporting the sustainable development of academic institutions by reducing the negative impact on the environment, increasing the accessibility of education and strengthening the quality of management of educational processes. The paper discusses the possibilities of using immersive learning environments in laboratory, simulation and design classes, which allow for the reduction of the consumption of material resources, emissions related to student mobility and risk in experiments. The social dimension of VR was also indicated, including increasing the inclusiveness of education for people with disabilities and foreign students. The analysis also covers implementation challenges, such as infrastructure costs, digital competences of the human force, and ethical and management issues. The conclusions suggest that VR technology can be an important element of the university's transformation towards a sustainable and socially responsible model, provided that a strategic and systemic approach to its implementation is taken.

Key words: virtual reality in education; ESG strategy; immersive learning; inclusive education; sustainable university transformation

Track Session: AI-ESG: Artificial Intelligence, Education and the Sustainable Development Goals

Bożenna Piątkowska, UWSB Merito w Gdańsku, Poland

Title: The Role of Green Leadership in Building Poland's Environmental Security

Abstract:

The article addresses the role of green leadership in shaping Poland's environmental security in the context of contemporary climate, economic, and social challenges. The aim of the study is to analyse the importance of leadership oriented towards sustainable development and to identify mechanisms that contribute to strengthening the ecological resilience of the state. The paper indicates that green leadership constitutes an important element of energy and environmental transformation, integrating the activities of public administration, the private sector, and civil society.

The article discusses the theoretical foundations of environmental security and the concept of green leadership as a management model based on ecological responsibility, innovation, and long-term strategic thinking. Particular attention is paid to the European Union's climate policy, the European Green Deal, and national strategies related to climate neutrality and the protection of natural resources. The analysis shows that effective green leadership may contribute to mitigating the effects of climate change, improving the quality of life of society, and strengthening Poland's energy security.

The study also emphasizes the importance of environmental education, the development of renewable energy sources, investment in green technologies, and cross-sectoral cooperation. It is noted that the effective implementation of environmental policy requires competent leaders capable of building public trust and mobilizing various stakeholder groups around shared ecological goals. The conclusions of the analysis indicate that green leadership is becoming one of the key factors determining environmental stability and state security in the long term.

Key words: green leadership; environmental security; energy transition; climate policy; ecological resilience

Track Session: Poster Session

Valentyna Pidlisniuk, Jan Evangelista Purkyně University in Ústí nad Labem, Czech Republic

Title: Waste Valorization for Circularity in Miscanthus-Based Phytotechnology

Abstract:

The transition toward a circular bioeconomy requires innovative strategies that integrate waste valorization with sustainable land management. Waste valorization, defined as the transformation of organic and industrial residues into value-added products, plays a key role in reducing environmental burdens while enhancing resource efficiency and closing material loops.

This contribution presents a nature-based solution combining phytotechnology with waste-derived amendments (biochar, sewage sludge, ash) using Miscanthus × giganteus (Mxg), a high-biomass perennial crop with strong potential for soil restoration and biomass production. Field-scale studies conducted on post-military and post-industrial sites in the Czech Republic and Ukraine demonstrate that Mxg can tolerate and stabilize contaminants, improve soil structure, and enhance soil organic carbon and biological activity.

The integration of waste streams—including biochar, biomass-derived ash and organic waste, sewage sludge, digestate, and paper sludge further strengthens phytomanagement efficiency by improving nutrient cycling, microbial functioning, and long-term soil recovery. Circular reuse pathways, such as the reintegration of biochar or ash into cultivation systems, illustrate how waste products can be looped back into production cycles, enhancing soil quality while reducing waste disposal.

Moreover, harvested Miscanthus biomass can be converted into bioenergy, biochar, and bio-based materials, supporting cascading use and the generation of secondary raw materials. Such approaches align with circular bioeconomy principles, where biomass and waste streams are continuously valorized into energy, materials, and ecosystem services.

Overall, this work highlights the synergy between phytotechnology and waste valorization as a scalable strategy for restoring degraded lands, mitigating climate change, and advancing circularity in agricultural and environmental systems.

The research is supported by NATO SPS MYP G6094 and CORNET.

Key words: waste valorization; circular bioeconomy; Miscanthus x giganteus; phytotechnology; degraded land restoration

Track Session: OWV: Organic Waste Valorisation within the Circular Economy Pathway

Dariusz Pieńkowski, Poznań University of Life Sciences, Poland

Title: Sustainable leadership and the intoxication of power

Abstract:

In the wake of numerous economic and political scandals, the issues of intoxication with power and the hubris that accompanies it have repeatedly surfaced. Many managers with exceptional abilities have fallen victim to Icarus syndrome, a phenomenon that has often led to the unfortunate demise of their professional careers. Exemplars of this phenomenon include Carlos Ghosn, the former managing director of the Renault-Nissan-Mitsubishi Alliance. A novel phenomenon has recently emerged, manifesting in the actions of political leaders such as Donald Trump, who utilizes his presidential position to promote his own commercial products.

A review of the extant academic literature on the subject reveals that this particular instance of intoxication of power is not attributable to medical conditions experienced by the leaders in question. As has been previously indicated, this tendency manifests as a runaway status, although specific individuals may be more susceptible to developing hubris. Consequently, the strategic shaping of institutions associated with leadership – including moral obligations, functions, and privileges – in conjunction with controlling institutions, can serve as an effective countermeasure to circumvent this pervasive pitfall of power. The research thesis states that the problems are deeply involved in the institutional framework attributed to the market economy and market actors. The human nature particularly adopted in the neoclassical economics ignored social and psychological foundations of human beings. This approach has been identified as a contributing factor to the emergence of the contextual conditions for hubris syndrome. This study analyses the institutional factors influencing the development of the hubris syndrome. The central objective is to discuss the extent to which contemporary concepts of entrepreneurship and management, developed within the framework of sustainable development economics, provide a response to these institutional challenges.

Key words: sustainable leadership; hubris syndrome; intoxication of power; institutional governance; market economy institutions

Track Session: LC-CC: Leadership Competences in the Face of Complex Challenges

Maciej Pieńkowski, WSB Merito University in Wrocław, Poland

Title: Enhancing organizational resilience through Lean Gamification

Abstract:

Gamification, the integration of game-like elements in non-game contexts, has become visible in our everyday life, effectively influencing behavior through mechanisms such as points, badges, and progress indicators. Its rapid adoption is supported by strong evidence of its ability to enhance motivation and engagement, extending beyond customers to employees, particularly as younger generations enter the workforce familiar with game-based feedback systems. Despite this, many organizations face many challenges with low engagement and limited proactivity, as employees exhibit fatigue with workplace tasks and reluctance to propose improvements.

This paper introduces the concept of lean gamification, which merges gamification with lean management - a philosophy aimed at maximizing customer value while minimizing waste. By synthesizing lean principles with game mechanics, lean gamification fosters a culture of continuous improvement and innovation. The study provides a structured literature review of psychological, motivational, and managerial aspects of gamification and introduces the POMPA model (Problem, Offtakers, Mechanics, Pilot, Adjustments) as a framework for designing and implementing gamified solutions aligned with organizational goals.

Empirical insights from three case studies demonstrate that incorporating game elements into lean practices significantly boosts employee participation, encourages improvement proposals and accelerates the implementation of innovative ideas. The findings reveal heightened engagement, collaboration, and motivation among employees, underscoring the effectiveness of the POMPA model in guiding lean gamification initiatives.

This research positions lean gamification as a valuable managerial innovation for enhancing employee motivation and organizational resilience, providing both theoretical contributions and practical guidance for effective implementation in real-world settings.

Key words: Lean Gamification, organizational resilience, employee engagement, Lean Management, continuous improvement

Track Session: AMMA: Humanistic Approach to Future Leadership - Art of Management and Management of Art

Johannes (Joost) Platje, Anna Zgrzywa-Ziemak & Przemysław Szuba, WSB Merito University in Wrocław, Poland

Markus Will & Stefanie Kast, Zittau/Görlitz University of Applied Sciences, Germany

Kazım Barış Atıcı & Bülent Çekiç, Hacettepe University, Türkiye

Krystian Wojtkiewicz, Wrocław University of Science and Technology, Poland

Title: A Sustainable Future? Increasing Systemic Risks and Their Ignorance

Abstract:

This contribution presents a conceptual framework for analysing systemic risk in the context of sustainability and future leadership competencies. While sustainable development is often framed through the triple bottom line, economic growth, and technological progress, such approaches may overlook trade-offs, physical limits, cascading effects, and the possibility of non-linear collapse.

The aim of the research is to develop a model of determinants of systemic risk, with particular attention to ignorance as a probability amplifier. Ignorance may increase the likelihood, severity, or proximity of systemic threats by weakening the recognition of early warning signs and reinforcing techno-optimism, cognitive biases, denial of physical limits, and overconfidence. The framework introduces the idea of "LEM probability," understood as an unpredictable certainty: an event that will occur at some point, although its timing and form remain unknown, and which reveals hidden fragilities within a system.

The proposed model identifies determinants related to sustainability and systemic risk knowledge, willingness to reflect, attitudes toward sustainable business practices, cognitive load, trust, leadership competencies, institutional governance, and decision-making under uncertainty. By focusing on ignorance as a mechanism amplifying systemic threats, the contribution supports a better understanding of how leaders, organizations, and institutions can strengthen resilience in the face of complex sustainability challenges.

Key words: systemic risk; sustainability; ignorance; resilience; leadership competencies

Track Session: Opening/ Poster Session

Johannes (Joost) Platje, WSB Merito University in Wrocław, Poland

Anna Motylska-Kuźma & Dorota Dyjakon, DSW Ideis University, Poland

Jarl Kampen & Ynte K. van Dam, Wageningen University & Research, the Netherlands

Title: Dominant Social Paradigm and Ignorance of Systemic Risks

Abstract:

This contribution examines whether the Dominant Social Paradigm (DSP) may contribute to the ignorance of systemic risks. Systemic risk refers to the possibility that failures in a subsystem or organization may generate significant consequences for the wider system in which they occur. In the context of increasing complexity, globalization, and sustainability challenges, traditional risk management approaches may be insufficient to address cascading and interconnected threats.

The study investigates the relationship between selected DSP dimensions and the perception of systemic risk and its potential impact. It is based on a pilot survey conducted among 153 business students using an online questionnaire. The research applies DSP scales covering beliefs related to resources, pollution, and ecological problems, as well as scales measuring systemic risk recognition and systemic risk impact recognition. The analysis includes correlation testing and McDonald's omega reliability assessment.

The findings suggest that worldviews may influence the way individuals recognize systemic risks and assess their consequences. In particular, resource scarcity awareness and pollution awareness are positively associated with the recognition of systemic risks. The results indicate that DSP may function as a cognitive buffer that delays the recognition of cascading and interconnected systemic threats. The study contributes to sustainability education and risk governance by highlighting the importance of worldview assumptions, perceived scarcity, pollution awareness, and cognitive frames in shaping systemic risk perception.

Key words: Dominant Social Paradigm; systemic risk; risk perception; sustainability education; risk governance

Track Session: Poster Session

Robert Poskart, University of Opole, Poland

Title: Technologisation of Education as a Tool for Building Digital Fluency

Abstract:

This chapter investigates the technologisation of education as a mechanism for building digital fluency, drawing on survey data from 483 respondents across diverse educational settings (Filtered_Survey_2026). Analysing six empirical figures, the study documents substantial but uneven adoption of Learning Management Systems (LMS), near-universal daily use of AI tools (81.8% engaging weekly or more), and widespread use of generative AI for text creation (79.5% weekly). The dominant purposes of AI use – brainstorming, idea generation, summarisation, and structured exam preparation – are more consistent with cognitive amplification than with cognitive substitution. Despite high levels of digital engagement, respondents decisively favour hybrid, in-person-led educational models and express primary concern not about technical failure but about intellectual over-dependence and the erosion of critical thinking. These findings support the Education 5.0 framework: technology augments, rather than replaces, human-centred learning. The chapter concludes that technologisation produces genuine digital fluency only when embedded within intentional pedagogical design — shifting the institutional focus from digital provision to digital cultivation.

Key words: digital fluency; educational technologisation; artificial intelligence in education; Education 5.0; hybrid learning

Track Session: AI-ESG: Artificial Intelligence, Education and the Sustainable Development Goals

Parth Raman, University of Wrocław, Poland

Title: Designing the South Asian Economic and Diplomatic Agency (SAEDA): A Blueprint for Enforceable Governance and Sustainable Integration in an Asymmetrical Region

Abstract:

This research attempts to implement the South Asian Economic Diplomatic Agency, a revolutionary successor to the South Asian Association for Regional Cooperation SAARC. It scrutinizes the structural paralysis of regionalism in South Asia, arguing that the region's longstanding failure is deeply ingrained in its dependence on Neo-functionalism, which holds that political harmony can be achieved inevitably through gradual economic cooperation. This functionalist plan of action proved structurally deficient in addressing significant power disparities and bilateral hostilities in a region driven by high politics and acute security conflicts. Therefore, this proposal stresses that legalizing governance frameworks is a precursor for deep integration and advocates for a paradigm shift towards Realist Institutionalism. The primary desideratum of the SAEDA model is to institutionalize India's supremacy in the region into an enduring Institutional commitment. The agency proffers a rule-based dividend that mitigates smaller states by pivoting away from the crippling strict unanimity norm and towards proportional voting and required side payment for regional structural interconnectivity. This structure, which adopts the ASEAN Minus X principle to authorize flexible involvement among sovereigns, improvises the ASEAN Way mechanism rather than a conventional Binding Court of Justice. This ensures that the mistrust of others will not preclude a subset of consenting member states from advancing with technical integration. The systematic Institutionalisation of human capital mobility is a cardinal component of SAEDA design. The South Asian Qualifications and Recognition Framework (SAQRF) should be used to standardize professional qualifications, as it serves as a geopolitical tool. A regional skills passport, underscored by fundamental human rights safeguards, should be included in this framework to shield migrant workers from exploitation. Simultaneously, the framework should facilitate the transfer of social protection benefits by emphasizing the process of enabling mobility for employability, tourism, and healthcare. Furthermore, to foster de-dollarization and technical resilience, the strategy also emphasizes economic autonomy through the establishment of the SAEDA Credit Unit SCU and the hard-linking of national digital payment rails. This study amalgamates primary views from a diverse pool of regional specialists, including policy makers and legislators from India, Sri Lanka, Nepal, Bhutan, and the Maldives, by utilizing an empirical-descriptive methodology based on an interpretivist epistemology. The resulting blueprint provides a workable road map to transform South Asia into a stable, technically integrated economic union.

Key words: SAEDA; realist institutionalism; ASEAN Way; mobility; economic insulation

Track Session: SSR-ST: Systemic Security Risks in Sustainability Transitions – Geopolitical, Informational and Strategic Dimensions

Diana Rokita-Poskart, Opole University of Technology, Poland

Title: International Mobility as Demographic Resilience: Spatial and Institutional Dynamics in Poland's Crisis Response

Abstract:

Poland's higher education system faces an existential demographic challenge the university-age population has contracted from almost 2 million in 2006 to 1.2 million in 2023, precipitating a structural decline in domestic student enrollment that disproportionately threatens non-metropolitan academic centers. Against this backdrop, international student mobility emerges not merely as a marker of institutional prestige, but as a potential mechanism of demographic and socio-economic resilience for regions most acutely exposed to systemic demographic crisis. This paper examines whether and under what spatial and institutional conditions international students may function as a meaningful demographic buffer. Drawing on longitudinal data from 2019–2023 across sixteen Polish academic centers, we analyze the distribution of international students along two intersecting dimensions: spatial (metropolitan versus non-metropolitan) and institutional (public versus non-public universities). Our analysis reveals a paradox at the heart of Poland's internationalization landscape: international students concentrate overwhelmingly in metropolitan centers where demographic pressure is comparatively moderate while non-metropolitan cities, most vulnerable to demographic erosion, attract proportionally fewer students in absolute terms, yet exhibit markedly higher relative growth rates. We further examine whether non-public institutions amplify or moderate this spatial asymmetry. The findings carry direct implications for regional resilience policy and the governance of higher education internationalization as a strategic instrument of territorial cohesion.

Key words: international mobility; demographic resilience; crisis response; spatial dynamics; institutional adaptation

Track Session: RE-OP: Resilient Europe: an Ordoliberal Perspective

Abdulmannan Rouhani, Valentyna V. Pidlisniuk & Karim Suhail Al Souki, Jan Evangelista Purkyně University in Ústí nad Labem, Czech Republic

Andrzej Cezary Żołnowski, University of Warmia and Mazury in Olsztyn, Poland

Title: Biomass Ash Valorization within the Circular Economy for Sustainable Soil Management and Crop Productivity

Abstract:

The expansion of biomass-based energy production is one of the important components of the transition toward low carbon energy systems. However, the combustion and gasification of lignocellulosic feedstocks inevitably generate substantial quantities of biomass ash. As bioenergy capacity increases, the sustainable management of this mineral by-product becomes increasingly important. Conventional disposal practices, particularly landfilling, are inconsistent with circular economy principles and result in the loss of potentially valuable mineral resources. Biomass ash is typically characterized by high alkalinity and considerable concentrations of base cations (Ca, Mg, K) as well as essential nutrients, including P and some micronutrients. Its strong liming capacity enables effective neutralization of soil acidity, improvement of soil chemical properties, and enhancement of nutrient availability, particularly in acidic or degraded soils. When applied at appropriate rates, biomass ash can enhance crop performance by improving nutrient uptake efficiency, promoting root development in acidic soils, and increasing aboveground biomass and yield through pH mediated optimization of nutrient availability. In addition, optimized ash inputs may stimulate soil biological activity by mitigating acidity constraints. These characteristics support its potential use as a soil amendment and partial substitute for mineral fertilizers, thereby contributing to nutrient recycling and reducing reliance on synthetic amendments. Despite these advantages, several challenges limit its direct application. The chemical composition of biomass ash varies depending on feedstock origin and combustion conditions, which affects nutrient availability and contaminant concentrations. High application rates may cause excessive soil alkalization, salinity stress, nutrient imbalances, or accumulation of trace elements. To maximize benefits while minimizing risks, biomass ash should be applied at carefully optimized doses based on soil properties and regulatory thresholds. Co-application with organic amendments or mineral fertilizers is recommended to balance nutrient supply and enhance performance. Such integrated management strategies enable safer and more efficient utilization. The valorization of biomass ash represents circular economy practice, transforming a bioenergy residue into a functional soil amendment closes nutrient loops, supports sustainable agriculture, and strengthens the linkage between renewable energy production and soil resource management. Taking into consideration the emerging socio-economic and political circumstances globally, investing in biomass ash could pave the way to new

advantages in the sustainable agricultural and environmental sectors. Such an investment is highly recommended as it decreases the dependence on the chemical synthetic fertilizers and supports European decision makers in their attempts to decline pollution and fulfilling the sustainable development goals.

Key words: biomass ash; biowaste valorization; circular economy; nutrient recycling; soil amendment

Track Session: OWV: Organic Waste Valorisation within the Circular Economy Pathway

Małgorzata Rozkwitalska-Welenc, WSB Merito University in Gdańsk, Poland

Title: From career-enhancing strategies to agency: gender performativity and empowerment in women's career progression in the energy sector

Abstract:

While extensive research documents various barriers that women face in male-dominated sectors, studies on career progression and women's strategies to succeed remain limited. This paper integrates concepts of empowerment, agency, career-enhancing strategies, and gender performativity, often examined in isolation, and explores how women in the energy sector navigate constraints and advance their careers. Drawing on prior scholarship and findings from 25 interviews with professionals in the energy industry, the study proposes a conceptual framework that illustrates how gender performativity shapes women's agency and fuels their career decisions. The findings contribute to theories of women's empowerment, gender performativity, and career development, as well as research on women in male-dominated fields. The study underscores the central role of agency as a mediating mechanism between empowerment and career outcomes, while highlighting how gender performativity informs strategic responses. Structural and psychological empowerment provide critical resources that enable women to exercise agency, which in turn translates these resources into action through diverse career-enhancing strategies. Importantly, the research acknowledges double-edged sword effects: agency and strategic action can foster career progression and personal fulfillment, but they may also lead to burnout, work-life imbalance, and emotional labor, revealing the hidden costs of negotiating gendered norms.

Key words: women's career progression; gender performativity; empowerment; agency; energy sector

Track Session: Poster Session

Mudassira Sarfraz & Muhammad Kamran, Civitas University, Poland

Title: Women's Leadership in Higher Education: A Qualitative Cross-Cultural Analysis

Abstract:

Women remain underrepresented in leadership roles within higher education, despite growing global attention to gender equity. This paper examines how women leaders navigate structural, institutional, and cultural barriers in diverse higher education contexts. Using a qualitative research design, the study draws on in-depth, semi-structured interviews with women in senior academic and administrative positions, including deans, department chairs, and program directors. The analysis highlights three central themes shaping women's leadership trajectories. First, structural barriers such as gendered hierarchies, limited access to mentorship, and insufficient institutional support continue to impede advancement. Second, participants described resilience strategies, including building informal networks and leveraging cross- cultural competencies. Third, mentoring relationships, both formal and informal, emerged as crucial in providing guidance, legitimacy, and pathways for career progression. Cross-cultural comparisons revealed significant variation. In contexts where patriarchal traditions dominate, women leaders reported heightened scrutiny and resistance, relying more heavily on relational strategies to establish authority. By contrast, in more egalitarian environments, institutional reforms and gender-sensitive policies were perceived as key enablers of leadership development. These findings underscore the need to interpret women's leadership within specific socio-cultural frameworks rather than through a universal lens. This study contributes to scholarship on gender and leadership in higher education by foregrounding women's lived experiences across cultures. It further offers practical implications for institutions, including the implementation of gender-sensitive policies, expanded mentorship programs, and organisational cultures that recognise diverse leadership styles.

Key words: Women leaders, higher education, qualitative research, cross-cultural competencies

Track Session: GBL-NP: Gender Balance in Leadership – New Perspectives on Management in Times of Socio-Economic Challenges

Philipp Schäfer, University of Applied Sciences Zwickau, Germany

Title: Disclosure without Discipline? An Ordoliberal View on the Lending Relevance of ESG Reporting

Abstract:

The European Union's sustainable finance framework aims to redirect private capital flows toward sustainable economic activities. Banks play a key role in this process as central financial intermediaries. To this end, the European regulatory approach relies primarily on transparency, standardization, and accountability. At the same time, both academia and practice increasingly question whether the growing complexity of this framework actually contributes to a more effective steering of capital flows or merely increases information density. This paper examines, from an ordoliberal perspective, the gap between regulatorily generated sustainability transparency and its practical relevance for lending decisions and credit terms. Methodologically, the analysis is based on a conceptual-empirical triangulation of two perspectives: an evaluation of the sustainability reporting of major banks in Germany and Austria for the 2024 financial year, and a survey of 64 credit institutions on the integration of ESG aspects into lending processes. The findings suggest that the regulatory framework expands sustainability transparency, while its translation into lending practice remains limited and asymmetric. Sustainability signals are selectively prioritized, exert a stronger influence on lending decisions than on credit terms, and predominantly produce negative rather than positive effects. The paper argues that, from an ordoliberal perspective, this points to a calibration problem: transparency is necessary, but insufficient if it is not translated into allocation-relevant decision-making mechanisms.

Key words: ESG reporting; sustainable finance; lending decisions; ordoliberalism; banking regulation

Track Session: RE-OP: Resilient Europe: an Ordoliberal Perspective

Iouri Semenov, WSB Merito University in Poznań, Poland

Title: Future-proofing warehouse management transformation with AI-technology focused on increasing resilience capabilities on unpredictable business changes

Abstract:

As customer expectations evolve, management strategies are becoming increasingly ineffective. As a consequence, widely used methods such as FMEA or ETA no longer meet the requirement to strengthen resilience to unpredictable business changes. This is due to the rapid development of digital twins technologies. In progress warehouse management are based on AI/ML and other groundbreaking technologies, which have contributed to the concept of the smart ("black") warehouses. Such future-proofing concept is based on the safety-critical intra-warehouse processes using feedback loops, and predictive analytics with AI -technology. Proven that the application of these technologies support synchronized fleets of AGVs/AMRs, AS/RS and APS systems increasing efficiency, accuracy and flexibility in warehouse management. Performed analyses have shown that, in the short term, moderate success of the concept of LADC (Large Automated Distribution Centre) can be counted on, even if very high levels of AI-technology incorporated into centers are ensured. This is due to the fact that the infrastructure of automated warehouses consists of a large number of poorly connected units and the which management is very complicated. This feature makes LADC more vulnerable to various bottlenecks risks generating such negative synergy effects as quality loss of operations activities via conflicting priorities and congestions, lack of collaboration or unplanned breaktimes. The aim of the study is to develop proposals for future-proofing warehouse industry e.g. smart MFC (Mini-Fulfillment Center) offering short delivery times, high quality control and hyper personalized service.

Key words: AI-enabled warehouse management; digital twins; warehouse resilience; automated distribution centers; spatiotemporal bottlenecks

Track Session: AI-ESG: Artificial Intelligence, Education and the Sustainable Development Goals

Francisco Vargas Serrano, Universidad de Sonora, Mexico

Title: Systemic risk of 30 of the world's leading banks during the period 2014–2025

Abstract:

This study analyzes the network dynamics and systemic risk of 30 of the world's leading banks during the period 2014–2025. Using annual balance sheet data, interbank exposures are estimated by constructing weighted and directed exposure matrices for each year. On these networks, centrality indicators are calculated (in-degree and out-degree, closeness, betweenness, eigenvector centrality), along with specific systemic risk metrics (criticality, impact fluidity, impact susceptibility, impact diffusion, vulnerability) and the DebtRank index, which captures additional losses under simulated shocks. The results provide a temporal and multidimensional profile of the systemic importance of each institution, its susceptibility to contagion, and its potential to propagate financial shocks. This methodology provides a solid foundation for the longitudinal monitoring of systemic risk, the comparison between institutions, and the development of early warning signals for authorities and financial regulators.

Key words: banking systemic risk; financial contagion; network analysis; DebtRank; interbank exposures

Track Session: PASR: Modelling Probability Amplifiers of System Risk

Klaudia Skelnik, WSB Merito University in Gdańsk, Poland

Title: Disinformation as a Systemic Risk Amplifier: Leadership Challenges in Crisis Governance and Public Trust

Abstract:

Contemporary systemic crises – ranging from armed conflicts to energy instability and pandemics – are increasingly shaped not only by material disruptions but also by informational dynamics. Disinformation has evolved into a strategic tool that amplifies systemic risk by distorting perception, undermining trust, and weakening institutional response capacities. This paper examines disinformation as a probability amplifier of systemic crises, focusing on its role in destabilizing public communication and decision-making processes. Drawing on concepts from information warfare, crisis management, and systems theory, the study proposes a framework linking disinformation ecosystems with governance vulnerabilities and societal resilience deficits. Particular attention is given to the role of leadership in mitigating informational threats. The paper argues that informational resilience should be conceptualized as a core leadership competence in the 21st century – encompassing the ability to detect manipulation, manage uncertainty in communication, and maintain public trust under conditions of informational chaos. The study integrates qualitative analysis of selected crisis cases (e.g., hybrid warfare contexts) with theoretical modelling of information flows and trust erosion mechanisms. It concludes with recommendations for developing leadership competencies and institutional strategies aimed at strengthening resilience against disinformation-driven systemic risks.

Key words: disinformation, informational resilience, systemic risk, crisis management, hybrid threats, leadership competencies, public trust, information warfare

Track Session: Poster Session

Grzegorz Sojka, WSB Merito University in Poznań, Poland

Title: More AI, More Stress? Re-validating a Thesis-Writing Stress Questionnaire and Comparing Student Cohorts Before and After Generative AI

Abstract:

Writing a diploma thesis is among the most demanding academic tasks, combining sustained self-regulation, supervisory relationships, and methodological work. The rapid adoption of generative AI tools (e.g., ChatGPT) since late 2022 has transformed how students approach these tasks, prompting an intuitive expectation that thesis-related stress should now be lower. This study tests that assumption.

We pursue two aims: (1) to re-validate the Student Stress Questionnaire (KSS-16), a Polish instrument measuring thesis-writing stress developed in 2019; and (2) to compare stress levels and structure between a 2019 cohort (N=117) and a 2026 cohort (data collection ongoing), examining the moderating role of AI use. Participants complete the KSS-16, the Perceived Stress Scale (PSS-10), and items on the extent, scope, and perceived impact of AI use.

Preliminary 2026 results (N=30) show strong psychometric replication: KSS-16 internal consistency improved (alpha=0.89 vs 0.78) and convergent validity with PSS-10 was confirmed (r=0.36). AI use is near-universal (93%). Notably, the data challenge the simple "AI reduces stress" narrative: greater intensity of AI use correlates with higher, not lower, thesis stress (r=0.37), even though half of students subjectively report that AI lowers their stress. This dissociation between subjective relief and measured stress is the study's central emerging finding.

Results speak directly to AI and the SDGs, particularly quality education (SDG 4) and well-being (SDG 3), suggesting that AI integration in higher education may reshape rather than reduce student stress, introducing new pressures around detection, ethics, and authorship. Full results from the completed sample will be presented at the conference - research is still in progress.

Key words: thesis-writing stress; generative AI; student stress questionnaire; higher education; psychometric validation

Track Session: Poster Session

Barbara Sowa-Pyszka, WSB Merito University in Gdańsk, Polska

Title: Public Governance and Personnel Security in Public Services: The Organisational Dimension of Human Resource Management

Abstract:

The article entitled "Public Governance and Personnel Security in Public Services: The Organisational Dimension of Human Resource Management" addresses the issue of contemporary personnel management in public sector institutions in the context of ensuring personnel security. The author indicates that the concept of public governance, based on co-governance, transparency, accountability, and inter-institutional cooperation, is becoming an important element in building efficiently functioning public services. Particular importance is attributed to human resource management, which affects both organisational effectiveness and the level of security of officers and public administration employees.

The study emphasizes that personnel security includes not only the physical protection of employees, but also employment stability, competence development, prevention of occupational burnout, and the creation of appropriate interpersonal relations within the organisation. It is indicated that effective human resource management in public services requires the implementation of modern methods of motivating, evaluating, and training employees, as well as the development of an organisational culture based on trust and accountability.

The author analyses the organisational dimension of human resource management, drawing attention to the importance of recruitment procedures, personnel policy, and control and supervision mechanisms. The article stresses that improper personnel management may lead to a decline in the quality of public tasks performed, an increase in organisational risk, and a weakening of citizens' trust in state institutions. For this reason, public governance should integrate administrative, social, and managerial activities in order to increase the effectiveness and security of public service operations. In conclusion, the author states that personnel security is one of the key elements of the stable functioning of public organisations.

Key words: public governance; personnel security; human resource management; public services; organisational culture

Track Session: Poster Session

Klaudia Strzelecka, DSW Ideis University, Poland

Title: Personality Predictors of AI Use among Students

Abstract:

The LLM tools such as ChatGPT and Gemini are increasingly used by students, who commonly apply them to enhance work efficiency, reduce cognitive load, support learning process or brainstorm. Although prior research has examined the role of individual differences, such as personality or need for cognition, in shaping attitudes towards and frequency of AI use, there remains a notable gap in understanding how personality traits influence patterns of LLM use itself. The research aims to investigate how personality traits and need for cognition predict use of AI tools among students. This is a questionnaire study using the IPIP-20 measuring personality traits, the Need for Cognition Scale and an original AI Use Questionnaire developed through a pilot study. The survey was shared on various online forums with students. A total of 161 students participated in the study. AI use among students varies depending on field of study and degree level, suggesting that academic context shapes how LLMs are used. Master's students use AI more extensively, possibly reflecting greater academic demands and need to reduce cognitive load. Limited gender differences were observed, indicating broadly similar patterns of AI use across women and men. Personality traits and need for cognition significantly predict specific AI use patterns, confirming the role of individual differences. Traits such as openness, emotional stability and extraversion are linked to different functions of AI. Educational strategies may benefit from integrating AI in ways aligned with students' individual differences. However, the results of this study are limited to a student sample and self-report measure. Future research should replicate these findings on a larger scale and incorporate methods that assess deeper, implicit attitudes towards AI.

Key words: AI use; personality traits; need for cognition; students; large language models

Track Session: Poster Session

Krzysztof Surma, WSB Merito University in Wrocław, Poland

Title: Research and Analysis of the Influence of Worldview on the Determinants of the Decision-Making Process under Conditions of Uncertainty

Abstract:

In today's dynamic times, an efficient and functional approach to issues related to decision-making in risky conditions is becoming increasingly important. The internal determinants of the decision-maker may be an important factor influencing the way in which he approaches the analysis and estimation of potential and actual threats. Worldview is one of the factors determining the approach to risk and the tendency to take it in crisis situations. They are the so-called probability enhancers, which have an impact on the subjective assessment of events as more probable than could result from objective data. Among the important variables influencing this phenomenon, we can distinguish, e.g. personal experiences, strong emotions accompanying decision-making, or beliefs and worldview. In order to analyse the impact of the worldview of decision-makers on the decision-making process in risk conditions, a survey was prepared to determine the propensity to engage in risky behaviour when determining their values. Particular attention will be paid to identifying the relationship between professed values, ideological beliefs and attitudes towards uncertainty and the choice of specific decision-making strategies. This study focused on determining the extent to which differences in worldview will affect risk appetite. As part of the analyses, it is planned to conduct quantitative and qualitative research, within the framework of which selected economic theories will be used, m.in. Attitudes towards Diverse Business Practices, the New Ecological Paradigm, the Dominant Social Paradigm or the Theory of Trust. The target research group are students of first-cycle studies in the field of Logistics at the WSB Merito University in Wrocław. Based on the prepared research, it is expected that the results obtained will allow to a significant extent to understand the cognitive and psychological determinants of the decision-making process under conditions of uncertainty. At the same time, the results will be used to develop decision-making models that take into account the determinants of decision-makers, including their worldview. One of the key assumptions is to create a model of probability determinants, which in a broader context will allow for a rational look at the analyzed risk and making decisions based on real data. The results obtained will be able to be used in social sciences, economics and management.

Key words: worldview; decision-making under uncertainty; risk perception; probability amplifiers; behavioral determinants

Track Session: Poster Session

Marta Szaban, Poznań University of Economics and Business, Poland

Title: Consumer acceptance of cosmetic products formulated with upcycled ingredients: A multi-method examination of product cues and psychological drivers

Abstract:

This research examines how consumers evaluate personal care products formulated with upcycled ingredients, conceptualizing acceptance as a cue-based process of managing perceived bodily risk rather than as a direct attitudinal response to sustainability claims. Although upcycling is increasingly promoted within the circular economy, consumer evaluations of products containing waste-derived ingredients that come into contact with the body remain insufficiently understood, particularly due to intuitive contamination-related concerns often described as a "yuck factor." The study adopts a triangulated, multi-method design combining qualitative interviews, conjoint analysis, and ingredient-level evaluations. Study 1 draws on 33 qualitative interviews to explore how consumers make sense of cosmetics formulated with upcycled ingredients and articulate acceptability and risk perceptions. Study 2 employs a conjoint experiment with 438 consumers to examine how market cues - price positioning, brand type, ingredient source, and application area - shape purchase likelihood, perceived risk, and anticipated social exposure. Study 3 examines the acceptability of specific upcycled cosmetic ingredients to 601 consumers and tests whether individual psychological dispositions influence these evaluations. Across all studies, consumer acceptance is primarily structured by price positioning and the perceived source of the upcycled ingredient, indicating reliance on stable evaluative cues under conditions of uncertainty. Ingredients derived from plant-based secondary materials are evaluated more positively than those framed as by-products of food processing or oil pressing, highlighting heterogeneity in ingredient-level admissibility. Individual psychological dispositions, including Green Self-Identity, Health Consciousness, Openness to Change, and Institutional Trust, increase overall acceptance without altering the relative hierarchy of ingredient source preferences.

Key words: consumer acceptance; upcycled ingredients; cosmetic products; perceived bodily risk; circular economy

Track Session: SDG-LA: Sustainability Literacy in Action: Education, Engagement, and Behavioral Change

Izabela Szlaska, Civitas University, Poland

Title: Competing for Talent: How Foreign-Owned Firms Reshape Organizational Management in Domestic Enterprises

Abstract:

Sustainable economic growth requires the efficient use of renewable and non-renewable resources, as well as the development of human capital as a key driver of long-term socioeconomic progress. Economic literature emphasizes that education, knowledge accumulation, and skills development play a central role in productivity growth, technological change, innovation, and the creation of competitive advantage. Human capital is therefore essential not only for economic growth, but also for poverty reduction, social cohesion, improved quality of life, and the capacity of economies to adapt to technological and structural change.

This study examines the role of human capital in sustainable economic development, with particular attention to the relationship between education, foreign direct investment, and human capital accumulation in Polish enterprises. Drawing on human capital theory and endogenous growth approaches, the paper discusses how investment in education and training contributes to individual capabilities and overall economic performance. It also analyzes the potential channels through which foreign direct investment may influence human capital, including job creation, knowledge and technology transfer, the diffusion of management practices, access to training, and employee mobility within multinational enterprises.

The analysis indicates that enterprises with foreign capital play an important role in the Polish economy, particularly among large firms, and may contribute to higher wages and the use of human capital in building competitive advantage. However, the relationship between foreign capital and human capital accumulation is not straightforward. The observed increase in employment in foreign-capital enterprises is not necessarily accompanied by a proportional increase in education and training among employees. This may suggest that such enterprises either attract already qualified workers, conduct internal nonformal training, or import skilled labor together with technology. As a result, there is no clear basis for determining the direction of the impact of foreign direct investment on human capital accumulation in Poland.

Key words: talent competition; foreign-owned firms; human capital; organizational management; domestic enterprises

Track Session: HRM-SIW: Human Resource Management for a Sustainable and Inclusive Workplace

Sadaf Tahir, University of the National Education Commission, Poland

Title: Barriers to Evidence-Based SDG Policymaking in developing countries

Abstract:

The role of the policy advisory system in developing countries represents a crucial yet understudied field in contemporary governance. In these countries, where traditional bureaucratic structures and fragile democratic systems prevail, policy advisory systems often struggle to effectively include universities. The peripheral role of universities in advancing the Sustainable Development Goals necessitates the explicit integration of cross-sectoral expertise to address the interrelated, complex issues through evidence-based policymaking. The study aims to explore institutional challenges, resource constraints, and systemic barriers to understand the underutilization of universities in policy circles, as they are confined to traditional teaching and research. The case of Pakistan advances our understanding of the challenges of policymaking in authoritarian or hybrid regimes. Using the qualitative research methods, in-depth key informant interviews were conducted with senior academics, bureaucrats, and development agencies. Thematic analysis of the interviews will be conducted using NVivo 15 software.

Key words: evidence-based policymaking; Sustainable Development Goals; policy advisory systems; universities; developing countries

Track Session: SDG-LA: Sustainability Literacy in Action: Education, Engagement, and Behavioral Change

Jarosław Tomaszewski, WSB Merito University in Wrocław, Poland

Title: Agile, AI and Sustainability: Preparing Future Leaders For Uncertainty And Complex Challenges – Insights From An International Educational Project

Abstract:

The rapid development of artificial intelligence, sustainability challenges, and increasing uncertainty are changing expectations toward future leaders and university graduates. Traditional educational approaches are often no longer sufficient to prepare students for dynamic and unpredictable professional environments.

This presentation discusses how Agile methods, AI-supported teamwork, and sustainability-oriented thinking can support the development of future leadership competencies. The paper is based on experiences and survey results from the international Blended Intensive Programme "Agile Leadership – Skills, Mindset and Tools", organized in Poznań in 2026.

The programme brought together students from different European countries who worked in multicultural teams using Agile/Scrum approaches, AI tools, and project-based learning. The study focuses on competencies such as adaptability, teamwork, communication, AI literacy, and readiness to work in changing environments.

The presentation also highlights the role of international and experiential education in preparing students for uncertainty and complex future challenges.

Key words: agile leadership; artificial intelligence in education; sustainability competencies; experiential learning; future leadership skills

Track Session: AI-ESG: Artificial Intelligence, Education and the Sustainable Development Goals

Yelda Erden Topal, Middle East Technical University, Türkiye

Title: Motivations behind Investment Decisions behind Solar Heat for Industrial Processes in Türkiye: An opportunity for Industrial Decarbonization

Abstract:

The growth of the global population and the use of fossil fuels are increasing the risks to energy supply security and environmental threats, encouraging countries to shift towards renewable energy. According to IEA data, the increase in energy demand in 2023 was largely met by fossil fuels. Still, improvements in energy efficiency and the use of renewable energy (RE) have slowed the growth rate of demand. Türkiye has focused on industrial decarbonization targets within the framework of the Paris Agreement. While the share of domestic RE sources in Türkiye's energy production is increasing, dependence on imported fossil fuels persists. Developing policy proposals and a governance model for carbon reduction in industry is a critical need. In this context, our project proposal aims to reduce dependence on fossil fuels by prioritizing the supply of industrial thermal energy needs through domestic and renewable sources. Expanding solar heat for industrial processes (SHIP) will be a crucial step. This project represents the first comprehensive study focusing on the role of SHIP in Türkiye's industrial decarbonization process. While there are numerous studies in the literature on industrial sector electrification, research on solar energy solutions for industrial heat energy remains limited. This study is an initial attempt to elaborate on the dynamics behind the industrial energy transformation by developing evidence-based policy proposals within the framework of sectoral priorities and smart specialisation. It aims to determine the main motivations behind the investment decisions of Turkish Industrial producers in different sectors for SHIP implementations in their energy supply processes of industrial heat by using the 10 in-depth expert interviews conducted with Turkish companies that have the potential to implement SHIP.

Key words: solar heat for industrial processes; industrial decarbonization; renewable energy investment; energy transition; Türkiye

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Dariusz Tworzydło, University of Warsaw, Poland

Przemysław Szuba, WSB Merito University in Wrocław, Poland

Title: ESG Projects in the Work of PR Specialists - Based on Empirical Research

Abstract:

This study examines the role of ESG-related topics in the work of public relations professionals in Poland. The aim of the research is to diagnose the impact of selected variables from PR professionals' profiles on their engagement with ESG communication, identify the hierarchy of predictors influencing how frequently they participate in ESG-related projects, and determine the role of ESG in communication activities conducted by different types of PR professionals, including in-house PR teams and external experts working on an outsourcing basis.

The research and analyses were conducted by the Exacto research team under the supervision of Prof. Dariusz Tworzydło and Dr. Przemysław Szuba, with the support of substantive partners from the Newseria news agency and Mediaboard. The results are based on 225 valid questionnaires completed by practitioners representing the private sector, the public sector, non-governmental organisations, PR agencies, and academia. A purposive sampling method was applied, and the study primarily involved individuals responsible for managing communication within their organisations.

The findings provide insight into the extent to which ESG has become embedded in professional communication practice and show how organisational context, professional profile, and type of PR activity may shape engagement in ESG-related projects. The study contributes to a better understanding of the evolving role of public relations specialists in sustainability communication and the implementation of ESG principles in organisational communication.

Key words: ESG communication; public relations; PR professionals; empirical research; sustainability communication

Track Session: SDG-LA: Sustainability Literacy in Action: Education, Engagement, and Behavioral Change

Kristīne Užule & Edgars Čerkovskis, EKA University of Applied Sciences, Latvia

Title: Developing Sustainability-Oriented Leadership Competences for Social Entrepreneurship in Higher Education

Abstract:

As social enterprises increasingly tackle pressing social challenges, identifying the leadership competences required to sustain and grow such organizations has become a critical area of inquiry. Social enterprises operate under unique conditions, often small in scale, limited in longevity, and defined by socially driven missions and diverse employee profiles. These characteristics call for leadership that not only meets standard organizational demands but also reflects the complexity and values of the social economy. This study aims to determine a distinct set of sustainability-oriented leadership competences specific to the needs of social enterprises and social entrepreneurship initiatives. The research was conducted in two stages. The first stage focused on retrieving these competences from scientific and professional literature, using a distant reading approach. A specialized corpus was constructed from peer-reviewed academic publications indexed in ScienceDirect and Scopus, as well as reports produced by social enterprise associations. Semantic co-occurrence and conceptual mapping techniques were applied to identify key leadership competences emphasized across these sources. In the second stage, the results of this textual analysis were evaluated through an expert survey. The experts included experienced practitioners, such as social enterprise managers and leaders of relevant support organizations, as well as academic specialists in social entrepreneurship. Social enterprise leaders must go beyond general leadership skills to demonstrate competences uniquely suited to mission-driven, resource-constrained contexts, such as managing hybrid value models, leading inclusive teams, sustaining legitimacy across diverse stakeholders, and embedding social innovation into everyday operations to maximize long-term social impact. The results can inform curriculum design in higher education, professional development initiatives, and recruitment or training practices within the social economy.

Key words: sustainability-oriented leadership, leadership competences, social entrepreneurship, higher education, social innovation

Track Session: LC-CC: Leadership Competences in the Face of Complex Challenges

František Vráb, University of Zilina, Slovakia

Title: From Economic Periphery to Regional Powerhouse: A Comparative Analysis of Systemic Resilience and Strategic Leadership in Poland and Slovakia

Abstract:

This paper explores the divergent economic trajectories of Poland and Slovakia within the framework of mid-21st- century systemic risk and leadership. While both nations entered the European Union in 2004 facing significant disparities—with Germany's GDP per capita then four times that of Poland—their subsequent development strategies have led to a profound shift in regional power dynamics. Poland has successfully transitioned from a provider of low-cost labor to a trillion-dollar "Regional Powerhouse." This evolution is characterized by a shift from reactive adaptation to proactive economic sovereignty. Through a multi-sectoral analysis (IT, logistics, and energy), the study identifies how Poland's mastery of systemic risk— leveraging EU funds for infrastructure, diversifying energy sources (nuclear and renewables), and fostering domestic capital (e.g., PKN Orlen, CD Projekt)—has created a robust model of economic resilience. In contrast, the paper examines Slovakia's increasing "Asymmetric Vulnerability." Despite its initial success, Slovakia's heavy "Path Dependency" on the automotive sector (>30% of GDP) and a trend of divesting domestic firms to foreign entities have exposed significant structural weaknesses. The 2022 energy crisis, which impacted Slovakia's GDP by 2-3%, serves as a critical case study in the risks of single-sector export reliance and delayed infrastructure adaptation. By comparing these two models, the research distills essential competencies for future leaders: Systems Thinking to navigate global supply chain disruptions, Cognitive Flexibility in policy-making, and Strategic Financial Decision-making to move beyond FDI-dependency. The paper concludes that Poland's "Powerhouse Model" offers a vital blueprint for university graduates and policymakers aiming to transform peripheral vulnerabilities into proactive leadership in an era of digital warfare and climate-driven transitions.

Key words: economic resilience; systemic risk; path dependency; CEE Governance; strategic leadership; Poland-Slovakia comparison

Track Session: SSR-ST: Systemic Security Risks in Sustainability Transitions – Geopolitical, Informational and Strategic Dimensions

Iwona Werner & Agnieszka Springer, WSB Merito University in Poznań, Poland

Title: Trust, Recognition, and Organizational Justice in Academic Work: Implications for Employee Well-being and Inclusive HRM

Abstract:

Contemporary higher education systems are increasingly shaped by intensifying performance pressures, institutional stratification, and shifting employment relations, which collectively redefine the conditions of academic work (e.g. Kwiek, 2019). Within this context, employee well-being is no longer solely an individual outcome but becomes a critical dimension of sustainable and inclusive human resource management. Building on prior research on burnout and health-related functioning among academic staff (Werner & Springer, 2021; Springer et al., 2023), this study advances a relational perspective on well-being by focusing on the role of social and organizational conditions of work. The study develops and empirically examines a framework linking three dimensions of the psychosocial work environment: trust, recognition, and organizational justice to employee well-being. These constructs are conceptualized as foundational mechanisms through which organizations can foster meaningful, inclusive, and sustainable work environments. Importantly, the study introduces academic rank as a theoretically relevant moderator, reflecting structural inequalities and differentiated access to resources, autonomy, and recognition within academia. The empirical analysis is based on data collected in 2026 from a representative sample of N=400 academic staff employed at Polish higher education institutions. Psychosocial work environment factors are measured using selected scales from the Copenhagen Psychosocial Questionnaire (COPSOQ II), while well-being is operationalized through the Burnout Assessment Tool (BAT-12). Moderation analyses are employed to explore how the strength and direction of relationships between relational work factors and well- being vary across career stages. The findings have implications for both theory and practice, supporting the development of HRM strategies that move beyond performance metrics toward relational, equitable, and well-being-oriented models of managing academic work. The study contributes to the literature by highlighting the role of relational and fairness-based dimensions of work as key mechanisms supporting well-being and inclusive HRM in academia.

Key words: academic work; employee well-being; organizational justice; inclusive HRM; recognition and trust

Track Session: HRM-SIW: Human Resource Management for a Sustainable and Inclusive Workplace

Wim Westerman, University of Groningen, the Netherlands

Title: Showing Character: Enthusiastic Business Conduct with Dutch FinTechs

Abstract:

The business world operates in a tension between feeling, thinking, and acting: recognizing risks, managing pressure, but also finding freedom and seizing opportunities. This certainly applies to the financial sector today, including service providers whose business models revolve around technological innovation: FinTechs, with the Netherlands as a guiding country. Concerns exist about cybersecurity, data protection, regulatory compliance, market inclusion and exclusion, and other issues, as evidenced by case studies and an exploration among Dutch-speaking stakeholders. Sustainable behavioural guidelines can provide clarity. This piece focuses particularly on virtuous engagement with people and services ("demonstrating character"). In the briefly examined practice, this is done enthusiastically: thoughtfully and quite cheerfully. However, 'Amsterdam', will things be OK then?

Key words: business conduct, FinTechs, Netherlands

Track Session: CEVI: Center for Energy Value Issues - Competencies for Energy Valuation and Investment

Dominika Wilczyńska, WSB Merito University in Gdańsk, Poland

Title: You Cannot Build Sustainable Systems with Exhausted People: The Hidden Threat to Future Leadership

Abstract:

In an era of socio-economic instability and accelerating transformation, psychological resilience has become a strategic foundation for sustainable leadership in education and sport. Teachers and coaches, key architects of future generations, are increasingly exposed to burnout, threatening not only individual wellbeing but also institutional stability and long-term system sustainability. At the same time, young athletes themselves report rising levels of emotional exhaustion, performance anxiety, and sport-related burnout, indicating that mental health challenges are emerging across all levels of the educational and sport ecosystem. This presentation integrates findings from three complementary empirical investigations across the educational and sport ecosystem. First, a systematic review and meta-analysis of randomized controlled trials (n = 430 athletes aged 11-23) demonstrated that Cognitive Behavioral Therapy (CBT) and Mindfulness-Based Interventions (MBI) significantly reduced emotional exhaustion (d = -0.87), reduced sense of accomplishment (d = -0.74), and sport devaluation (d = -0.77). Online interventions proved more effective than traditional formats, highlighting digital delivery as a scalable resilience-building strategy. Second, a pilot study of 73 teachers revealed mean burnout scores of 27.64 (SD = 12.59) for emotional exhaustion and 7.70 (SD = 5.58) for depersonalization. Neuroticism strongly correlated with emotional exhaustion ($r = .457$, $p < .05$) and negatively correlated with personal accomplishment ($r = -.511$, $p < .05$). Extraversion was protective, correlating positively with personal accomplishment ($r = .420$, $p < .05$) and negatively with exhaustion ($r = -.240$, $p < .05$). Physical education teachers reported significantly lower emotional exhaustion (M = 23.21) than teachers of other subjects (M = 31.51; $p = .004$). Teachers aged 26-35 exhibited higher depersonalization than those aged 36-64 ($p = .042$). Third, a large-scale study of 412 licensed soccer coaches showed that age and coaching experience were inversely associated with burnout, particularly among coaches motivated by earning professional development points ($p = .004$; $p < .001$). Younger and less experienced coaches were more vulnerable, while professional development pathways moderated burnout levels. Together, these findings suggest that psychological resilience is not merely an individual trait but systemic infrastructure. Sustainable leadership requires embedding evidence-based resilience interventions, adaptive professional development models, and digitally scalable support systems within educational and sport organizations. Aligned with the LEADER 2050 vision, this research positions burnout prevention as a strategic imperative for safeguarding human capital, strengthening institutional trust, and preparing future generations for complex global challenges.

Key words: psychological resilience; occupational burnout; sustainable leadership; education systems; youth sport; digital interventions

Track Session: PA-GTU: Psychological Antifragility: Growing Through Uncertainty

Rafał Wojakowski, University of Surrey Business School, UK

Athina Ioannou, University of Surrey Business School, UK

Title: What should leaders know about quantum computing? A business analytics perspective on cross-sector quantum preparedness

Abstract:

Quantum computing is expected to affect institutions through two primary channels: cryptographic disruption and computational acceleration of sampling-intensive analytics. These developments act as potential probability amplifiers of systemic risk, particularly through the prospective breakdown of widely deployed cryptographic infrastructures and the propagation of vulnerabilities across interconnected sectors. Despite growing technical attention, there is limited empirical evidence on how such risks are perceived, measured, and managed at the organizational level. This study develops a novel Quantum Awareness Survey grounded in expert insights and structured around a three-pillar framework: Privacy & Security, Business Analytics, and Strategic Investment Cost. Building on this framework, we construct a standardized Quantum Awareness, Preparedness & Readiness Index (QuAPRI) across 10 dimensions, including cybersecurity exposure, hybrid integration capability, technical readiness, and strategic investment orientation. The proposed index provides a quantitative tool for identifying latent vulnerabilities and asymmetries in preparedness, enabling early detection of systemic fragilities associated with quantum disruption. By linking organizational awareness to measurable readiness indicators, the study contributes to modelling and monitoring mechanisms for systemic risk, and supports the development of actionable frameworks for risk assessment and mitigation in the face of emerging technological shocks.

Key words: quantum computing, leadership, post-quantum cryptography, cybersecurity, hybrid decision support systems, innovation readiness, business analytics, finance, systemic risk

Track Session: PASR: Modelling Probability Amplifiers of System Risk

Krystian Wojtkiewicz, Wroclaw University of Science and Technology, Poland

Title: Let's turn digital. What can go wrong?

Abstract:

The global shift toward digital-first administrative and pedagogical workflows in higher education has been accelerated by both technological advancement and the necessity of remote operations. This paper explores the transition from paper-based systems to digital document lifecycles, moving beyond the idealized narrative of "seamless integration" to critically examine the systemic frictions, socio-technical barriers, and unintended consequences of rapid digitization.

While the benefits of digital workflows—such as reduced physical storage, enhanced data retrieval, and lower carbon footprints—are well-documented, the implementation phase often reveals a "digital paradox" where efficiency gains are offset by new forms of administrative burden. This study utilizes a multi-case analysis of three European universities to evaluate the impact of this transition on faculty, staff, and students. Through a combination of semi-structured interviews and workflow audit data, we identify three primary "failure points" in the digitalization process, namely Technological Debt and Fragmentation, Socio-Cultural Resistance, Security and Compliance Overhead.

The findings suggest that the primary risks of "turning digital" are not found in the technology itself, but in the alignment gap between software architecture and the nuanced, often informal, workflows of academic governance. We conclude by proposing a "Hybrid Resilience Framework," advocating for a decentralized transition strategy that prioritizes user agency and redundant verification system.

Key words: higher education digitization; digital workflows; socio-technical barriers; administrative burden; hybrid resilience

Track Session: PASR: Modelling Probability Amplifiers of System Risk

Marta Wolska, Łukasiewicz Research Network, Poland

Title: Risks in the trade of strategically important goods: regulatory, economic, and international security analysis

Abstract:

The publication presents a multidimensional analysis of the risks associated with the trade in strategically important goods, addressing the issue from regulatory, economic, and international security perspectives. It discusses global conditions shaping control systems and highlights the role of the Wassenaar Arrangement as a key element of the security architecture influencing the transfer of armaments and dual-use products.

The text emphasizes the complexity of strategic goods trade, and the SWOT analysis identifies the main opportunities, threats, and internal factors shaping the capacity of entities to operate in a dynamic regulatory and geopolitical environment. The legal framework underscores the importance of national and international norms that define the responsibilities of enterprises and institutions and enforce advanced verification, control, and documentation procedures.

The economic dimension covers the financial, operational, and reputational consequences of inadequate risk management, including sanctions, loss of contracts, and diminished market credibility. From a security perspective, effective risk assessment requires an interdisciplinary approach that considers the nature of the technology, the recipient's profile, and the potential for undesirable use.

Overall, the analysis highlights the need for continuous, informed identification and assessment of risks, supported by an organizational culture grounded in procedural compliance and the development of personnel competencies in an evolving regulatory and geopolitical context.

Key words: strategic goods trade; dual-use goods; export control; regulatory compliance; international security risk

Track Session: Poster Session

Ralph Wrobel, University of Applied Sciences Zwickau, Germany

Title: Escaping the Rare Earth Trap: Lessons from Japan for Europe

Abstract:

Rare earth elements (REEs) are essential inputs for advanced manufacturing, renewable energy technologies, and defence systems. China's dominance in global rare earth mining, refining, and processing has created significant supply risks for industrialized economies. While Europe remains highly dependent on Chinese rare earth supplies, Japan has implemented a comprehensive strategy to reduce such vulnerabilities following the disruption of Chinese exports during the 2010 Senkaku crisis. This paper examines Japan's policy response and evaluates its effectiveness in mitigating geopolitical risks associated with rare earth dependence. It analyses a range of policy instruments, including government-supported overseas resource investments, supply diversification through partnerships with alternative producers, strategic stockpiling, recycling initiatives, and technological substitution. The study also highlights the role of coordinated industrial policy and public-private cooperation in strengthening Japan's supply chain resilience. By assessing the outcomes of these measures, the paper identifies key lessons for the European Union's current efforts to secure critical raw materials under initiatives such as the Critical Raw Materials Act (CRMA). The findings suggest that Japan's proactive and coordinated approach offers valuable insights for Europe in reducing strategic dependence and escaping the emerging geopolitical trap in rare earth markets.

Key words: Rare earth elements (REEs), Japan, China, supply diversification, critical raw materials, industrial policy, supply chain security

Track Session: RE-OP: Resilient Europe: an Ordoliberal Perspective

Krzysztof Ziółkowski, WSB Merito University in Gdańsk, Poland

Title: Sustainability-Driven Forecasting of the Metal Scrap Market: AI Models, Market Conditions, and Long-Term Prospects

Abstract:

The accelerating transition toward circular economic models has increased the strategic importance of secondary raw materials, particularly metal scrap, as key inputs for low-carbon industrial production. This study investigates the long-term development of the metal scrap market by integrating sustainability-driven determinants with advanced forecasting techniques. The research examines how regulatory pressures, global market conditions, and circularity objectives influence the availability, trade flows, and valuation of scrap metals—an area gaining relevance in sustainability transitions and resource management, as highlighted in broader analyses of circular economy pathways.

Using machine learning and ensemble-based modelling approaches, the study develops predictive scenarios for material recovery, market volatility, and resource valorization under tightening environmental constraints. The modelling framework incorporates policy-driven transformations and systemic pressures observed in sustainability transitions, where material flows and resource security increasingly intersect with strategic and environmental considerations . Results indicate that improved forecasting accuracy can significantly enhance planning for recycling capacity, trade optimization, and industrial decarbonization strategies.

The contribution of this work lies in linking AI-based forecasting with circular economy objectives, demonstrating how data-driven modelling can support the valorization of secondary materials beyond organic waste streams, contributing to resilient and sustainable material management systems. The findings are relevant for policymakers, recycling industries, and supply-chain stakeholders seeking to strengthen circularity, reduce resource dependency, and align industrial processes with long-term sustainability goals.

Key words: metal scrap market; sustainability forecasting; AI models; circular economy; secondary raw materials

Track Session: Poster Session

Andrzej Cezary Żołnowski, Karol Janeczek, Elżbieta Rolka & Beata Żołnowska, University of Warmia and Mazury in Olsztyn, Poland

Title: Impact of the Fly Ashes from Biomass Combustion on the Yield and Quality of Green Forage of Corn (Zea mays L.)

Abstract:

Energy production from burning biomass in bioheat plants involves the production of biomass fly ash (BFA). Due to its rich chemical composition, in the era of a circular economy, it should be reused, for example, for environmental purposes as a secondary raw material containing valuable macro- and micronutrients. Due to its alkaline nature, it can also be an alternative to commercial agricultural lime (CAL) for neutralizing the acidic reaction of agricultural soils. The basis for the presented research was a pot experiment with corn (Zea mays L.) as a test plant and increasing doses of BFA (16.20, 32.40, and 48.60 g pot−1), which is equal to 6.99, 13.98, and 20.97 g of CAL pot−1. The above doses were determined based on the neutralization value (NV) of BFA and CAL, calculated to neutralize the hydrolytic acidity of the soil (Hh) to 0.5, 1.0, and 1.5 Hh. The study analyzed the effect of BFA on the leaf greenness index (SPAD), plant height, yield, and chemical composition of corn, as well as macronutrient content. The observations indicate that BFA application positively modified the yield of both fresh mass and dry mass of corn and height of plants, and reduced the dry matter content compared to the effect obtained after CAL use. BFA caused a decrease in the total N and Ca content and a significant increase in P, K, and Na compared to the CAL-fertilized treatments. BFA significantly contributed to a narrowing of the Ca:P, Ca:Mg ratios, and a widening of the K:(Ca + Mg), and K:Ca ratios compared to the ionic balance observed in the CAL-fertilized corn. The obtained results allow us to conclude that fly ash from biomass combustion can be a valuable alternative to conventional soil deacidification agents used till now in agriculture.

Key words: biomass fly ash (BFA); corn; yield; SPAD; macronutrients; ion balance

Track Session: OWV: Organic Waste Valorisation within the Circular Economy Pathway