# Quarterly Corvinus Research Highlights

January – March 2025

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# FOREWORD

Dear Colleagues,

It is a great pleasure to present the first edition of the Quarterly Corvinus Research Highlights for 2025, covering the period from January to March. This issue features a selection of 64 journal articles, 7 book chapters, and a book—representing the most outstanding scholarly work produced by the faculty of Corvinus University of Budapest.

To ensure the highest standards, we applied a rigorous selection process. For journal articles, we relied for the first time on the Scimago Journal Rank (SJR) indicator. Only D1-Q1 articles published in peer-reviewed journals in <u>our journal list</u> with an SJR percentile of 75 or higher were considered. For books and book chapters, we included only those published by <u>publishers</u> recognized in the Corvinus Research Excellence Award. All selected works were uploaded to MTMT during the first quarter of 2025 and had a minimum of 20% Corvinus affiliation. Journal articles are listed in descending order based on their SJR percentile, while other publications are organized by their upload date to MTMT.

I would like to extend my sincere thanks to all the authors for their valuable contributions. High-impact research not only advances academic knowledge but also strengthens the reputation of our university. I wish you continued success in your scholarly work and look forward to the exciting research developments ahead.

Sincerely,

Prof. Tamás Bartus

Vice-Rector for Faculty and Research



# **JOURNAL ARTICLES**



## Utilizing managerial beliefs for set identification of price elasticities of demand

ROUVEN E. HASCHKA; HELMUT HERWARTZ

Journal of the Academy of Marketing Science 2025

#### Abstract

Data-driven decision-making is increasingly prevalent but can clash with managerial beliefs, risking biased decisions. A prime example is pricing strategy optimization, where traditional methods for estimating price elasticities of demand often lead to counter-intuitive results due to model misspecification and the reliance on single-point estimates. To address this, we propose utilizing structural vector-autoregressions (SVARs) to generate identified sets of elasticities, integrating managerial beliefs into the analysis to improve decision-making processes. Using weak restrictions about the directional effects of supply and demand shocks on sales and prices, and assumptions about the functioning of instore promotions effectively sharpens the identified sets. Specifically, we analyze the demand for beer at a large scale for 1,953 stores in the US. For many stores (i.e., at least 40%), both recent endogeneity-robust single-equation methods and alternative identification strategies for SVARs used in marketing studies yield positive price elasticity estimates that oppose behavioral fundamentals. Hence, these are hardly informative for designing pricing strategies. Instead, the suggested approach to set identification yields elasticity estimates that are sufficiently precise to improve the design of retail pricing strategies and offer insights into customer's distinct price sensitivities in grocery and drug stores. Overall, our approach emphasizes the importance of combining data-driven analysis with managerial insights for evidence-based decision-making.



### Modelling time-varying volatility spillovers across crises: Evidence from major commodity futures and the US stock market

SHIETAL RAMESH; RAND KWONG YEW LOW; ROBERT FAFF

### *Energy Economics* 2025 143: 108225

#### Abstract

Effective risk management requires discernment of volatility interaction patterns across assets. Our study examines the level of interconnectedness amongst nine major commodity futures across precious metals, energy, industrial and agricultural sectors and the US S&P 500 index from 1990 to 2022. Spillover indices are constructed by combining the Time-Varying Parameter (TVP)-Vector Autoregression (VAR)-Stochastic Volatility (SV) model with the DY- spillover index. We analyse the fluctuating dynamics of the extent and directionality of the volatility transmissions across various crises. Our results indicate that SPX is the largest net transmitter of volatility information, predominantly affecting crude oil, heating oil, and gold futures, with spillovers intensifying during crises. Gold futures receive heightened volatility transmissions during crises, alluding to the "flight to quality" characteristic displayed by investors. The COVID-19 crisis and the consequent supply chain disruptions uniquely heightened volatility transmissions from lumber to natural gas futures, unseen in previous economic crises. We posit that natural gas futures could be a viable asset for risk diversification as they show limited interaction with SPX and minimal within-sector transmissions with crude and heating oil futures. We substantiate our findings on potential hedge assets by constructing dynamic portfolio weights based on minimising pairwise volatility interactions between assets in the portfolio.



### Urban highways are barriers to social ties

LUCA MARIA AIELLO; ANASTASSIA VYBORNOVA; **Sándor Juhász;** Michael Szell; Eszter Bokányi

**PNAS** 2025 122(10): e2408937122

#### Abstract

Urban highways are common, especially in the United States, making cities more car-centric. They promise the annihilation of distance but obstruct pedestrian mobility, thus playing a key role in limiting social interactions locally. Although this limiting role is widely acknowledged in urban studies, the quantitative relationship between urban highways and social ties is barely tested. Here, we define a Barrier Score that relates massive, geolocated online social network data to highways in the 50 largest US cities. At the granularity of individual social ties, we show that urban highways are associated with decreased social connectivity. This barrier effect is especially strong for short distances and consistent with historical cases of highways that were built to purposefully disrupt or isolate Black neighborhoods. By combining spatial infrastructure with social tie data, our method adds a dimension to demographic studies of social segregation. Our study can inform reparative planning for an evidence-based reduction of spatial inequality, and more generally, support a better integration of the social fabric in urban planning.



### Children preferences for global and local brands: An empirical study drawing on symbolic self-completion theory

### JELENA FILIPOVIC; MATTHEW GORTON; STEFAN MARKOVIC

Psychology and Marketing 2025 42(6): 1456-1475.

#### Abstract

The marketing literature has examined extensively consumer preferences between global and local brands. However, there remains a dearth of research on the topic in the context of vulnerable consumers with insecure self-identities. Children largely embody insecure identities and, thus, there are several factors that can influence their global versus local brand preferences. Surprisingly, however, there is still limited empirical research examining how key demographic and socioeconomic factors influence children's brand preferences, especially in developing countries. Drawing on symbolic self-completion theory, and based on data from Serbia, we address this research gap and contribute to the social psychology and marketing literatures by showing how age, gender, poverty background, and external reference groups influence children's preferences between global and local brands.



# Pushed to the edge? Entrepreneurs with disabilities and the post-socialist experience of ableism

SÁRA CSILLAG; CARMEN SVASTICS; **Anna Laura Hidegh**; Zsuzsanna Győri

### Journal of Business Ethics 2025

#### Abstract

In this study, we examine the narratives of Hungarian entrepreneurs with disabilities (EWD) of the post-socialist era, using microhistory. Our research question concerns how ableism appears in the lives of EWD and how the aftermath of socialism emerges in their experience of ableism. We believe that a state-socialist past influences the lives and careers of EWD in a way that is unique in entrepreneurial and disability literature. Drawing on the accounts of 29 Hungarian entrepreneurs, we identified four mechanisms that make post-socialist ableism specific: invisibility; passivity and welfare dependency; the legitimacy of disability organisations; as well as the limitations of economic participation. Our research suggests that these effects, embedded in the current political, social, and economic environment, can only change slowly and over a long time.



### How to create dynamic capabilities: A design science study

SZABOLCS S. SEBREK; A. GEORGES L. ROMME; ZSOLT T. KOSZTYÁN

Technovation 2025 143: 103204

#### Abstract

Dynamic capability (DC) theories are widely used by innovation scholars, but there is little empirical work that applies these theories in ways that can be used by practitioners. Moreover, DC studies tend to suffer from tautological issues when measurements of DC overlap with those of firm performance. To fill this void, this paper explores how scholars can help companies in creating a dynamic capability. We adopt a design science approach in which scholars and practitioners team up to address and resolve a focal firm's (micro-DC) challenge in managing a large number of product development projects that run simultaneously but all depend on the same resource pool. To address this challenge, we design and implement a process technology tool. This study thus demonstrates how one can solve a real-life DC challenge by developing a practically relevant solution, based on design science.



### Gender equality and green entrepreneurship in farms

IMRE FERTŐ; ŠTEFAN BOJNEC

Sustainable Development 2025

#### Abstract

Gender dynamics in agricultural sustainability, particularly within the framework of Agri-Environmental-Climate-Schemes (AECS), play a critical role in advancing green entrepreneurship. This study explores gender-based differences in the adoption and intensity of AECS practices among Hungarian farms, emphasising the implications for gender equality in sustainable agricultural development. Utilising the Hungarian Farm Accountancy Data Network panel data from 2014 to 2021, we apply Blinder-Oaxaca and Recentered Influence Function decomposition models to dissect disparities in AECS engagement between male- and female-headed farms. Findings indicate that, while male-headed farms receive greater AECS subsidies due to larger economic scales and resource availability, female-headed farms demonstrate comparable levels of AECS intensity when controlled for these factors. These insights highlight the potential for gender-sensitive policies within the European Union's Common Agricultural Policy framework to empower female farmers in green entrepreneurship and sustainable practices. The study's findings contribute to a broader understanding of gender's influence on green entrepreneurship and sustainable development in agriculture, with significant implications for policy frameworks that support inclusive and climate-resilient agricultural practices globally.



### Daring routine: examining the tourists' risk perception attitudes through the characteristics of travel frequency and revisit frequency

László Kökény; Zoltán Birkner; Gábor Michalkó

### **Current Issues in Tourism** 2024

#### Abstract

The turbulent times have led to increased research on risk perception by tourists. Our research aims to measure whether tourists' risk perceptions are also related to travel frequency, not just revisit frequency. Our study examined tourists with a representative sample (N=387). Pearson correlation and basic linear regression analysis were used to test hypotheses. The main finding of our study was that those who travel more often have lower destination risk perception, but it was not ultimately true that those who revisit the same destination more often have lower destination risk perception. The scientific novelty is that, along with the destination-based research logic, the 'legitimacy' of a tourist's travel frequency and the tourists' internal travel characteristics as a tourist-based research logic can be an accurate indicator in researches on risk perception.



## The role of leadership in digital transformation – a paradox way to improve operational performance

KITTI DIÓSSY; DÁVID LOSONCI; MÁRTA ARANYOSSY; KRISZTINA DEMETER

Journal of Manufacturing Technology Management 2025 36(9): 88-113.

#### Abstract

**Purpose** Leadership has been identified as a crucial driver of efficient deployment of any Operations Management (OM) paradigm. Our work focuses on digitalisation, a recent OM paradigm, and analyses the mediating effect of digital transformation (DT) on the relationship between task-oriented and relationship-oriented leadership styles (LSs) and operational performance (OP) improvements in the manufacturing context. **Design/methodology/approach** The authors employed survey data from Hungarian manufacturing firms. Hypotheses are tested using structural equation modelling.

**Findings** Task-oriented and relationship-oriented LSs exert distinct influences on DT and OP improvements. The results indicated that task-oriented LS drives OP improvements through its impact on DT. The relationship-oriented LS does not influence DT. Regarding the implications for OP improvements, we revealed a leadership paradox as the indirect positive impact of task-oriented LS may be offset by the direct negative influence of relationship-oriented LS.

**Research limitations/implications** The results are most pertinent to manufacturing firms that have already started their digital journey. Further studies must clarify how managers' cultural embeddedness (i.e. general perceptions about efficient leadership in their country or region, national culture) could influence findings. Finally, to learn about the effective long-term behaviours of leaders might require different empirical methods.

**Originality/value** To the best of the authors' knowledge, this study represents one of the first survey-based examinations of CEOs on the ways how LSs drive the effective deployment of DT in manufacturing firms. Our findings demonstrate a leadership paradox at the nascent stages of DT in manufacturing firms.



# Partitioned matching games for international kidney exchange

Márton Benedek; Péter Biró; Walter Kern; Dömötör Pálvölgyi; Daniel Paulusma

### Mathematical Programming 2025

#### Abstract

We introduce partitioned matching games as a suitable model for international kidney exchange programmes, where in each round the total number of available kidney transplants needs to be distributed amongst the participating countries in a "fair" way. A partitioned matching game (N, v) is defined on a graph G=(V,E) with an edge weighting w and a partition  $V=V1\cup\cdots\cup Vn$ . The player set is  $N=\{1,\ldots,n\}$ , and player  $p \in N$  owns the vertices in Vp. The value v(S) of a coalition  $S \subseteq N$  is the maximum weight of a matching in the subgraph of G induced by the vertices owned by the players in S. If |Vp|=1 for all  $p \in \mathbb{N}$ , then we obtain the classical matching game. Let  $c=max\{|Vp||1 \le p \le n\}$  be the width of (N, v). We prove that checking core non-emptiness is polynomial-time solvable if c≤2 but co-NP-hard if c≤3. We do this via pinpointing a relationship with the known class of b-matching games and completing the complexity classification on testing core non-emptiness for bmatching games. With respect to our application, we prove a number of complexity results on choosing, out of possibly many optimal solutions, one that leads to a kidney transplant distribution that is as close as possible to some prescribed fair distribution.



## Decoding the dark sides of family business: a synthesis, and future research agenda

AMITABH ANAND; ATTILA WIESZT; ÉVA VAJDA

**Review of Managerial Science** 2025

#### Abstract

Numerous contributions to family business recognize its positive impact on economic and social development. However, literature often overlooks the harmful aspects. To fill this void, we conduct a multidisciplinary systematic literature review to analyze the current state of the different dimensions of the dark sides of family business (FB) literature and synthesize the findings into a holistic framework. Our study employs a qualitative synthesis approach to propose a new unified definition of the dark side of FB, identify the antecedents, and analyze the consequences. Subsequently, we identify areas that require greater attention and outline a promising future agenda for advancing the literature on dark side of FB.



# Enhancing top managers' leadership with artificial intelligence: insights from a systematic literature review

SIMONE BEVILACQUA; JANA MASÁROVÁ; FRANCESCO ANTONIO PEROTTI; Alberto Ferraris

#### **Review of Managerial Science** 2025

#### Abstract

In the contemporary landscape of digital transformation (DT), the wave of artificial intelligence (AI) is radically restructuring the managerial processes of organizations. As a result, the influence of top managers is emerging as a determining factor in the effectiveness of business strategies related to AI innovation. Academics have provided a large body of literature on this topic, drawing on upper echelons theory, which states that top managers' leadership influences companies' strategic decisions and performance. Leaders have revolutionized their roles and skills to exploit the full potential of AI and integrate it into the business decision-making process effectively. However, given the fragmented nature of existing studies, a systematic literature review is needed to consolidate and clarify how AI impacts top managers' leadership. This paper presents findings involving bibliometric and content analysis tools, examining 63 articles from 31 highly ranked academic journals. Three research clusters emerge: (1) AI-driven skills of top managers' leadership; (2) factors driving top managers' decision to adopt AI in organizations; and (3) the strategic use of AI. The article contributes to upper echelons theory, providing a holistic perspective on top managers' leadership in the AI era and a guidance framework for successfully integrating AI in businesses. Finally, the study offers scholars avenues for future research and provides practical insights for top managers seeking to harness AI technologies to enhance their strategic leadership in organizations.



### **Raising environmental awareness with augmented reality**

**GIUSEPPE ATTANASI;** BARBARA BULJAT RAYMOND; AGNÈS FESTRÉ; ANDREA GUIDO

*Ecological Economics* 2025 233: 108563

#### Abstract

Individuals are often poorly informed about the environmental consequences of their actions. Informational campaigns are a widely used policy tool to address imperfect information. However, previous research suggests that simply providing information may be ineffective and fail to engage individuals. We investigate whether augmented reality (AR) can reduce psychological distance and promote pro-environmental behavior. In two incentivized experiments (laboratory and contextualized), we evaluate the effect of AR visualizations of marine plasticpollution consequences on participants' psychological distance and donations to pro-environmental organizations. These measures are complemented by selfreported environmental concern, pro-environmental engagement, intention to act, and prior experience with AR technology. Our results show no significant impact of AR visualizations on psychological distance or donation levels in either the AR-Lab or AR-Context settings. Consistent with these behavioral findings, we observe no significant differences across experimental conditions in self-reported measures. Interestingly, we document a general optimism regarding the effectiveness of immersive technologies as policy tools, highlighting a potential misalignment between public expectations and the actual effectiveness of these technologies.



## Regional green economies and Bitcoin's electricity consumption: Paving the way for global sustainability

SAMET GUNAY; DESTAN KIRIMHAN; SERCAN DEMIRALAY

Journal of Environmental Management 2025 374: 123997

#### Abstract

In the context of global sustainability goals, it is imperative to examine the interplay between emerging financial technologies and environmental objectives, which in turn offers insights into the implications of such technologies on sustainable investments and environmental policy decisions. Accordingly, this study investigates the influence of Bitcoin's energy consumption (BEC), as a representative of the cryptocurrency market, on the regional green economy indices of the United States, Europe, and Asia. Utilizing both unfiltered and filtered data, we conduct empirical analyses from both static and dynamic perspectives to account for the causal relationships that emerged during critical market developments, employing novel algorithms including forward recursive, rolling windows, and recursive rolling. The results reveal that energy-related developments play a dominant role in shaping the causal link between BEC and the green economy performance. More specifically, events such as the COVID-19 pandemic, the Russia-Ukraine war, and China's ban on cryptocurrency mining appear to significantly drive casual effects. After filtering out the impacts of global equity markets and information technology developments, we observe even more pronounced impacts on these causal relationships. Our findings highlight the need for coordinated global actions to address the energy consumption of the cryptocurrency market, facilitating the transition to global sustainability.



### Informal waste collection and municipal waste management in Hungary: A pilot project featuring smartphones to estimate the extent of informally retrieved bulky waste

#### TIM GITTINS; LÁSZLÓ LETENYEI

Waste Management 2025 200: 114757

#### Abstract

Involvement of the Roma population in informal waste collection in the CEE (Central and Eastern Europe) region has barely been researched with collectors as research subjects themselves. This article focuses on collection of bulky municipal waste by predominantly Roma informal waste collectors. A pilot project was implemented in Budapest in 2023 with the aim of assessing the extent of informally retrieved bulky municipal waste otherwise destined for disposal by municipal authorities. This involved the use of smartphones to estimate informal waste accumulation and to monitor selection of waste categories and quantities transported for further use. A survey was thus applied to a sample area subject to annual bulky waste collection. Smartphones were deployed for this purpose to avoid direct intrusion into activities of informal waste collectors. While methodology is subject to major refinement, the key result lies in indication of a moderate extent of informally collected waste inferring an overall reduction of bulky waste destined for landfill disposal or incineration. A major extent of informally collected metallic waste for further likely resale through a transactional supply chain to international destinations was also identified. Policy implications also exist in relation to transformation of the domestic waste management sector in line with circular economy principles and in terms of integrating operative roles of informal and official waste collectors. Principally amongst these is reduced onus on penalisation of informal waste collection. Recognition of circular economy focused public services serendipitously performed by informal collectors may thus be merited despite consequential negative environmental effects.



# External finance and the growth of rural and urban SMEs in England

Amr Khafagya; Thao Nguyen; **Matthew Gorton**; Jeremy Phillipson

#### Journal of Small Business Management 2024

#### Abstract

Small and Medium-sized Enterprises (SMEs) make a substantial contribution to regional development and economic prosperity. Access to external finance is an important determinant of business growth, and the growth potential of rural firms may be hindered by limited access to external finance. Using data from the UK Longitudinal Small Business Survey, this article examines the impact of external finance on SME growth, paying attention to differences between rural and urban enterprises. Results from an extended ordered probit model incorporating yearand firm-effects indicate that the impact of external finance on growth is stronger for rural businesses than their urban counterparts. This holds for both microbusinesses and SMEs. A lack of perceived direct competitors positively moderates the impact of external finance on business growth, with more rural businesses operating in competition voids. The results are robust after controlling for firms' characteristics and endogeneity bias.



### Self-regulation, media pressure, and corporate catastrophes

Edina Berlinger; Judit Lilla Keresztúri; Ágnes Lublóy

*Economic Analysis and Policy* 2025 85: 1337-1356.

#### Abstract

To formalize the monitoring role of the media in corporate finance, we propose a new model of corporate catastrophic risk combining two disciplining forces: corporate self-regulation and media pressure. We assume that optimizing firms have a strong interest in hiding large operational loss events to avoid reputational losses. When a loss is revealed, the operation is immediately restored to its equilibrium, due to higher media attention. The model explains why public losses depend heavily on media attention but seem to be unrelated to the quality of internal governance. Internal governance has high impact on the hidden part of losses. Using the SAS Global Oprisk database, we test the model predictions for the period of 2011-2022 covering 4,547 loss events attributed to firms in the MSCI World index. The results of the empirical analysis are consistent with the theoretical model: higher media attention increases public losses but decreases total (the sum of public and hidden) losses in terms of both frequency and severity. We also find evidence that it may be easier to hide the actual size of large corporate losses than the occurrence of the loss event itself, especially within the financial sector. Promoting press freedom and market liquidity, prerequisites for media and investor attention, can be highly effective policies for improving corporate governance.



# The politics of developmental alliances and municipal industrial policy in Central and Eastern European cities

CORNEL BAN; GERGŐ MEDVE-BÁLINT; CLARA VOLINTIRU

Competition and Change 2025

#### Abstract

Comparative political economists have been late to acknowledge the role of municipalities in industrial policy. Given that industrial policy is traditionally the province of central governments, when and why do cities follow national industrial policy priorities and when and why do they deviate from them? To address the question, the article compares three middle-sized municipalities in Central and Eastern Europe whose economic catch-up strategies shaped their transformation into dynamic economic hubs for the region - a different fate from other comparable cities. Thus, Gdansk (Poland) becomes a manufacturing and knowledge economy hub, Cluj (Romania) morphs into a knowledge economy hub with manufacturing in tow, while Debrecen (Hungary) is reborn predominantly as a manufacturing hub accompanied by an emerging business services sector. While the initiatives of municipal developmental alliances complemented the national export-led growth model in all three cities, only Debrecen fully aligned with the national industrial policy, while Cluj sharply deviated from it, with Gdansk being an intermediary case. The paper argues that this variation can be explained by three factors: preexisting economic legacies in frontier and legacy sectors, the politics of leadership in local developmental alliances, and the politics governing the embedded autonomy of city governments in both the private sector and the central government (double embedded autonomy).



## Comparative analysis of EU-based cybersecurity skills frameworks

#### FERNANDO ALMEIDA

#### Computers and Security 2025 151: 104329

#### Abstract

Research on cybersecurity security skills is highly relevant in today's digital era, where cybersecurity threats are growing in complexity and frequency. This study aims to evaluate and contrast multiple EU-based cybersecurity skills frameworks to highlight areas of convergence, divergence, and potential gaps, offering valuable insights for improving the cohesion and applicability of these frameworks. It was applied a qualitative content analysis approach combined with a comparative analysis technique. This approach is used to identify the main cybersecurity skills emphasized across EU-based cybersecurity frameworks, exploring how they differ in terms of structure, scope, and focus areas, and discovering the main strengths and limitations of these frameworks. The findings support the creation of more inclusive and adaptive frameworks that address underrepresented areas, such as the needs of small and medium-sized enterprises (SMEs) and emerging domains like AI security. Overall, this study serves as a foundational resource for enhancing cybersecurity resilience, promoting skills standardization, and advancing the EU's leadership in global cybersecurity preparedness.



### The psychometric properties of the EQ-HWB and EQ-HWB-S in patients with breast cancer: A comparative analysis with EQ-5D-5L, FACT-8D, and SWEMWBS

Stevanus Pangestu; Fredrick Dermawan Purba; Hari Setyowibowo; Yohana Azhar; Clara Mukuria; **Fanni Rencz** 

Value in Health 2025 28(3): 449-459.

#### Abstract

**Objectives** The EQ Health and Wellbeing (EQ-HWB) is a new generic measure that captures constructs beyond health-related quality of life, with a 25-item long form and a shorter 9-item version (EQ-HWB-S). This study aimed to assess the psychometric performance of both versions in breast cancer, which is the most prevalent cancer worldwide, and compare them with other instruments. Methods A longitudinal survey in Indonesia (2023-2024) with 300 female patients used the EQ-HWB, 5-level EQ-5D (EQ-5D-5L), Functional Assessment of Cancer Therapy - General (from which Functional Assessment of Cancer Therapy Eight Dimension [FACT-8D] was derived), and Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS, from which the Short WEMWBS was derived). Results All patients reported problems in at least 1 EQ-HWB item. The EQ-HWB-S index (11%) had a lower ceiling than the EQ-5D-5L (35%) and the Short WEMWBS (15.3%), but not the FACT-8D (5%). EQ-HWB-S index values correlated strongly with EQ-5D-5L (r = 0.73) and FACT-8D index values (r =0.70), whereas EQ-HWB level sum scores correlated strongly with Functional Assessment of Cancer Therapy - General (r=0.69) and moderately with WEMWBS (r=0.49). The EQ-HWB and EQ-HWB-S discriminated across known groups comparably with the EQ-5D-5L and FACT-8D with large effect sizes according to EuroQol visual analog scale groups, number of symptoms, and general health and exhibited excellent instrument-level test-retest reliability (intraclass correlations, 0.79-0.83) and acceptable responsiveness (standardized response means, |0.24| to |0.97|).

**Conclusions** This study represents one of the first validations of the EQ-HWB and EQ-HWB-S in any clinical population. Both instrument versions demonstrate robust psychometric performance. The EQ-HWB-S can be recommended to inform resource allocation decisions of breast cancer treatments.



### Development and Testing of the Psychometric Properties of 20 Bolt-On Items for the EQ-5D-5L Across 31 Rare Diseases

RICHARD HUAN XU; **FANNI RENCZ**; RUIQI SUN; DONG DONG; SHUYANG ZHANG

Value in Health 2025 28(5): 769-780.

#### Abstract

**Objectives** Our objective was to develop and assess the psychometric properties of relevant bolt-on items for the EQ-5D-5L in patients with rare diseases (RDs). **Methods** Nineteen new EQ-5D-5L bolt-ons were developed based on literature review, expert input, and qualitative interviews and focus groups with patients, caregivers, and representatives of patient associations. A nationwide, cross-sectional, web-based survey in China included patients or caregivers of patients with 31 RDs in China (n = 9190). In each RDs, participants completed the EQ-5D-5L and 3 of 20 (1 existing and 19 newly developed) bolt-ons. Ceiling, explanatory power, convergent, divergent, and known-group validity were examined.

**Results** Among the bolt-ons, itching had the lowest ceiling (6.5%), whereas social relationships had the highest (42.2%). The absolute reduction in the ceiling of the EQ-5D-5L with the addition of any bolt-ons was limited, ranging from 0 (respiratory problems) to 8.3% points (isolation). Dignity and vitality resulted in the largest increase in explained variance in EQ VAS. The isolation, fertility, and visual acuity bolt-ons showed good divergent validity from the EQ-5D-5L items. There was strong convergent validity between SF-12 and conceptually related bolt-ons (eg, physical health composite and muscle problems bolt-on). Various bolt-ons improved the known-groups validity in specific patient groups, eg, Huntington's disease (oral expressions), scleroderma (dexterity), myasthenia gravis (muscle problems), neuromyelitis optica and multiple sclerosis (fatigue), Marfan syndrome (self-image), and Pompe disease (safety).

**Conclusion** The EQ-5D-5L shows sufficient validity in most RDs, but incorporating relevant, specific bolt-ons could enhance its ability to more comprehensively assess health-related quality of life in these patients.



# Model risk at central counterparties: Is skin in the game a game changer?

WENQIAN HUANG; ELŐD TAKÁTS

International Journal of Central Banking 2024 20(3): 161-184.

#### Abstract

As central counterparties (CCPs) have become systemic, their credit risk modeling has become critical for the global financial system. This paper empirically investigates CCPs' incentives to model credit risk. Our hypothesis is that the more CCPs stand to lose from mismanagement, the more conservatively they model credit risk. Accordingly, we find that the higher the skin in the game, i.e., the CCP capital dedicated to credit risk, the lower the model risk is. The results are significant and robust across different model risk proxies. Consistent with our hypothesis, the association with other forms of capital is not significant. Our findings inform the policy debate on CCP capital regulation.



# Understanding rural business resilience during the COVID-19 pandemic

THAO NGUYEN; JEREMY PHILLIPSON; MARIA WISHART; STEPHEN ROPER; MATTHEW GORTON

Journal of Rural Studies 2025 114: 103580

#### Abstract

The survival and performance of businesses depend in part on their resilience when confronted with crises such as the COVID-19 pandemic. Drawing on a unique, large-scale survey of 2600 non-farm rural businesses conducted during the COVID-19 pandemic, we explore how rural businesses, shaped by their context, cope with the adversity caused by the crisis. Clustering rural businesses based on their performance during the pandemic reveals four groups that are distinctive in their performance: a set of unaffected businesses, and three groups which were negatively affected, but where their performance varied nonetheless, with declining, stable, and growth trajectories. Businesses in the negatively affected but growth cluster are distinctive in their resilience strategy, business profiles, and environmental characteristics. Such businesses rate their community engagement as higher, but they are less dependent on their local economy for inputs and sales. They are also proactive in planning for uncertainties and adopt a more transformative strategy. The results have implications for both public policy and business strategies for promoting future business resilience in rural areas and beyond.



# Flying safe: The impact of corporate governance on aviation safety

HAMED KHADIVAR; PEDRAM FARDNIA; THOMAS WALKER

*Journal of Air Transport Management* 2025 124: 102743

#### Abstract

This study examines the impact of various measures of corporate governance on airline safety, addressing a significant gap in the literature that explores safety performance within the aviation industry. Using data from seventy countries spanning the period from 1990 to 2016, we investigate the relationship between corporate governance quality indicators and airline accident rates while controlling for airlines' financial health. Our findings suggest that airlines with less qualified and busier directors, as well as those experiencing higher degrees of director succession, are more prone to accidents. Conversely, longer CEO tenure is associated with a lower accident rate. Furthermore, our findings highlight the importance of a well-developed regulatory environment and transportation infrastructure: airlines based in countries with more stringent legal regulations, robust law enforcement, and superior air transport infrastructure exhibit better safety performance. Our research underscores the critical role of corporate governance in ensuring airline safety and emphasizes the significance of regulatory frameworks and infrastructure investments in shaping safety outcomes in the aviation industry. These results carry significant policy implications for aviation safety regulators responsible for developing, overseeing, and implementing policies aimed at improving aviation safety.



# Mediating role of service quality in the relationship between self-determined study abroad motivations and satisfaction

ATTILA MUCSI; ERZSÉBET MALOTA

Journal of Studies in International Education 2025

#### Abstract

This current research explores the relationships among self-determined study abroad motivations, perceived service quality and satisfaction in the field of international higher education. A sample of 426 international students from 56 countries was analyzed via PLS-SEM. The results show that self-determined motivations positively affect satisfaction, and that perceived service quality partially mediates the effect of self-determined motivations on satisfaction. This research is unique as it provides quantitative evidence that the influence of self-determined study abroad motivations on satisfaction through perceived service quality as a partial mediator is 70% stronger ( $\beta$ =0.202) than the direct influence ( $\beta$ =.119) of these motivations on satisfaction. Students who had a higher level of self-determined motivation rated service quality dimensions higher and subsequently were more satisfied with their experience at the host university and in the host country. Our insights may help higher education institutions and service quality requirements.



# Advancing nickel-based catalysts for enhanced hydrogen production: Innovations in electrolysis and catalyst design

### JOHAN REINEER TUMIWA; TAMÁS MIZIK

International Journal of Hydrogen Energy 2025 109: 961-978.

#### Abstract

Nickel-based catalysts, recognized for their cost-efficiency and availability, play a critical role in advancing hydrogen production technologies. This study evaluates their optimization in water electrolysis to improve efficiency and system stability. Key findings highlight the enhancement of these catalysts with nickel-iron oxyhydroxide and nickel-molybdenum co-catalysts. Technological innovations, such as Perovskite Solar Cells integration for solar-to-hydrogen conversion, are explored. The use of nickel foam enhances electrode durability, offering valuable insights into designing sustainable and efficient hydrogen production systems.



## The effects of a disability employment quota when compliance is cheaper than defiance

JUDIT KREKÓ; ÁLMOS TELEGDY

*Economica* 2025 92(399): 614-643.

#### Abstract

This paper evaluates the effects of the Hungarian disability employment quota, which requires firms over a size threshold to employ individuals with disabilities or pay a non-compliance tax. In 2010, the tax was raised from very low levels to 170% of the minimum wage cost associated with meeting the quota. We employ a regression discontinuity design on firm-level data to estimate the effects of the policy and provide a lower-bound estimate to account for the potential bias resulting from firms bunching below the threshold. Firms respond to the quota by hiring 0.24–0.29 additional workers with disabilities, with a lower bound estimate of 0.12-0.17. However, about two-thirds of the quota is not fulfilled, which is puzzling as the tax is higher than the minimum wage cost of a worker with disabilities. Our model shows that high hiring costs associated with employing individuals with disabilities might be an important factor behind this anomaly. We test this hypothesis by showing that the effect is weaker in regions with a low share of individuals with disabilities, implying that without adequate policies targeting the removal of supply-side barriers to the employment of people with disabilities, even strong demand-side financial incentives cannot achieve their goals.



### Seeing from the north: A critical family language policy study of a peripheral European minority community

Petteri Laihonena; Csanád Bodó; **Judit Gáspár**; Bernadett Jani-Demetriou; Carina Fazakas-Timaru

International Journal of Bilingual Education and Bilingualism 2024

28(3): 292-307.

#### Abstract

Family language policy research has been focused on migrants from the Global South, their linguistic resources and challenges in the Global North target countries. There has been less research on the countries of origin and of those staying behind. To fill this gap, we investigate a minority speaker community touched by intensive labour migration. The participants (n=12) of this research were interviewed in Romanian-Hungarian bilingual villages in the Moldavian province of Romania. We investigate interviews with mothers through methods of interactional discourse analysis. The interviews include recurring narratives of language shift from Hungarian to Romanian and stories about migration as well as more recent narratives about participating in Hungarian language education. Our research questions are based on the Critical Family Language Policy framework: What is a family? what counts as a language? and how to define policy in this context? We conclude that the role and definition of family, the interpretations of what constitutes a language, and most significantly the role of community in discourses about language management are different from those typical in the Global North.



## Qualitative evidence on EQ-5D-5L skin irritation and selfconfidence bolt-ons in Darier's disease and Hailey-Hailey disease

DÓRA PLÁZÁR; ZSERALDIN METYOVINYI; MÁRTA MEDVECZ; FANNI RENCZ

## Quality of Life Research 2025 34: 977-989.

## Abstract

**Objectives** Limited evidence is available about the content validity of the EQ-5D-5L in rare skin fragility disorders. Previous research has demonstrated that the skin irritation and self-confidence additional dimensions (bolt-ons) improve the content validity of the EQ-5D-5L in psoriasis and atopic dermatitis. Our aim was to investigate the content validity of the EQ-5D-5L and the two bolt-ons in Darier's disease and Hailey-Hailey disease.

**Methods** In 2023, we conducted qualitative, semi-structured interviews with 15 adult patients at a university dermatology clinic. Patients completed the EQ-5D-5L with two bolt-ons using a think-aloud technique. We used probing questions to explore the relevance, comprehensiveness and comprehensibility. Thematic analysis was applied to analyze the transcripts from the interviews.

**Results** Most patients found both the EQ-5D-5L and the two bolt-ons comprehensible and relevant to their disease. All patients preferred the EQ-5D-5L with the two bolt-ons over the EQ-5D-5L alone. Twelve potential missing concepts were identified after the EQ-5D-5L+bolt-ons, but only financial impact and sex life were identified by more than one patient. Only one patient reported a conceptual overlap between the skin irritation bolt-on and the pain/discomfort dimension. **Conclusions** Our findings suggest that there is no actionable evidence indicating gaps in the content validity of the EQ-5D-5L with two bolt-ons in Darier's and Hailey-Hailey disease. Future studies are encouraged to conduct quantitative psychometric testing of the bolt-ons in this and other chronic dermatological patient populations.



## Associations between financial toxicity, health-related quality of life, and well-being in Indonesian patients with breast cancer

Stevanus Pangestu; Fredrick Dermawan Purba; Hari Setyowibowo; Clara Mukuria; **Fanni Rencz** 

## Quality of Life Research 2025

## Abstract

**Objectives** Financial toxicity (FT) is the impairment of financial well-being experienced by patients with cancer, categorized into subjective (SFT) and objective (OFT) forms. This study aimed to investigate the associations between FT, health-related quality of life, and overall well-being in patients with breast cancer.

**Methods** We analyzed baseline data from a single-center longitudinal study in Indonesia. Patients completed the EQ-5D-5L, EQ Health and Wellbeing (EQ-HWB), COST: A FACIT Measure of Financial Toxicity (FACIT-COST, for measuring SFT), and OFT-related questions. Ordinal logistic regression was used to examine the associations between FT and selected EQ-5D-5L and EQ-HWB items. Multivariable linear regression was used to assess the associations of FT and EQ-5D-5L and EQ-HWB-S index values. The main regression models were adjusted for sociodemographic and clinical factors such as age, income, metastasis status, and symptoms.

**Results** The survey included 300 female patients with breast cancer undergoing treatment (mean age=51). Overall, 21% experienced high SFT (FACIT-COST $\leq$ 17.5) and 51% reported any OFT (e.g., incurring debt). Adjusted for covariates, higher SFT was associated with more problems in EQ-5D-5L pain/discomfort and anxiety/depression, and in EQ-HWB exhaustion, anxiety, sadness/depression, frustration, pain, and discomfort. OFT was associated with more problems in exhaustion. Higher SFT was associated with lower EQ-5D-5L and EQ-HWB-S index values, with explained variances of 46.3% for EQ-HWB-S and 31.2% for EQ-5D-5L.

**Conclusions** This study is the first to explore the associations between financial toxicity, EQ-5D-5L, and EQ-HWB outcomes in breast cancer. Our findings provide insight into the cancer burden and its link to health and well-being.



## Return trade-offs between environmental and social pillars of ESG scores

LEYLA YUSIFZADA; IGOR LONČARSKI; GERGELY CZUPY; HELENA NAFFA

**Research in International Business and Finance** 2025 75:102779

## Abstract

Our analysis explores the trade-off between environmental and social factors, as we observe that the environmental and social performances of firms are negatively correlated across industries. We find that, from 2013 to 2022, firms with high environmental scores but low social scores outperformed those with low environmental scores but high social scores by an average of 0.39% per month. However, this outperformance diminished when the investment horizon began in 2016. We find that in the period following 2016, public markets began to signal an equal importance for both environmental and social pillars. Therefore, policy frameworks should aim to balance both environmental and social objectives to address the disparities created by regulations that favour one aspect of sustainability over the other.



## Cross-cohort analysis of how COVID has changed the online learning experience of business students

## Ágnes Halász; Zsófia Kenesei

International Journal of Management Education 2025 23(2): 101121

## Abstract

The COVID-19 pandemic reshaped the educational landscape and brought online learning into the mainstream. As management education adapts to this new reality, understanding how the experience of online learning influences students is vital especially when comparing students exposed to online university education during the pandemic with those who went to university afterward. This study examines how the personal characteristics of business students, particularly selfmanagement and the need for interaction, shape their perceptions of online learning. By surveying two cohorts-students from the height of the pandemic in 2020 and a post-pandemic cohort in 2022—we uncover how these characteristics shape the adoption of online learning. Our findings reveal that the need for interaction remains a priority for students, unaffected by the novelty of online education. Meanwhile, the influence of self-management has weakened, suggesting it is a skill that can-and should-be cultivated in online courses. In addition, students increasingly value the enjoyment of online learning (hedonic motivation) over its perceived effectiveness (performance expectancy), emphasizing the need for engaging, well-designed course experiences. This cross-cohort analysis highlights critical shifts in how students engage with online learning, offering valuable insights for the future of management education in a post-pandemic world.



## Development of updated population norms for the SF-36 for Hungary and comparison with 1997–1998 norms

ALEX BATÓ; VALENTIN BRODSZKY; FANNI RENCZ

Health and Quality of Life Outcomes 2025 23: 14

## Abstract

**Background** Hungarian SF-36 population norm data were last collected in 1997–1998 and have not been updated since, reducing their relevance and limiting their usability and comparability. This study aimed to establish contemporary normative data for the SF-36 domain and standardised summary scores in Hungary and compare them to the previous population norms.

**Methods** An online cross-sectional survey, including the SF-36v1, was conducted among 1,700 members of the Hungarian adult general population in 2020. The sample demonstrated good representativeness across key sociodemographic characteristics. Normative data were calculated for domains using raw scores and for summary scores using country-specific factor score coefficients derived from exploratory factor analysis. Multivariate linear regression models were performed to examine the association of domain and summary scores with sociodemographic and healthrelated characteristics. Raw domain scores were compared with the 1997–1998 norms.

**Results** Males reported higher scores (better health) in seven out of eight domains (p<0.001). Mean standardised PCS scores decreased, whereas MCS scores increased with age (p<0.001). Compared to the 1997–1998 population norms, the 18–24 and 25–34 age groups reported lower, while the 65+age group reported higher scores in all eight domains. Higher scores were reported in 2020 from the 35–44 age group onward on the role physical, bodily pain, social functioning, and role emotional domains.

**Conclusions** This study established contemporary population norms for the SF-36 in Hungary. Our results highlight the changes in health status in the general population, particularly in young adults, compared to the 1997–1998 population norms, and provide valuable input to inform decision-makers.



## Investigation of emerging market stress under various frequency bands: Evidence from FX market uncertainty and liquidity

## SAMET GUNAY; BARBARA DÖMÖTÖR; ATTILA ANDRÁS VÍG

## Emerging Markets Review 2025 65: 101262

## Abstract

This study investigates the relationship between Emerging Markets Financial Stress Index (EMFSI) and currency returns, uncertainty and liquidity of eight emerging economies, using MODWT, Wavelet Coherence, TVP-VAR analyses. The results indicate that interactions become more pronounced during political events rather than economic developments. Energy market developments also appear to be significant periods for the interaction of variables, especially for Saudi Arabia and the UAE. Finally, the findings related to investment horizon suggest that short-term spillovers may be linked to medium- to long-term correlations between the EMFSI and currency pairs. This could serve as an early warning for policymakers and investors.



## Supply chain transparency and governance in supplier codes of conduct

**GYÖNGYI VÖRÖSMARTY** 

## Benchmarking: An International Journal 2025

## Abstract

**Purpose** The study's purpose was to analyse the use of supplier codes of conduct as a supply chain governance tool and show that such codes can contribute to transparency in supply chain networks by helping define objectives and promote environmental, social and governance (ESG) developments.

**Design/methodology/approach** The study involved examining 67 publicly available and randomly selected supplier codes of conduct of manufacturing companies from the electronics, vehicle manufacturing, healthcare and food sectors.

**Findings** Supplier codes of conduct reflect the increasing complexity of social and environmental requirements while maintaining the ethical standards. Reactions to new challenges can be identified in the content of the codes. Many codes expect active development by suppliers and the communication of expectations to lowertier suppliers. For setting environmental objectives, standards are important; the most influential reference point for the social elements of codes is recommendations from international organisations, while for ethical instruments, it is national legislation. Codes and related information can thus be an instrument for promoting ESG objectives and governance-related transparency in well-defined supply chains and a part of legitimacy-building efforts associated with a wider group of stakeholders. Industry-level differences are identified.

**Originality/value** Recent literature does little to explore the role of codes of conduct in increasing transparency in supply chain governance and legitimacy efforts. This study contributes by constructing a research framework that helps investigate whether corporate codes of conduct make the activities of supply chain stakeholders more transparent and by providing evidence that companies are actively communicating with a wide range of stakeholders.



## The central role of trust and perceived risk in the acceptance of autonomous vehicles in an integrated UTAUT model

Zsófia Kenesei; László Kökény; Katalin Ásványi; Melinda Jászberényi

European Transport Research Review 2025 17:8

## Abstract

The adoption of autonomous vehicles (AVs) is crucial for the future of transport. Among their many benefits, one of the most important is increased safety. Yet a key barrier to consumer adoption is the perceived level of risk. In our research, we explore this controversy within the framework of the Unified Theory of Acceptance and Use of Technology (UTAUT) model including two key variables: trust and perceived risk. Based on a survey, we tested our hypotheses using structural equation modelling (SEM). Our results suggest that positive perceptions of technology attributes alone—performs well, no effort to use, supported—are not sufficient for acceptance; it is also essential that these attributes increase trust in AVs and thereby reduce perceived risk. If potential users have confidence in AVs and thus perceive a reduced risk, the perceived benefits of the technology can be significantly enhanced. We draw implications for theory and practice from our results, concentrating mainly on the potential to enhance trust in AVs.



## Psychometric benefits of adding bolt-ons to the EQ-5D-5L in populations undergoing minimally invasive cosmetic procedures

Eszter Mercédesz Müller; Anna Nikl; Máté Krebs; Péter Holló; Valentin Brodszky; Lajos Vince Kemény; Fanni Rencz

## **European Journal of Health Economics** 2025

## Abstract

**Objectives** There is growing interest in measuring health outcomes associated with minimally invasive cosmetic procedures (MICPs), such as botulinum toxin and hyaluronic acid injections. However, the EQ-5D may have limited content validity for this purpose. This study aims to psychometrically test five additional dimensions ('bolt-ons') for the EQ-5D-5L in individuals planning or undergoing MICPs.

**Methods** In 2023, a cross-sectional, online survey was conducted with 149 women planning MICPs and 215 who had recently undergone them. Respondents completed the EQ-5D-5L, five bolt-ons (skin irritation, self-confidence, sleep, social relationships, tiredness), the Rosenberg Self-Esteem Scale (RSES) and the Brief Fear of Negative Evaluation Scale-Straightforward Items (BFNE-S). The following psychometric properties were tested for the EQ-5D-5L+bolt-on(s): ceiling, convergent and divergent validity, explanatory power and known-groups validity.

**Results** Adding tiredness (22%), self-confidence (23%) or sleep bolt-ons (27%) substantially reduced the ceiling of the EQ-5D-5L (47%). The self-confidence and social relationships bolt-ons showed a moderate or strong correlation with the RSES and BFNE-S total scores (-0.462 to -0.679). The tiredness and self-confidence bolt-ons improved the EQ-5D-5L's explained variance in EQ VAS scores from 37% to 45%. The self-confidence and social relationships bolt-ons improved the EQ-5D-5L's discrimination between known groups based on self-esteem and bodily appearance (relative efficiency: 2.72 to 2.82).

**Conclusions** Relevant bolt-ons substantially enhance the psychometric performance of the EQ-5D-5L in MICP populations. The self-confidence and tiredness bolt-ons may be recommended as primary choices for use alongside the EQ-5D-5L, both in clinical studies and as part of sensitivity analyses in economic evaluations of MICPs.



## How to measure consumer's inconsistency in sensory testing?

LÁSZLÓ SIPOS; KOLOS CSABA ÁGOSTON; PÉTER BIRÓ; SÁNDOR BOZÓKI; László Csató

Current Research in Food Science 2025 10: 100982

## Abstract

Consumer sensory testing is the basis for determining directions of product development in the food industry. However, while compliance assessment by trained and expert assessors is well developed, few information is available on testing consumer consistency. Therefore, we provide a statistical framework to rank assessors and attributes according to the level of inconsistency, as well as to identify inconsistent assessors, based on Kendall rank correlation coefficients. The detection of (in)consistency requires evaluations on two connected scales. The suggested approach is illustrated by data from sensory tests of biscuits enriched with three pollens at different levels. 100 consumers evaluated the samples on two different scales (nine category monotonic ascending hedonic response scale, fivecategory just about right (JAR) intensity scale). The 88 consistent assessors are found using a wider range of both the liking scale and JAR scale than the 12 inconsistent assessors whose evaluations do not have a significantly negative rank correlation. Future consumer tests are recommended to include multiple scales. The proposed framework aims to identify and even filter out the potentially biasing inconsistent evaluations. Questions on attributes leading to highly inconsistent responses should be reconsidered in future sensory tests on the same food product.



## The soft power cost of COVID-19 in OECD countries: a loselose outcome for China and the United States

JACOB RICHARD THOMAS; LEMENG LIANG; SHIGETO SONODA; YU XIE

International Political Science Review 2025

## Abstract

One way in which many scholars of public opinion have operationalized a country's soft power abroad is to measure how favorably that country is viewed by people in foreign countries. While earlier research has demonstrated the mechanisms and factors correlated with how foreigners perceive a country, much less is known about how sudden and unexpected global events may impact how favorably citizens of different countries view another country. Analyzing recent Pew Global Attitudes Survey data, we assess how the COVID-19 pandemic changed public opinions of China and the United States—with Russia as a reference—in 12 OECD countries. Our analysis reveals that COVID-19 led to a decline in favorability toward both the US and China—the 'soft power cost' of COVID-19. While the cost is larger for China than for the US in most countries, we observe exceptions in Germany, Italy, and South Korea. We also explore the heterogeneity of the soft power cost by respondents' individual attributes and other attitudes such as how COVID-19 impacted their lives.



## Experiences Influencing the Preparation of the Post-2027 EU Budget Framework

## **ÁKOS KENGYEL**

Intereconomics: Review of European Economic Policy 2025 60(1): 60-66.

## Abstract

The article analyses the factors affecting the preparation of the post-2027 EU budget framework by examining the characteristics of the European Union's budget and the changes that took place between 2021 and 2027. The article draws lessons from the Multiannual Financial Framework and the NextGenerationEU programme and maps the factors influencing the planning of the post-2027 budget. The analysis pays special attention to the consequences arising from the new approaches applied in connection with the NGEU.



## Forecasting cause-of-death mortality with single- and multipopulation models in Hungary

## LÍVIA VARGA

## Scandinavian Actuarial Journal 2025

## Abstract

The aim of this study is to analyze and forecast cause-specific mortality in Hungary using different models from the Lee–Carter model family. The stochastic mortality models were fitted to time series from 1970 to 2021 by sex, main cause of death and age 60 and over. We fitted single- and multi-population models that differed in their assumptions about the distribution of deaths, the number of mortality indices describing the trend in mortality change, and the age-varying coefficient(s). The use of the dynamic time warping algorithm to cluster the period effects of the single-population models and to build multi-population models on this basis is a new approach. The clustering of mortality indices by cause of death appeared to be different for men and women, reflecting the different lifestyles of the sexes. For each model and each main cause of death, we made a projection by sex up to 2050. The reduced Plat model with three mortality indices was found to be the best predictive model, and its multi-population version also performed well for some causes of death.



# Examining the synergies between industry 4.0 and sustainability dimensions using text mining, sentiment analysis, and association rules

MOHAMAD ALI SALEH SALEH; MUTAZ ALSHAFEEY

Sustainable Futures 2025 9: 100423

#### Abstract

The transformation to Industry 4.0 has significantly revolutionized manufacturing and production processes, raising important questions about their impact on sustainability. This study aims to explore the interplay between Industry 4.0 and the economic, social, and environmental dimensions of sustainability. The methodological approach includes advanced text-mining, sentiment analysis, and association rule-mining techniques to examine 6,759 abstracts from the Scopus database. The text mining highlighted frequent keywords related to Industry 4.0 and the three sustainability dimensions, characterized by "economic growth," "circular economy," "social responsibility," "education 4.0," "energy efficiency," and "waste management." Sentiment analysis revealed a predominantly positive perspective, with 2,608 positive sentiments out of 2,761 in the economic dimension, 1,604 out of 1,728 in the social dimension, and 1,352 out of 1,527 in the environmental dimension. The association rule mining uncovered the associations between Industry 4.0 and each sustainability dimension. The highest support was observed between Industry 4.0 and economic sustainability, with a support value of 0.444, confidence of 0.855, and a lift of 1.060. These findings highlight the role of Industry 4.0 in promoting resource efficiency and reducing waste through circular economy principles and advanced manufacturing technologies. For the social dimension, the analysis revealed a strong association with Industry 4.0 (support: 0.430, confidence: 0.831, lift: 1.030), emphasizing its role in enhancing worker safety and job satisfaction by automating hazardous tasks and creating new hightech job opportunities. In the environmental dimension, a significant association was found (support: 0.380, confidence: 0.827, lift: 1.024), showing Industry 4.0's contribution to sustainability through optimized energy consumption and emissions reduction as the integration of big data and IoT enables real-time monitoring of environmental impacts.



## Why people do not use MOOCs: an innovation resistance perspective

GÁBOR PÖRZSE; ZSÓFIA KENESEI

Information and Learning Science 2025

## Abstract

**Purpose** Even though the pandemic years resulted in a significant increase in massive open online courses (MOOCs), there are still countries where penetration is low. The rejection of MOOCs can inhibit individual and societal advancements. The purpose of this study is to explore what is behind the resistance to MOOCs in these regions. Using the theoretical framework of innovation resistance theory, it defines the factors that inhibit the adoption of MOOCs.

**Design/methodology/approach** The research is based on two studies. In the first study, in-depth interviews were used to explore factors that may cause barriers to adoption. Following the results of the first phase, a survey was conducted to investigate resistance to MOOCs, including both users and nonusers of such platforms.

**Findings** Structural equation modeling revealed the presence of functional and psychological barriers, with the most significant being usage and value-related barriers. The lack of information and the need for interaction were identified as the main factors contributing to these barriers.

**Originality/value** The results help increase the acceptance and effective integration of MOOCs into different educational environments, especially in countries with high resistance.



## Challenges of employment in the agrifood sector of developing countries—a systematic literature review

Tamás Mizik; Judit Nagy; Endre Mihály Molnár; Zalán Márk Maró

Humanities & Social Sciences Communications 2025 12: 62

## Abstract

Agri-food employment in developing countries holds significant importance due to the vital role of the sector. This study synthesizes existing literature to identify the key challenges of employment in the agri-food sector in developing countries. 17,125 articles were identified in the Scopus database and based on a two-stage systematic review of 173 articles (final database), six principal topics were identified and analyzed: (1) family farms; (2) special characteristics of employment; (3) gender disparities; (4) wages; (5) education; (6) productivity. Each segment provided important results. Family farms were found to be crucial for employment, production, and income generation in developing countries. The special characteristics of employment often involve migration and mobility challenges, while gender inequalities persist due to the special nature of production. Agricultural wages are lower compared to other sectors, further accelerating outmigration. Education plays a key role to adopting advanced production methods, but educated people often find better opportunities outside the sector. Finally, productivity is crucial in income generation and is often driven by mechanization. These six segments are interconnected, with education emerging as a key factor. This study contributes to the existing literature by providing a systematic and comprehensive synthesis of the employment challenges in the agrifood sector of developing countries and providing targeted insights for policymakers to address pressing issues such as gender inequality or low agricultural productivity.



## Revealing urban area from mobile positioning data

## GERGŐ PINTÉR

**Scientific Reports** 2024 14: 30948

## Abstract

Researchers face the trade-off between publishing mobility data along with their papers while protecting the privacy of the individuals. In addition to the anonymization process, other techniques, such as spatial discretization and location concealing or removal, are applied to achieve these dual objectives. The primary research question is whether concealing the observation area is an adequate form of protection or whether human mobility patterns in urban areas are inherently revealing of location. The characteristics of the mobility data, such as the number of activity records in a given spatial unit, can reveal the silhouette of the urban landscape, which can be used to infer the identity of the city in question. The presented locating method was tested on multiple cities using different open datasets and coarser spatial discretization units. While publishing mobility data is essential for research, concealing the observation area is insufficient to prevent the identification of the urban area. Instead of obscuring the observation area, noise should be added to the trajectories to mitigate privacy risks regarding the individuals.



## Trade-offs and synergies when balancing economic growth and globalization for sustainable development goals achievement

IMRE FERTŐ; GÁBOR HARANGOZÓ

Scientific Reports 2025 15: 8634

#### Abstract

This study investigates the complex relationships between globalization, economic growth, urbanization, and ecological footprint in the context of advancing the United Nations Sustainable Development Goals (SDGs). Employing a club convergence framework, we evaluate global SDG Index from 2000 to 2023 for 149 countries with 3212 observations, identifying five converging clubs and one nonconverging group. Our analysis demonstrates that higher GDP per capita and various dimensions of globalization positively impact SDG outcomes, whereas rapid urbanization and expansive ecological footprints exert negative influences. This research highlights the critical need for tailored policy interventions that address the distinct challenges encountered by different country clusters to bolster sustainable development efforts. Our findings reveal the multifaceted nature of sustainable development, indicating that economic growth and globalization can support SDG advancement if their detrimental effects are effectively mitigated. The study offers valuable insights for crafting national and global strategies to expedite progress towards the SDGs, emphasizing the importance of harmonizing economic, social, and environmental priorities.



## Statistical overview of the Sniffin' sticks olfactory test from the perspectives of anosmia and hyposmia

László Sipos; Zsófia Galambosi; **Sándor Bozóki**; **Zsombor Szádoczki** 

Scientific Reports 2025 15: 8984

## Abstract

The Sniffin' Sticks test is evaluated by summing the scores of threshold, discrimination, and identification subtests to establish an olfactory diagnosis (anosmia, hyposmia, normosmia). However, variations in thresholds, ranges and inconsistencies have been observed. Statistical analyses (distributions, quantiles), protocol simulation, and implementations of the Sniffin' Sticks test were conducted. This study contributes a statistical revision: determining a cut-off point for the total TDI score, optimising the number of alternatives in the identification subtest, and equalising correct responses (frequency, balanced in time, subsequent pairs). The upper score threshold used to diagnose anosmia is lower than the typical first-order error thresholds applied in comparable assessments (anosmia≤16.75 points, hyposmia≥17 points at 90% confidence level). In the culturally adapted 16pen Sniffin' Sticks identification tests, the frequency of correct responses was aligned with that of the original test. However, the equalisation of the frequency of adjacent correct response pairs and the temporal occurrence of correct responses was not met in any test. The order of all correct answers that simultaneously satisfied all three matching conditions was determined. The practical significance of the results is that the recommended protocol of the Sniffin' Sticks test system can be implemented in clinical practice with minimal modification.



## Are ESG factors truly unique?

## SVETOSLAV COVACHEV; JOCELYN MARTEL; SOFIA BRITO-RAMOS

North American Journal of Economics and Finance 2025 77: 102386

## Abstract

The growing popularity of ESG investing raises questions about whether ESG and carbon factors represent unique sources of systematic risk or are absorbed by traditional equity factors. We find that the systematic components of recently proposed carbon and ESG risk factors are linear combinations of well-known risk factors. The ESG factor has a positive exposure to large firms, high beta firms and to the safety factor (a subcomponent of the quality factor). The carbon factor has positive exposure to the market and safety factors and negative loadings on the size and profitability factors. Furthermore, investors who follow well-known ESG indexes are exposed to market and size factor risks, and not always to the ESG and carbon factors. Such indexes are nevertheless closely related to the "long leg" of the ESG factor. Overall, the evidence suggests that the ESG and carbon factors are subordinated to other factors, highlighting the importance of leveraging established risk factors to account for ESG and carbon risks.



## Food security and crises: evidence from the Western Balkans

## ATTILA JÁMBOR; ÁGNES VARGA

## Agriculture and Food Security 2024 13: 60

#### Abstract

**Context** The world has experienced many global shocks in recent years, especially affecting vulnerable countries, people and groups. The analysis of recent impacts helps us to better understand how to build more sustainable agri-food systems. Objectives This paper aims to analyse the situation and main determinants of food security in the Western Balkans in light of the recent crises to ensure higher resilience for the future.

**Methods** It follows a threefold approach. First, the food security situation in the different countries was analysed quantitatively using descriptive statistics of the main indicators on a time-series basis and the main determinants of food security. Second, the results of the semi-structured interviews with local experts were presented to understand the reasons for the changing patterns of food security. Third, results were validated during a hybrid workshop.

**Results** Our findings suggest that food security and food supply were stable in most cases, while a large number of small farms, rural depopulation, climate change and harmonisation of food systems were cited as the main challenges. The COVID-19 pandemic did not appear to have a serious impacted on food security, although it has certainly accelerated the restructuring within the agri-food sectors. However, the war in Ukraine has had a greater impact, particularly in terms of high price inflation and rising prices for agricultural inputs.

**Conclusions** This paper analysed the food security situation in the Western Balkans in the light of recent crises. Although the region has made good progress in reducing poverty and inequality in recent decades, the COVID-19 pandemic and the war in Ukraine appear to have stalled or, in some cases, even reversed this progress. This paper provides a number of policy recommendations based on the results to shape future policies of the region towards higher resilience.



## Mapping global value chains at the product level

## LEA KARBEVSKA; CÉSAR A. HIDALGO

**EPJ Data Science** 2025 14: 21

## Abstract

Value chain data is crucial for navigating economic disruptions. Yet, despite its importance, we lack publicly available product-level value chain datasets, since resources such as the "World Input-Output Database", "Inter-Country Input-Output Tables", "EXIOBASE", and "EORA", lack information about products (e.g. Radio Receivers, Telephones, Electrical Capacitors, LCDs, etc.) and instead rely on aggregate industrial sectors (e.g. Electrical Equipment, Telecommunications). Here, we introduce a method that leverages ideas from machine learning and trade theory to infer product-level value chain relationships from fine-grained international trade data. We apply our method to data summarizing the exports and imports of 1200+ products and 250+ world regions (e.g. states in the U.S., prefectures in Japan, etc.) to infer value chain information implicit in their trade patterns. In short, we leverage the idea that due to global value chains, regions specialized in the export of a product will tend to specialize in the import of its inputs. We use this idea to develop a novel proportional allocation model to estimate product-level trade flows between regions and countries. This contributes a method to approximate value chain data at the product level that should be of interest to people working in logistics, trade, and sustainable development.



## Can we trigger radical lifestyle change in sustainable consumption? Exploring motivations, abilities and triggers of dietary changes

MÁRIA CSUTORA; ZSÓFIA VETŐNÉ MÓZNER

British Food Journal 2025 127(4): 1169-1186.

## Abstract

**Purpose** Reducing meat consumption requires significant effort from individuals. Such shifts in diet can be compelling examples of radical lifestyle change. The article explores factors that may trigger radical behavioural change. Decreased meat consumption yields environmental and health advantages; nevertheless, individuals often neglect to adopt this change in their diet.

**Design/methodology/approach** The conceptual model is based on Fogg's behavioural framework. The research is based on a survey, where respondents have already changed their lifestyles and reduced their meat consumption in the past. Respondents were recruited from social media groupsin Hungary. Particular emphasis is put on the deeper analysis of open-ended questions. The coding process proposed by Strauss and Corbin was followed. Coding and analysis were supported by NVivo software.

**Findings** Motivations, abilities and triggers of dietary changes were identified. Resultsrevealed the prominent role of content creators. Influencers and social media can play an incubator role in diffusing new consumption patterns. Strong emotional experiences can also trigger radical lifestyle changes. Discouraging voices were mainly those of family and close acquaintances. Children tend to encourage parents, while parents tend to discourage children when it comes to reducing meat consumption.

**Originality/value** Behaviour change theories primarily focus on incremental changes, yet there is a growing need to understand radical lifestyle changes related to food consumption. This article explores the triggering factors of such radical dietary changes. The study is a rare example of large-scale qualitative sustainable consumption research.



## Pathways to green food purchases: exploring the nexus of attitudes, habits and lifestyles using SEM and NCA

WAQAS MAZHAR; GYULA ZILAHY

British Food Journal 2025 127(13): 208-229.

## Abstract

**Purpose** Green food consumption offers a promising avenue for reducing the negative environmental impacts of the food sector. However, the challenge lies in reshaping food-related behaviors that are deeply embedded in habits and lifestyles. This study explored how attitudes, purchasing habits and food-related lifestyle characteristics influence the intention to purchase green food products.

**Design/methodology/approach** This study utilized a representative survey of 475 residents from Budapest, Hungary. Data were gathered through a structured questionnaire adapted from established literature. The analysis was conducted using partial least squares structural equation modeling (PLS-SEM) and necessary condition analysis (NCA).

**Findings** The findings of this study revealed that attitudes, green habits and foodrelated lifestyle characteristics positively influence green food purchase intentions. Among these factors, green habits emerged as the most influential, while food innovation had the least impact. Furthermore, the necessary condition analysis (NCA) identified attitude as the sole necessary condition, albeit with a lowto-moderate effect size.

**Originality/value** These findings hold significant implications for policymakers and managers, who can leverage this information to foster green food purchase intentions. By gaining deeper insights into the characteristics of their target markets and employing tailored communication strategies, they can more effectively promote sustainable consumption behaviors.



## A cross-country comparison of wine in cultural foreign policy in Portugal and Hungary

JEREMIÁS MÁTÉ BALOGH; NUNO MORGADO

British Food Journal 2025 127(13): 248-263.

## Abstract

**Purpose** This paper assesses the differences in the use of wine, as a consumed food substance, in the formulation of Portugal and Hungary's cultural foreign policies between 2010 and 2022. By comparing the degrees of effectiveness of these two traditional wine-making countries' approaches in shaping their national image, we contribute to the limited literature on wine diplomacy and cultural foreign policy. We highlight the disparities in policies and state organizations responsible for formulating the respective policies. Wine diplomacy enhances international affairs and strengthens political and economic ties, hence its importance in cultural foreign policy.

**Design/methodology/approach** The authors apply the concept of soft power and draw on neoliberal foreign policy theory to conduct research. The paper is a descriptive-analytical study, comprising a theory testing approach through the application of the concept of soft power. It employs content analysis of wine diplomacy literature, as well as process tracing between the statistical results and the structure of the domestic organizations and their policies.

**Findings** Our findings show that an international wine strategy can be utilized as a form of soft power. Furthermore, Portugal produces nearly three times as much wine as Hungary and exports more than twice as much. However, Portugal's international wine strategy is less developed than the Hungarian one. This fact creates a puzzle that requires further investigation. **Research limitations/implications** Wine is seen as a form of soft power that may enhance a country's international relations, project a favorable country image, foster cooperation and cultural exchange through events and institutions. In this way, when appropriately utilized, wine can also strengthen political and economic relations.

**Originality/value** The paper addresses a gap in the existing literature by applying a mixedmethods approach to the comparison of Portugal and Hungary's wine foreign policies at the formulation level and presents a novel means for examining wine as a soft power element in international relations.



## A comparative analysis of ensemble autoML machine learning prediction accuracy of STEM student grade prediction: a multi-class classification prospective

Yagya Nath Rimal; Navneet Sharma; Abeer Alsadoon; **Sayyed Khawar Abbas** 

Multimedia Tools and Applications: An International Journal 2025

## Abstract

Statisticians in the early stages in research aiming to predict the relationship between dependent and independent variables for better classification. This association may exhibit either a negative or positive correlation to target features, albeit with varying degrees of reliability. This paper tries to fulfill the research gap between the selection of appropriate Automl model for multiclass student grade classification for the predication bachelor degree grade. Consequently, this study endeavors to assess the predictive accuracy of an ensemble AutoML (Automated Machine Learning) model for science, technology, engineering, and management students letter grading. This assessment is based on their subject grades from high school through to internal evaluation of bachelor's degree, to predict bachelor's degree (final) outcomes when the target variables are in multiclass letter grading in a modern system. The ensemble AutoML approach is employed to forecast upcoming grades. Nine out of 78 recommended Automl models undergo fine-tuning and cross-validation for performance metrics, evaluating the best-optimized hyperparameters and assessing their performance after best-optimized hyperparameters. The study analyzed the performance of various models in classifying STEM students, focusing on their accuracy and prediction error rates and miss classification between train and predicated values. The history scoring of each model tuned recommended hyperparameters to achieve the best model. The feature importance of dependent and independent features was analyzed comprehensively to true and predicated and internal multiclass grading classification of STEM student and contrasted to provide a detailed explanation of their respective performance.



## Twenty years of EU accession: learning lessons from Central and Eastern European agriculture and rural areas

ATTILA JÁMBOR; MATTHEW GORTON

Agricultural and Food Economics 2025 13: 1

## Abstract

Twenty years have passed since the first eastern enlargements of the European Union (EU). This paper assesses the impacts of EU accession on agriculture and rural regions of Central and Eastern European countries and identifies the reasons behind differences in country performance. Results suggest that EU accession brought modest convergence with established Member States. However, countries capitalised on the opportunities given by EU membership to differing extents. Specifically, the Baltic countries and Poland performed best post-accession, while Croatia, Slovenia, and Hungary witnessed much slower rates of convergence. The findings are consistent with the notion of convergence clubs, with persistent variations in catch up rates between groups of states. To explain membership of lower- and higher-speed convergence clubs, the paper identifies four sets of factors, namely initial conditions, pre-accession policy frameworks and actions, administrative preparedness, and post-accession policies.



## Unravelling the definition of business process innovation: a systematic literature review

DETRIN QERIMI; KRISZTINA DEMETER; DÁVID LOSONCI

International Journal of Innovation Science 2024

## Abstract

**Purpose** Business process innovation (BPI) is an emerging field that has captured the interest of both academics and policymakers. However, the term is often fraught with ambiguity and inconsistencies in the literature, lacking a comprehensive understanding. The purpose of this paper is to explore what lies behind and determine the definition of BPI as well as to provide a deeper understanding of its key components and antecedents.

**Design/methodology/approach** The study reviews the literature by applying Tranfield, Denyer and Smart (2003) method. A systematic approach was adopted to gather pertinent scholarly articles from the Scopus database, resulting in 516 potential articles, of which 32 relevant articles were included for analysis.

**Findings** BPI encompasses innovations in processes, organizational structures and marketing. These components of innovation, along with crucial antecedents such as business process re-engineering, improvement and redesign, provide a comprehensive, end-to-end framework for defining BPI. These results demonstrate BPI as an internal change, modification or improvement of business processes and functions that should consolidate at least a type of innovation that is used in the organization and creates an output that is a value to the organization, customers and/or stakeholders.

**Research limitations/implications** An important limitation of this study pertains to the inclusion criteria, which restricted to the "definitions". Consequently, there is a possibility of overlooking some relevant literature. Furthermore, the framework is purely conceptual. Although grounded in the existing literature, the authors focused on examining the definitions and conceptual frameworks.

**Originality/value** By synthesizing a comprehensive selection of literature spanning the years 1990–2022, this paper represents a unique contribution to the conceptualization of BPI through its components and antecedents.



## European attitudes towards parenting and adoption by same-sex couples

IVETT SZALMA; JUDIT TAKÁCS

**European Journal of Politics and Gender** 2025

## Abstract

This study investigates attitudes towards the adoption rights and parenting skills of same-sex couples in 25 European countries using data from the European Social Survey and the European Values Study. The aim is to explore how political-demographic processes and various types of pronatalism intersect and shape attitudes towards same-sex parenting issues. Our hierarchical regression analysis reveals that similar social groups generally accept both same-sex adoption rights and parenting skills. Additionally, attitudes towards these issues are influenced by views on immigration and voluntary childlessness, along with macro-level factors like legal regulations, gender inequality and religiosity. The study enhances the understanding of European political-demographic processes and the concept of selective patriotic pronatalism – defined as a preference for the reproduction of certain social groups over others, framed as a national or patriotic duty – by highlighting that various forms of pronatalism can actually impede reproductive empowerment.



## Enhancing the professional identity of master's students: "knowing why," "knowing how" and "knowing whom"

ANTONINA LISOVSKAIA; DMITRY KUCHEROV

Education and Training 2025 67(2): 184-205.

## Abstract

**Purpose** This paper aims to explore how teaching activities can enhance the professional identity of master's students as they explore careers.

**Design/methodology/approach** The data were gathered through qualitative semistructured interviews with 57 participants, 2nd-year master's program students from a Russian business school, shortly before graduation.

**Findings** The research results reveal a lack of reflection on professional identity and introspection through personality traits among master's program students. This insight is vital for strengthening students' professional identity in higher education, emphasizing the importance of reflection. Furthermore, our research underscores the idea that business schools should prioritize career-related courses to bolster the student's professional identity. These findings provide a new perspective on the role of professional identity in career development, enlightening the field of management education.

**Research limitations/implications** Understanding the professional identity and career strategies of young people is crucial. It equips educators, employers and policymakers with the necessary guidance and teaching activities to prepare students for their professional journey. This study provides practical insights that can be directly applied in management education, ensuring that students are well-prepared for their future careers. We suggest using the concept of an intelligent career and three interdependent competencies ("ways of knowing") reflecting why, how and with whom people work to develop course matriculation and teaching activities.

**Originality/value** This study contributes to a better understanding of the students' professional identities and identifies teaching activities that could be considered in management education.



## The fairness of the group draw for the FIFA World Cup

## László Csató

International Journal of Sports Science and Coaching 2025 20(2): 554-567.

## Abstract

Several sports tournaments contain a round-robin group stage where the teams are assigned to groups subject to some constraints. Hence, the organisers usually use a computer-assisted random draw to avoid any dead end, a situation when the teams still to be drawn cannot be assigned to the remaining empty slots. This procedure is known to be unfair: the feasible allocations are not equally likely, that is, the draw does not have a uniform distribution. We quantify the implied unfairness of the 2018 FIFA World Cup draw and evaluate its effect on the probability of qualification for the knockout stage for each national team. The official draw order of Pot 1, Pot 2, Pot 3, Pot 4 turns out to be a significantly better option than the 23 other draw orders with respect to the unwanted distortions. Nonetheless, the non-uniform draw distorts the probability of qualification by more than one percentage point for two countries. Our results call attention to the non-negligible role of draw order and make it possible for policymakers to decide whether using fairer draw mechanisms is justified.



## Impact of institutional change programs on digital and sustainable public sector governance

CSABA JÁNOS LATORCAI; PÉTER STRAUSZ; ZOLTÁN CSEDŐ

International Journal of Public Sector Management 2025

## Abstract

**Purpose** Institutional change (IC) programs in the public sector are often driven by sustainability and digitalisation as contextual factors, contributing to the development of digital and sustainable governance (DSG) systems. This study aims to explore the longitudinal impact of ICs on DSG advancements.

**Design/methodology/approach** We collected and analysed data of 200 public sector organisations in two European countries and conducted a longitudinal analysis, focusing on the impact of European Union-funded IC programs.

**Findings** Results show that steps towards digital governance (DG) are demonstrably linked to environmental efforts, and EU-funded IC programs could have a long-term positive impact on digital and environmentally sustainable governance in Europe. Findings, however, highlight the unbalanced nature of sustainability governance, as environmental and policy-related conditions and activities seem to be overemphasised.

**Practical implications** Environmental policy seems to be established, but future DG initiatives should consider more environmental polity conditions and activities (e.g. dedicated departments), as well as economic and social sustainability to ensure well-balanced governance systems.

**Originality/value** To the best of our knowledge, this is the first study that explores empirically how prior IC programs affect future DSG in the public sector.



## **Decision-making preferences in times of crisis**

Réka Várnagy; Anna Novák; Judit Badics

**Politics and Governance** 2025 13: 9178

## Abstract

During crises, understanding political decision-making processes and evaluating related preferences are key to the legitimacy of political decisions. Our research focuses on preferences in decision-making processes in times of crisis through the analysis of the representational style most preferred by voters: that is, whether they prefer representation of the public good by the representatives, the party lines, the involvement of experts, or the incorporation of voters' interests. Within the framework of representative democracy, these decisions are mediated by representatives whose representational style determines whose interest and opinion decision-making processes integrate. In our analysis, we examined representative styles in the context of three different types of crises: economic, social, and environmental. Our results indicate that the type of crisis is indifferent when it comes to preferred political decision-making processes, as Hungarian voters tend to favor processes where they are being consulted by the representatives across different scenarios. Representatives' commitment to party lines is disfavored when making political decisions and we observed there is no clear preference regarding the involvement of experts in political decisions in times of crisis. These observed preferences strongly contradict the prevailing "strong party discipline" in Hungary. This deviation accentuates both weakening representative linkages and the importance of the performative elements of representation feeding into the populist characteristic of Hungarian democracy.



## The irresistible allure of charismatic leaders? Populism, social identity, and polarisation

**Rudolf Metz;** Bendegúz Plesz

**Politics and Governance** 2025 13: 9017

#### Abstract

This article examines the complex interplay between populism, social identity, and charisma attribution in leader-follower relationships. Drawing on a survey conducted in Hungary during the 2022 election, we investigate how populist attitudes and partisan identity shape citizens' perceptions of leaders, specifically assessing the charismatic appeal of Viktor Orbán and Péter Márki-Zay, and charisma attribution across three levels: a general need for charismatic leadership, recognition of specific charismatic behaviours, and emotional attachment. We found that while populist attitudes drive an overarching idealisation of leadership, partisan identity more directly influences the perception of leaders' charismatic qualities and emotional connections to them. Contrary to prevailing assumptions, our findings reveal that populist attitudes do not have a direct effect on (leader) affective polarisation, while the idealisation of leadership significantly increases it. A key observation here is that while partisanship influences both positive and negative perceptions of charisma, identity strength only enhances emotional attachment in the positive direction. It has no moderating effect on negative perceptions, suggesting that rejection of the out-group leader is a foundational aspect of group membership. These dynamics underscore the role of populism and identity politics in fostering political divisions, suggesting that identity-based attachments are crucial for understanding the emotional resonance between charismatic leaders and their followers. This study contributes to the ongoing discourse on the relationship between charismatic leadership and populism, identity, and polarisation, emphasising the significance of followers' attitudes in political dynamics.



## Art as a channel and embodiment of symbolic interaction between migrants and non-migrants

## **JACOB THOMAS**

## Symbolic Interaction 2025

## Abstract

Many non-migrant politicians, journalists, and scholars in migrant- destination societies often represent migrants with self-interested objectives and in specific instrumental ways based on stereotypes. Yet research on symbolic interaction reveals migrants are not passive victims. They actively and strategically shape their interactions with non-migrants. The artwork produced by Chinese migrant artists becomes a non-verbal channel through which the migrant can convey such challenges to non-migrants who can more empathetically appreciate these challenges. By analyzing the artwork and narratives of first-generation migrant artists, I show how art highlights various challenges that migrants confront in their process of immigration, like enduring physical pain, conforming to the institutions of the host society, navigating language barriers, confronting regular cultural clashes, accepting social estrangement, and coping with double consciousness. This paper shows how migrant art can serve as a semiotic object that reveals important features of past symbolic interactions between migrants and nonmigrants and offers a channel through which non-migrants can potentially empathize more with migrants' experiences.

## **BOOK CHAPTERS**



# **Economic populism in four East-European countries**

## ISTVÁN BENCZES; GÁBOR VIGVÁRI

*In: John Komlos (ed.): Neoliberal economic policy and the rise of right-wing populism: western civilization at the crossroads. 2024 pp 313-352.* 

## Palgrave Macmillan

#### Abstract

The new millennium has seen the rise of right-wing populism all over the world. Central and Eastern Europe offers an interesting case study insofar as populism has become a mainstream political movement. By focusing on Czechia, Hungary, Poland and Slovakia (known as the Visegrad 4), the chapter demonstrates that the rise and consolidation of populism in the region can be best interpreted as a Polányian countermovement, i.e., a firm reaction to the neoliberal agenda of economic and political transformation. The high cost of the transformation along with the disillusionment in European integration, as the latter has not managed to secure the living standard at the Western European level for new member states of the European Union, made these countries highly susceptible to such countermovements against neoliberalism in the economy and the traditional party system in politics. Countermovements, however, occurred in the form of populism.



## Sustainable public procurement of school meals in Europe

## ORSOLYA DIÓFÁSI-KOVÁCS; ANNA FREUND

*In: Annalisa Castelli (ed.): The economics and law of public procurement: New global scenarios. 2024 pp 141-157.* 

## Routledge

#### Abstract

Our topic focuses on a small but potentially impactful field of supply networks, namely sustainable school food systems. In the case of school food systems, sustainability impacts include both environmental and socio-economic aspects.



# There is nothing so practical as three good theories

LAURENCE ROMANI; **HENRIETT PRIMECZ**; ROGER-MATTHEW BELL LAMBERT

*In: Bettina Gehrke (ed.): Global leadership practices: Competencies for navigating in a complex world. 2024 pp 110-134.* 

## **Edgar Elgar Publishing**

## Abstract

This chapter equips the reader with concepts and theories for the resolution of intercultural situations. It presents three ways culture has been understood and studied in research and demonstrates their usefulness for solving global situations. The first is the positivist approach that compares and measures the impact of cultural dimensions on behaviour. The second is the interpretivist approach that provides explanation of how individuals see their cultural world and consequently act in it. The third is the critical perspective that approaches cultural differences foremost as the expression of power differences. The chapter shows, with the help of a case study that is progressively analyzed, that when used complementarily, these three approaches provide a rich and insightful conceptual framework for the analysis and efficient resolution of culture-related management situations.



# National conservative, radical, and extremist right-wing parties in Croatia

## VASSILIS PETSINIS

Péter Marton, Gry Thomasen, Csaba Békés, András Rácz (eds.): The Palgrave Handbook of non-state actors in east-west relations. 2024 pp 321-337.

## Palgrave Macmillan

## Abstract

This contribution slightly "diverges" from the thematic scope of this volume in that it does not concentrate on a set of actors typically considered among "non-state actors" as such. Instead, the chapter casts its focus on the political parties of the national conservative, radical, and more extremist right in Croatia, identifying the factors that explain why they form an idiosyncratic party scene, especially as regards their position in the field of foreign policy. In the latter context, parties of the Croatian far right are critical of the EU and NATO but not necessarily pro-Russia – a constellation relevant to understand with a view to the East-West dimension of the inquiry in this volume.



# (Dis)ableism at work

## ELINE JAMMAERS; ANNA LAURA HIDEGH; SARAH RICHARD

*In: Oana Branzei (ed.): The Routledge companion to disability and work.* 2024 pp 101-114.

## Routledge

#### Abstract

This chapter introduces ableism at work, with ableism understood as a system of oppression operating at a societal level, and work seen as waged, sheltered or selfemployment. By providing empirical examples of different past research projects led by the authors across three regions in Europe, we aim to shed light on the different shapes and colours that workplace ableism may take. The goal is to make ableist workplace structures and attitudes more easily recognizable, both for managers who may unwillingly participate in their upkeep and for disabled workers whose careers are restrained by them. After defining ableism in general, we zoom in on two interlocking aspects of workplace ableism: ways of organizing work, and ways of thinking about workers. Next, we position the phenomenon of workplace ableism in a place and time-sensitive context by highlighting the role of macroeconomic policies and technological transformation. We end with a reflection on how ableism might be experienced differently in one and the same workplace by workers with a similar impairment type, to do justice to the complexity of workplace ableism, by bringing in intersections and the internalization of ableist beliefs.



# The GCC states and China. Asymmetric relations in a multipolar world order 2.0

## Máté Szalai

In: Mher Sahakyan (ed.): Routledge Handbook of Chinese and Eurasian International Relations. 2024 pp 149-164.

## Routledge

#### Abstract

The fundamental changes taking place in the international system and the rise of the Multipolar World Order 2.0 profoundly altered the leverage and status of small states and middle powers. While realist premises indicate that mostly great powers shape international politics and others merely follow them, several smaller entities proved that they could capitalize on recent developments and maintain their independent foreign policy. The six member states of the Gulf Cooperation Council (GCC), especially Qatar, the United Arab Emirates, and Saudi Arabia, are among the most successful actors in this regard. One key element of their strategy has been to build relations with China as a superpower, despite their traditional alliance with the United States. This endeavour has not solely been a result of the need to accommodate the global transformation, but a conscious decision to build interdependence and influential capacity with China. This chapter will focus on how asymmetric yet interdependent relations between China, a superpower, and the GCC, a group of small and middle-sized states, evolve in the context of the Multipolar World Order 2.0 in the Eurasian continent. The main argument of this chapter is that despite traditional expectations in International Relations, small states and middle powers can build influence vis-á-vis great powers and shape their foreign policy in direct and indirect ways without compromising their security. Building on a realist assessment of the changing world order and the possibility of junior partners in asymmetric relations, this chapter argues that the relations between China and the GCC do not show a clear hierarchy, and Gulf states have successfully built up their derivative power vis-á-vis China. Consequently, in some cases, I can see indications that Saudi Arabia and its neighbours actually have some influence on Chinese foreign policy, for instance, in the case of Yemen or the Saudi-Iranian normalization deal.

#### **Full paper**

#### **Quarterly Corvinus Research Highlights January – March 2025**



# University Governance in Central and Eastern European Countries (Czech Republic, Hungary, Poland, and Slovakia)

Dominik Antonowicz; Kováts Gergely; Jan Kohoutek

*In: Umesh Sharma, Jahirul Mullick (eds.): Oxford Research Encyclopedia of Education. 2025* 

## **Oxford University Press**

#### Abstract

Universities in Central and Eastern Europe (CEE) share similar and also distinctive features of university governance, with a strong emphasis on self-governance, collegiality, and institutional autonomy. Since the fall of communism (in the 1990s), the adopted laws have formed the basis for less direct state control of academic matters concerning enrollment, curricula, and staffing that also have given rise to a number of new (both public and private) higher education institutions (HEIs). By the 2020s, the governance of public universities in all CEE countries has been through a bicameral model, where decision-making powers are shared between large academic bodies (senates) consisting of representatives of internal stakeholders and a board or council consisting partly or fully of external members. More recently, universities in the Czech Republic, Hungary, Poland, and Slovakia have also exposed those systems to transnational trends and the hegemonic concept associated with new public management ideas that, to some extent, challenge the traditional governance model. The latter has progressively evolved into a mixture of historical heritage and political eclecticism in adopting global trends. However, the biggest and most visible impact on university governance was made through the widespread adoption of a research assessment modeled on the British Research Assessment Exercise/Research Excellence Framework framework that becomes a driving mechanism for allotting state-subsidized research on the basis of performance indicators. On a final note, as far as the underlying characteristics of higher education (HE) governing mechanisms are concerned, Hungary has been an outlier among the CEE countries since 2010. However, the present evidence suggests that the spurious and controversial Hungarian reforming of HE and HE policies (of governance and beyond) will not be followed by any other country in the region. **Full paper** 

## Quarterly Corvinus Research Highlights January – March 2025





## The economics of regional integration

## SÁNDOR GYULA NAGY (ed.)

2025 353 p.

## Routledge

#### Abstract

This book develops a new methodological framework for measuring the efficiency of regional integration and the integration profile of member states. It includes rich case studies, which offer a comparative analysis of ten integrations spanning four continents - The Americas, the European Union, Africa and Asia. The Economics of Regional Integration shows the importance of regional (economic) integration in the world economy, based partially on descriptive analyses, the authors' new methodological framework, and a new composite index integration profile. It implements and quantifies relevant theories (e.g. integration maturity, competitiveness, economic development, convergence) to one framework and a composite indicator. This helps to arrive at a more precise measurement of these integrations, resulting in useful feedback for decision-makers and leading to policy recommendations for each organisation to improve efficiency or to include new members. The text presents a comparative perspective of regional integration based on case studies, by applying the same theoretical framework and a comprehensive methodology for assessing the economic readiness of membershipseeking countries while also considering regional differences. It investigates the impact of regional integration on income inequality and poverty reduction by examining how common development, economic policies and social programs implemented by regional organizations affect the distribution of income and wealth among member states. The comprehensive investigation of regional integration, covering economic, social and institutional factors, makes the book highly relevant for advanced students, researchers and scholars. Additionally, its potential policy context application makes it useful for policymakers and practitioners participating in regional integration programs.

#### **Full book**

Quarterly Corvinus Research Highlights

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