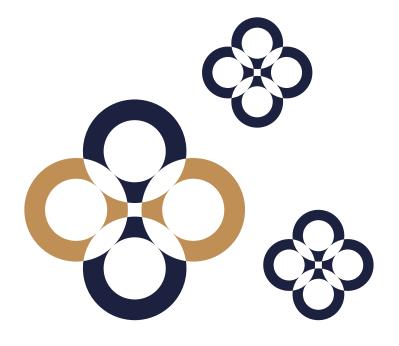
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# Quarterly Corvinus Research Highlights

October - December 2024

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# **FOREWORD**

### **Dear Colleagues**,



Presenting the fourth edition of the Quarterly Corvinus Research Highlights for 2024 (October-December) is a great honor for me. We offer a selection of 24 journal articles, 10 book chapters, and 5 books we consider the cream of the crop among the faculty members of Corvinus University of Budapest.

A stringent selection procedure was used to identify the 'best' publications. Influential Scimago-ranked D1-Q1 articles in prestigious peer-reviewed journals with AIP scores of at least 70, and monographs and book chapters published by publishers taken into consideration in the Corvinus Research Excellence Award were chosen. Selected publications were uploaded to MTMT within the last quarter of 2024 and had at least 20% affiliation to Corvinus. Publications are listed in the order of their upload date to MTMT.

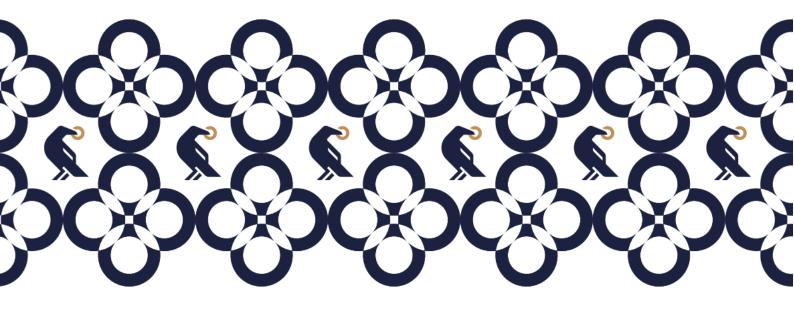
New year, new rules: 2025 brings significant changes to prospective Highlights. To respect the University's strategic goals, we say goodbye to the AIP score and we will evaluate articles using the SJR-based journal list. As for books and chapters, the <u>publishers' list</u> for the renewed Corvinus Research Excellence Award will be considered in the selection process.

Returning to the current edition, I want to express my gratitude to the authors for their important contributions. Publications that have an impact inspire the academic community at large and preserve the standing of our university. I wish you continued success in your research endeavors, and I look forward to witnessing the exciting developments that lie ahead.

Sincerely,

**Prof. Tamás Bartus** Vice-Rector for Faculty and Research

# JOURNAL ARTICLES





# The drunk side of trust: Generalized and instantaneous trust at gathering events

### **GUISEPPE ATTANASI**; STEFANIA BORTOLOTTI; SIMONA CICOGNANI; ANTONIO FILIPPIN

Journal of Behavioral and Experimental Economics 2024 113: 102293

### Abstract

We present novel evidence on the nexus between alcohol intake and trust at a large cultural gathering event. Throughout six editions, we interviewed nearly 2,000 attendees and collected an objective measure of alcohol intake (Blood Alcohol Concentration, BAC) using electronic breathalyzers and self-perceived measures of intoxication. We elicited different self-reported trust measures toward eventgoers and the general public. While alcohol intoxication is not correlated with trust toward the general public, there is a positive and significant nexus between alcohol intake and trust toward the other participants in the event (*Instantaneous trust*). Only a small part of this effect (15%) is driven by an increased trust in other drinkers at the event. Taken together, these findings indicate endogenous group formation regarding alcohol intake.



# Exploring the need for medical futures studies: Insights from a scoping review of health care foresight

BERTALAN MESKÓ; **TAMÁS KRISTÓF**; PRANAVSINGH DHUNNO; NÓRA ÁRVAI; GELLÉRT KATONAI

Journal of Medical Internet Research 2024 26: e57148

### Abstract

### Background

The historical development and contemporary instances of futures studies, an interdisciplinary field that focuses on exploring and formulating alternative futures, exemplify the increasing significance of using futures methods in shaping the health care domain. Despite the wide array of these methodologies, there have been limited endeavors to employ them within the medical community thus far.

### **Objective**

We undertook the first scoping review to date about the application of futures methodologies and published foresight projects in health care.

### Methods

Through the use of the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) method, we identified 59 studies that were subsequently categorized into the following 5 distinct themes: national strategies (n=19), strategic health care foresight (n=15), health care policy and workforce dynamics (n=6), pandemic preparedness and response (n=7), and specialized medical domains (n=12).

### Results

Our scoping review revealed that the application of futures methods and foresight has been successfully demonstrated in a wide range of fields, including national strategies, policy formulation, global threat preparedness, and technological advancements. The results of our review indicate that a total of 8 futures methods have already been used in medicine and health care, while there are more than 50 futures methods available. It may underscore the notion that the field is unexploited.

### Conclusions

Futures studies can significantly enhance medical science by addressing a crucial deficiency in the promotion of democratic participation, facilitating interdisciplinary dialogue, and shaping alternative futures. To further contribute to the development of a new research community in medical futures studies, it is recommended to establish a specialized scientific journal.



# The role of the family's ethnicity and correlates in social workers' risk perceptions: Evidence from a vignette study in Hungary

### MARIANNA KOPASZ; TAMÁS BARTUS; ILDIKÓ HUSZ

Children and Youth Services Review 2024 166: 107950

### Abstract

Studies have shown that children from some ethnic minority families are disproportionately represented in the child protection system. Ethnic-based treatment is problematic because it challenges whether child protection decision-making is based on the principle of 'the best interests of the child'. Roma children are also overrepresented in the child protection systems of many European countries, but little research has explored why this is so. The present study seeks to address this gap by examining child welfare workers' perceptions of risk at the early stages of child protection decision-making. The main research question is whether they perceive higher levels of risk if the parents are Roma.

### Method

We use data from a vignette-based survey conducted among child welfare workers (N = 600) in Hungary in 2018. The factors influencing social workers' risk perceptions are analysed using multilevel ordinal logistic regressions. The regression models of risk perception include case variables (harm to child, parents' ethnicity, mother's education, parents' employment, housing conditions, living environment, parental alcoholism, mother's willingness to cooperate), and the individual characteristics of the social worker. Ethnicity is examined individually as well as in interaction with other case characteristics.

### Results

Findings show that physical harm to the child, parental alcoholism, a messy living environment, and the non-cooperative behaviour of the mother increase the level of risk perceived by child welfare workers. There is no evidence of a statistical association between parental socioeconomic status and the social worker's perception of risk. Family ethnicity also does not have a statistically significant impact on risk perception (main effect). However, some case characteristics affect risk perception differently when the family is of Roma origin (interaction effects).

### Conclusions

Although, no ethnic bias was found in social workers' perception of risk, our findings indicate that the perception of risk for Roma families is less dependent on the circumstances of the case than for majority families. In some cases, this may lead to an unjustified overestimation of risk or, conversely, an underestimation when the family is Roma.



# Validity, test-retest reliability, and responsiveness of the Indonesian version of FACIT-COST measure for subjective financial toxicity

# STEVANUS PANGESTU; FREDRICK DERMAWAN PURBA; HARI SETYOWIBOWO; CLARA MUKURIA; **FANNI RENCZ**

Health and Quality of Life Outcomes 2024 22: 89

### Abstract

### Background

Financial toxicity describes the impairment of financial wellbeing in patients due to the burden of cancer diagnosis and care. The COST: A Functional Assessment of Chronic Illness Therapy Measure of Financial Toxicity (FACIT-COST) is the most widely used cancer-specific measure of subjective financial toxicity, having been validated in multiple languages, but not in Indonesian. This study aimed to validate the Indonesian version of FACIT-COST in a breast cancer sample.

### Methods

A single-center prospective cohort study was performed in Indonesia. Female breast cancer patients aged  $\geq$  18 undergoing treatment at baseline were invited to participate and followed for up to six months. Clinical information (e.g., metastasis status, disease duration) was provided based on medical records.

### Results

Overall, 300 female patients participated at baseline. The PCA proposed a two-factor model structure for the instrument, which was confirmed by the CFA (RMSEA = 0.042, SRMR = 0.049, CFI = 0.99, TLI = 0.99). The internal consistency reliability of the two factors was considered adequate (Cronbach's alpha = 0.774-0.882, McDonald's omega = 0.786-0.888). The FACIT-COST demonstrated excellent test-retest reliability (intraclass correlation coefficient = 0.96) and satisfactory responsiveness to change (standardized response mean and effect size ranges=|0.39| to |0.92|).

### Conclusions

This is the first study to validate the FACIT-COST in patients with breast cancer and to present the measurement properties of the Indonesian version of FACIT-COST. The Indonesian FACIT-COST demonstrates acceptable psychometric performance and shows potential as a valid measure of subjective financial toxicity. The instrument may serve as a valuable tool for informing health policies that focus on providing resource support to improve cancer care in Indonesia.



### **Isometries of Lipschitz-free Banach spaces**

### MAREK CÚTH; MICHAL DOUCHA; TAMÁS TITKOS

Journal of the London Mathematical Society 2024 110(5): e70000

### Abstract

We describe surjective linear isometries and linear isometry groups of a large class of Lipschitzfree spaces that includes, for example, Lipschitz-free spaces over any graph. We define the notion of a Lipschitz-free rigid metric space whose Lipschitz-free space only admits surjective linear isometries coming from surjective dilations (i.e., rescaled isometries) of the metric space itself. We show that this class of metric spaces is surprisingly rich and contains all 3-connected graphs as well as geometric examples such as nonabelian Carnot groups with horizontally strictly convex norms. We prove that every metric space isometrically embeds into a Lipschitzfree rigid space that has only three more points.



## A holistic approach to assessing reliability in green hydrogen supply chains using mixed methods

**SOFÍA DE-LEÓN ALMARAZ**; TCHOUGOUNE MOUSTAPHA MAI; IRIS ROCIO MELENDEZ; M.K. LOGANATHAN; CATHERINE AZZARO-PANTEL

Technological Forecasting and Social Change 2024 209: 123816

### Abstract

Estimating the reliability of future energy supply chains is a vital yet complex task driven by environmental and energy security concerns in the context of the ongoing energy transition. This transition necessitates the integration of new technologies and systems into interconnected networks or supply chains. In this context, hydrogen plays a crucial role in the transition to green energy, as it is anticipated a surge in the establishment of "green" hydrogen supply chains (HSC), necessitating the assurance of reliability in meeting international roadmap targets. Technological reliability is typically evaluated by applying quantitative methods to current technologies. For future HSCs, the reliability assessment challenge is related to their prospective nature, with additional uncertainty due to the technologies' interdependencies. When stakeholders rely solely on technology readiness levels, essential aspects of the supply chain are not considered. This work introduces a novel methodology to assess the technological and organizational reliability of future HSCs, contributing to the literature on hydrogen reliability and strategic foresight. It also offers macro-level reliability projections for green HSCs by 2030, integrating input from energy experts and providing valuable insights for the scientific community, academia, and professionals. The proposed methodology's novelty lies in its ability to integrate various nodes of prospective HSCs. The study employs mixed methods, incorporating quantitative (multi-attribute utility theory) and qualitative approaches (horizon scanning). Variables such as capacity, flexibility, infrastructure vulnerability, and consequences of disruption are considered to quantify reliability, with twenty-four metrics included. Data collection employs the perspective of 2030 through a participatory study based on surveys and interviews, drawing insights from twentynine international experts associated with various HSCs-related technologies. This paper presents the quantitative results, projecting moderate reliability for green HSCs by 2030. Solar HSCs have been considered slightly more reliable than wind HSCs. The interdependence of electrolysis technology and several aspects related to hydrogen transportation are perceived as vital risks affecting the reliability of green HSCs. Having a constant hydrogen supply is seen as a more significant challenge than HSC's response to unexpected interruptions. The research found specific disparities in expert opinions that enriched the data collection process with complementary viewpoints, benefiting from the former's heterogeneous profiles.



## Information design for weighted voting

TOYGAR T. KERMAN; ANASTAS P. TENEV

**Economic Theory** 2024

#### Abstract

We consider a sender who wishes to persuade multiple receivers to vote in favor of a proposal and sends them private correlated messages that are conditional on the true state of the world. The receivers share a common prior, wish to implement the outcome that matches the true state, and have homogeneous preferences. However, they are heterogeneous in their voting weights. We consider both behavioral and sophisticated voters. When voters are behavioral, public communication is optimal if and only if there is a veto player. For sophisticated voters, we establish lower bounds on the sender's gain from persuasion for general voting quotas and show that the sender can often improve upon public communication. Finally, in an extension, we show that even when behavioral voters have heterogeneous prior beliefs, public communication is optimal if and only if there is a veto player.



# Short supply chains: Frameworks and extensions to public procurement

GYÖNGYI VÖRÖSMARTY; DIBYA RATHI; TÜNDE TÁTRAI

Cleaner Logistics and Supply Chain 2024 13: 100182

### Abstract

Recently, policymakers' interest in short supply chains (SSCs), i.e., removing the non-valueadding intermediaries in the supply chain, has increased as these are seen as a means of supporting employment and sustainability goals. This article aims to elaborate on the understanding of SSCs, identify what motivates participants to get involved, examine their replicability in different sectors of the economy other than the food sector and how they can be fostered through public procurement. Policymakers' objectives with public procurement align with those associated with SSCs; therefore, transferability may be possible in the context of public procurement, in addition to sustainability, and access to opportunities for SMEs. Semistructured exploratory interviews were conducted with SSC stakeholders to examine this and conclude that SSCs can be a valuable means of conducting socially responsible public procurement, with mixed views about their ability to foster gender equality. A case study is also presented with the key message that the application of SSC should consider suppliers' capabilities in addition to the mandatory application of SSC in the tendering process. Achieving positive results will require a shift in traditional procurement logic towards more flexible forms of co-opetition.



### Decrypting metaverse crypto market: A nonlinear analysis of investor sentiment

SAMET GUNAY; MOHAMED M. SRAIEB; SHAHNAWAZ MUHAMMED

International Review of Financial Analysis 2024 96(B): 103714

### Abstract

This study aims to investigate the role of investor sentiment in the emerging metaverse market, a novel entrepreneurship model. Empirical analyses are conducted through various causality tests to reveal the predictive power of investor sentiment on the price developments of the metaverse market. The Nonlinear Granger causality test indicates causal effects running from BTC (Bitcoin), GT (Google Trend), and FGI (Fear-Greed Index) to MVI (Metaverse Index). Further examination of these interactions through MS-VAR analysis reveals that under bear market regimes, both investor sentiment proxies (GT and FGI) and BTC have a statistically significant causal effect on the returns of MVI. This finding suggests that metaverse crypto market returns are substantially influenced by investor sentiment during periods of anxiety and turmoil, evident in steep bear markets, rather than during periods of tranquility and euphoria characteristic of bull markets. The results of the time-varying approach confirm this finding by indicating spikes in causal effects towards the end of 2021, during which a severe crash in cryptocurrency markets occurred. Overall, the causal links during market downturns may stem from the fear of missing out (FOMO) in retail investors, who mainly dominate the sentimental factors utilized in this study.



# Discrimination in track recommendation but not in grading: experimental evidence among primary school teachers in Hungary

DOROTTYA KISFALUSI; ZOLTÁN HERMANN; TAMÁS KELLER

European Sociological Review 2024

### Abstract

This study examines discrimination in teacher assessments and track recommendations against Roma minority students in Hungary. We conducted a pre-registered randomized experiment among 413 primary school teachers. Participating teachers evaluated six mathematics or literacy and grammar tests with fictitious, randomized student names and recommended a high school track. Our results show mixed evidence for discrimination against Roma students: teachers do not discriminate in test evaluations but do so in high school track recommendations, though this latter effect is small. We find that contextual factors play a substantial role in discrimination in track recommendations: teachers who receive tests with fewer Roma than non-Roma names discriminate against Roma students, whereas teachers who receive tests with more Roma names do not. In the latter case, non-Roma students receive similarly low track recommendations as Roma students in both experimental conditions. The results are consistent with stereotype-based theories of discrimination.



# Does user involvement in developing public sector innovations improve outcomes? A settheoretic analysis of European data

# ANNE JØRGENSEN NORDLI; ANTHONY ARUNDEL; **MÁRTON KATONA**; **MIKLÓS ROSTA**

Administration & Society 2024 57(1): 34-69.

### Abstract

Theories of a service or public sector logic stress that involving users in developing public sector innovations will produce better outcomes, but outcomes also could be influenced by the type of user involvement. We evaluate the relationship between interactive and non-interactive methods of involving users in innovation activities, along with six other factors, on a sample of management reported post-implementation outcomes from public sector innovations. A set-theoretic analysis is applied separately for service and process innovations to identify combinations (recipes) of eight factors associated with positive outcomes. Both interactive and non-interactive and non-interactive user involvement is associated with positive outcomes, but such involveme is always combined with other innovation capabilities or senior management support for innovation. The results have practical implications for managers for how to assemble resources to improve innovation outcomes.



# Time matters: What factors affect submissionto-acceptance time in the Journal of Communication?

# TAMÁS TÓTH; MÁRTON DEMETER; **GERGŐ HÁLÓ**; **UTKU BOZDAG**; BALÁZS BARTÓKI-GÖNCZY

### Communication Reports 2024

### Abstract

This article analyses the possible factors that can affect the time range in two scenarios of the publication process, namely the number of days between submitting a manuscript and its acceptance (n = 42) and the number of days between submitting a research paper and it being published (n = 101) in the *Journal of Communication*. Regression analyses revealed that some factors significantly affect the time period between the submission and the acceptance of papers. The most important finding is that the number of articles previously published in the *Journal of Communication* by the most prestigious authors significantly reduces the time between submission and the "decision accepted" response.



# How informed are international short sellers? Global and local industry concentration of short sellers

### TRUONG X. DUONG; ZSUZSA R. HUSZÁR; RUTH S.K. TAN

Journal of Multinational Financial Management 2024 76: 100885

### Abstract

Internationally, documenting the information content from short sellers at the stock level is rather challenging because of various direct and indirect short sale constraints as suggested by Boehmer et al. (2022). To account for stock level short sale constraints and the cross-country variation in short sale feasibility, we focus on short sellers' information at the aggregate industry and country levels and show that the value-weighted portfolio consisting of stocks from the topmost shorted and top three most shorted industries are associated with 45 bps and 42 bps lower returns over the next 20 days in a sample of 37 countries. The aggregate industry level also shows significant negative information from short sellers in more countries compared to Boehmer et al. (2022), especially in less developed markets. In addition to the industry information, we also find market level information from short sellers target the country's largest industries. We furthermore document evidence of short sellers' role in global information propagation.



# Social bots spoil activist sentiment without eroding engagement

LINDA LI; ORSOLYA VÁSÁRHELYI; BALÁZS VEDRES

Scientific Reports 2024 14: 27005

### Abstract

Social bots are highly active on social media platforms, significantly affecting online discourse. We analyzed the dynamic nature of bot engagement related to Extinction Rebellion climate change protests in 2019. We found bots to impact human behavior more than the other way around during active discussions. To assess the causal impact of bot encounters, we compared communication histories of those who interacted with bots with matched users who did not. There is a consistent negative impact of bot encounters on subsequent sentiment. The impact on sentiment is conditional on the user's original support level, with a more negative impact on those with a favourable or neutral stance towards climate activism. Political 'astroturfing' bots induce an increase in human communications, while encounters with other bots result in a decrease. Bot encounters do not change activists' engagement levels in climate activism. Despite the seemingly minor impact of individual bot encounters, the cumulative effect is profound due to the large volume of bot communication. Our findings underscore the importance of monitoring the influence of social bots, as with new technological advancements distinguishing between bots and humans becomes ever more challenging.



## Transient institutional ownership, costly external finance and corporate cash holdings

HYUN JOONG IM; HEUNGJU PARK; SHAMS PATHAN; ROBERT FAFF

### Journal of Business Finance & Accounting 2024

### Abstract

We investigate and robustly show that transient institutional ownership (IO) has a positive effect on the level and value of corporate cash holdings. Further, using a regression discontinuity design exploiting the Russell 1000/2000 index reconstitution as an exogenous shock to transient IO, we show that the effects of transient IO on cash holdings are causal. Additionally, our analysis shows that transient institutions exacerbate debtholder–shareholder conflicts, thereby increasing the cost of debt. Overall, our results suggest that transient institutions make cash holdings more valuable because financing by debt becomes more costly.



## Directed reciprocity subverts cooperation in highly adaptive populations

JEAN-JACQUES HERINGS; RONALD PEETERS; ANASTAS P. TENEV

Scientific Reports 2024 14: 29311

### Abstract

We examine the generally accepted hypothesis that directed reciprocity is a powerful driver for cooperation. To do so, we consider a framework where agents situated on a circle network interact with their neighbors and have the choice to be egoistic, altruistic, or partially cooperative. We study the interaction between reciprocity, the likelihood that an agent reproduces value to the neighbor who has recently produced value for the agent, and inertia, the tendency of agents to repeat their previous choices even if other strategies are more successful. On the basis of extensive simulations, we conclude that for high levels of inertia, reciprocity enhances cooperation, while for low levels of inertia reciprocity rather subverts cooperation. For intermediate levels of inertia, we find a U-shaped effect. Reciprocity therefore interacts with the level of inertia in a non-monotonic fashion.



# EQ-5D-5L population norms and health inequality for Trinidad and Tobago in 2022– 2023 and comparison with 2012

# HENRY BAILEY; MARCEL F. JONKER; ELEANOR PULLENAYEGUM; **FANNI RENCZ**; BRAM ROUDIJK

Health and Quality of Life Outcomes 2024 22: 103

### Abstract

### Background

The use of EQ-5D instruments in clinical, policy and economic applications continues to grow internationally. Population norms studies provide baseline values against which demographic and patient groups are compared and inequality is assessed. This study presents updated EQ-5D-5L population norms for 2022-2023, evaluates inequality and compares the results with those of 2012.

### Methods

Demographic and EQ-5D-5L data were obtained from mutually exclusive, representative samples of adults in three studies conducted from July 2022 through May 2023. EQ-5D-5L index values, EQ VAS scores, and ceilings (all dimensions at level 1) were calculated for age-sex groups and stratifiers including education, income, ethnicity, marital status, and employment status. For inequality, the Kakwani index was calculated for the EQ VAS scores and index values, and ordered logit models were used to obtain odds ratios for reporting higher levels of problems on each dimension for demographic groups. The results were compared with those from 2012 which included applying the value set that had been used for the 2022–2023 population norms to the 2012 states.

### Results

Data were obtained form 2,989 respondents. The mean index value was 0.921, EQ VAS was 79.6 and the ceiling was 31.5%. The Kakwani index was 0.113 for EQ VAS and 0.058 for index values, with sex accounting for the largest relative contribution. Mean index values, EQ VAS scores, and ceilings were lower across all demographic groups in 2022-2023 compared to 2012.

### Conclusions

This is the first study to investigate how EQ-5D-5L population norms have changed within a country over time. Significant changes were observed in the EQ-5D-5L measures and the relative frequencies of reported problems on the dimensions. Inequality increased, and there were changes in the levels of reported problems on the dimensions for demographic groups. Such changes suggest that national population norms should be updated periodically to capture changes in health status, perceptions of health, and health inequality.



# Large language models (LLMs) as agents for augmented democracy

### JAIRO F. GUDIÑO; UMBERTO GRANDI; CÉSAR HIDALGO

Philosophical Transactions of the Royal Society A 2024 382: 20240100

### Abstract

We explore an augmented democracy system built on off-the-shelf large language models (LLMs) fine-tuned to augment data on citizens' preferences elicited over policies extracted from the government programmes of the two main candidates of Brazil's 2022 presidential election. We use a train-test cross-validation set-up to estimate the accuracy with which the LLMs predict both: a subject's individual political choices and the aggregate preferences of the full sample of participants. At the individual level, we find that LLMs predict out of sample preferences more accurately than a 'bundle rule', which would assume that citizens always vote for the proposals of the candidate aligned with their self-reported political orientation. At the population level, we show that a probabilistic sample augmented by an LLM provides a more accurate estimate of the aggregate preferences of a population than the non-augmented probabilistic sample alone. Together, these results indicate that policy preference data augmented using LLMs can capture nuances that transcend party lines and represents a promising avenue of research for data augmentation.



# Divergent attitudes of eurosceptic parties towards intergovernmental and supranational EU institutions

### NIKOLAI GAD; EUGÉNIA C. HELDT; RÓBERT CSEHI

Journal of Common Market Studies 2024 79: 93-103.

### Abstract

How do Eurosceptic parties position themselves regarding individual European Union (EU) institutions? Using Euromanifesto data from 1979 to 2019, this study addresses this question by disaggregating the attitudes of party families towards separate intergovernmental and supranational EU institutions. It focuses on the relationship between the identities of radical left- and right-wing parties and Euroscepticism. The findings reveal that post-communist parties are more sceptical of intergovernmental institutions than nationalist parties, whilst nationalist parties are more sceptical of supranational institutions. Despite widespread Euroscepticism in both nationalist and post-communist party families, nationalist parties' attitudes towards intergovernmental institutions align with those of other party families. In contrast, post-communist parties support the transfer of more competences to the European Parliament but are sceptical of intergovernmental institutions. These results suggest that foundational party identities influence party-based Euroscepticism, which has implications for the EU's handling of increasing Euroscepticism.



# Enhancing banking systemic risk indicators by incorporating volatility clustering, variance risk premiums, and considering distance-to-capital

EMRAH ISMAIL CEVIK; TURALAY KENC; JOHN W. GOODELL; SAMET GUNAY

International Review of Economics & Finance 2025 97: 103779

### Abstract

We develop a systemic risk indicator approach using a structural GARCH option-based default risk framework incorporating volatility clustering, variance risk premiums, along with distance-to-capital features. We apply our model to the U.S. banking sector, testing its explanatory and forecasting power. Our model successfully identifies the most systemically risky banks during heightened systemic-risk episodes. Comparing our results to related approaches, especially the respected indicator of the Federal Reserve Bank of Cleveland, we evidence markedly improved performance. Given the recent implosion of Silicon Valley Bank, exploring new approaches to constructing banking systemic risk indicators should be of great interest to regulators and policy makers.



## Antidepressant use in spatial social networks

BALÁZS LENGYEL; GERGŐ TÓTH; NICHOLAS A. CHRISTAKIS; ANIKÓ BÍRÓ

Science Advances 2024 10(49): eadr0302

### Abstract

Social networks may help individuals maintain their mental health. Most empirical work based on small-scale surveys finds that cohesive social networks are critical for mental well-being, while diverse networks are considered less important. Here, we link data on antidepressant use of 277,344 small-town residents to a nationwide online social network. The data enable us to examine how individuals' mental health care is related to the spatial characteristics of their social networks including their ties in the local community and connections to distant communities. We find that, besides the cohesion of social networks around home, the diversity of connections to distant places is negatively correlated with the probability of antidepressant use. Spatial diversity of social networks is also associated with decreasing dosage in subsequent years. This relationship is independent from the local access to antidepressants and is more prevalent for young individuals. Structural features of spatial social networks are prospectively associated with depression treatment.



### The cost of sustainability in the construction sector – The case of family houses in Belgium

JORAN DOUHARD; BRUNO VAN POTTELSBERGHE DE LA POTTERIE

Journal of Cleaner Production 2024 483: 144240

### Abstract

As the housing sector is a major contributor to greenhouse gas emissions a large body of literature has focused on measuring the environmental impact of houses, using the Life Cycle Assessment (LCA) methodology. This literature reaches the conclusion that alternative construction materials should be used to reduce the environmental impact of buildings. While such research provides essential knowledge on the carbon footprint of the housing sector, few studies take into account the economic side of the issue. This paper addresses this gap by calculating the Life Cycle Cost (LCC) of houses and matching the results with the LCA stages. The methodology is developed for two reference houses in Belgium. Considering all elements and materials used in the construction process, this approach allows a comparison of each house's elements based on the required investment to abate their carbon footprint. The most striking results are that (1) the operational stage (i.e., the use of houses) accounts for about 65% of the total carbon impact of a house; (2) a 1€ investment in sustainable materials induces a drop of 1-1.3 kgCO<sub>2</sub>eq; (3) this effect is heterogeneous across materials, with the highest returns obtained for external walls (-6 KgCO<sub>2</sub>eq).



# Exploring the content validity of the EQ-5D-5L and four bolt-ons (skin irritation, selfconfidence, sleep, social relationships) in atopic dermatitis and chronic urticaria

ANNA-KATRINE SUSSEX; **FANNI RENCZ**; MILLIE GAYDON; ANDREW LLOYD; KATY GALLOP

Quality of Life Research 2024

### Abstract

### Background

The objective of this study was to assess the content validity of the EQ-5D-5L and four boltons: skin irritation, self-confidence, social relationships and sleep, for people with atopic dermatitis (AD) and chronic urticaria (CU).

### Methods

Adults with AD or CU in the United Kingdom, with varying levels of severity, participated in either online or in-person semi-structured interviews. During the interviews, participants were first asked about the symptoms and impacts of their condition. They were then asked to complete the EQ-5D-5L and four bolt-ons using 'think-aloud' and retrospective probing. Interviews were recorded, transcribed, then analysed using content and thematic analysis.

### Results

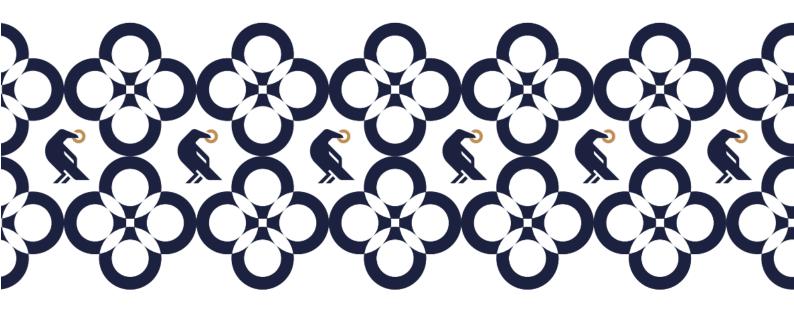
Thirty participants (N = 15 with AD; N = 15 with CU) were interviewed. Participants spontaneously reported itch (AD: 100%; CU: 93%), self-confidence (AD: 100%, CU: 47%), sleep (AD: 53%; CU: 53%), and social relationships (AD: 27%; CU: 60%). The skin irritation bolt-on was the most important or relevant dimension for 60% of AD and 73% of CU participants. For all participants, skin irritation and self-confidence bolt-ons improved the EQ-5D-5L's comprehensiveness. Social relationships was more frequently ranked as the least relevant among the other bolt-ons.

### Conclusions

This study assessed the content validity of four EQ-5D-5L bolt-ons within two patient populations. Skin irritation, self-confidence and sleep bolt-ons showed good evidence of content validity for people with AD and CU, providing support for their application in other skin conditions. The value of a social relationships bolt-on was less clear. Quantitative psychometric research is recommended to further support the use of bolt-ons in CU and AD.



# **BOOK CHAPTERS**





# Improving rural quality of life by combining public transportation with demand responsive transport systems

# **JÓZSEF PÁL LIESZKOVSZKY**; DÁNIEL TORDAI; DANIEL HÖRCHER; TAMÁS FLEISCHER; ANDRÁS MUNKÁCSY

In: Keseru Imre; Samyajit Basu; Marianne Ryghau;, Tomas Moe Skjølsvold (eds.): Strengthening European Mobility Policy: Governance Recommendations from Innovative Interdisciplinary Collaborations. 2024 pp 73-85.

### **Palgrave Macmillan**

### Abstract

We recommend improving rural quality of life by combining public transport with demand responsive transport systems. To achieve this policy recommendation, we propose the following: (1) Promote the creation of demand responsive transport (DRT) systems that fit well into the region's or nation's larger transport strategy and system, are cost effective and sustainable in the long run; (2) Identify and clarify the societal goals that DRT operations are intended to support. Subsidising DRT operations cannot be justified just for their own sake; (3) Define the intended demand intensity to be served with this transport service explicitly; (4) Integrate DRT services with complementary incentive mechanisms that preserve the benefits of the spatial concentration of the population and workplaces; (5) Ensure a reasonable level of long-term public funding for DRT systems right from the planning phase; and (6) Reduce the barriers of entry to the DRT market and develop a service model, enabling the utilisation of excess transport capacity that local SMEs and public institutions as minibus owners may have.



## A comparative analysis across reproduction policy fields in Hungary

### IVETT SZALMA; ALEXANDRA SIPOS

In: Hannah Zagel (ed.): Reproduction Policy in the Twenty-First Century A Comparative Analysis. 2024 pp. 119-135.

### **Edward Elgar**

### Abstract

This chapter gives a comparative overview on the trajectories and interactions of reproduction policies in Hungary starting from 1989, after the democratic reform, with a focus on the changes that took place after 2010 during the second Orbán government. We focus our analysis on this period, which had particular relevance to how reproduction is regulated across different policy fields. Notably, and as described by others (Szikra, 2018), the Orbán government has pursued a strongly pronatalist approach to family policy. It has been an explicit aim of the Orbán government to reach replacement-level fertility. As for the desired effects of these efforts, there was no increase in the number of births (90,335 live births in 2010, and 88,491 in 2022), and only a small increase of the total fertility rate (from 1.25 to 1.52) (HCSO, 2023a), which can be attributed to the growing number of reproductive women in the period. What this rather shows is the strong orientation in Hungarian politics towards pronatalism as an ideological and political project that aims to promote childbearing, assuming it is conducive to the wellbeing of society.



### **Economic growth & resilience**

### PÉTER BENCZÚR; ISTVÁN KÓNYA

In: László Mátyás (ed.): Central and Eastern European Economies and the War in Ukraine. 2024 pp. 33-71.

### Springer

### Abstract

This chapter looks at the overall macroeconomic and social situation of the CEEE at the onset of Russia's aggression on Ukraine and over the consecutive 18 months. Given its close proximity to the Covid-19 crisis, we interpret these shocks together as a twin crisis and draw parallels with the 2008-12 Global Financial Crisis (GFC). Unlike during the GFC, most of the CEEE seems to have recovered from the first phase (the Covid-19 shock) quickly. Under the surface, one can nevertheless discover important vulnerabilities and imbalances, in energy prices and supply security, the build-up of inflationary pressures and a decreased fiscal space. Though the status of the resilience capacities of the CEEE in early 2022 was still better than before the GFC, it was somewhat weaker than before the Covid-19 shock. Moreover, through their fossil energy imports, the CEEE had a substantial direct exposure to Russia. At the onset of the Ukraine shock, there were widespread fears of catastrophic consequences for industry, households in the winter, and further massive increases in energy prices. Such doomsday scenarios did not materialise, as European countries reacted more flexibly to both the quantity and price shock than anticipated. While in the majority of the CEEE the Ukrainian war lead to either a recession or a slowdown of the recovery from Covid, the recession is fairly shallow and seems to be mostly transitory. Overall, the main consequence of the war seems to be inflation, with a heterogeneous impact on the population. This may increase social pressures further, and coupled with increased societal polarisation, it may jeopardise the green transition. Finally, the war will have important geopolitical repercussions. With stronger geoeconomic and geopolitical competition, globalisation patterns may change, which will surely affect the CEEE that are highly integrated into the world economy.



## **Fiscal policy developments**

### CSABA LÁSZLÓ

In: László Mátyás (ed.): Central and Eastern European Economies and the War in Ukraine. 2024 pp. 127-170.

### Springer

### Abstract

The chapter examines the impact of the war on the fiscal policies of the Central and Eastern European countries, its impact on indebtedness, public deficits, and on the financing conditions of the state. It gives a detailed overview of changes in risk perceptions over the medium and long term. Of particular importance is the effect of the global increase in inflation on fiscal developments, the adjustment measures taken by the countries under review and the analysis of the expenditure structure over the period. The analysis also identifies long-term fiscal risks and possible policy actions to further improve the resilience and adaptability of fiscal policy in the event of drastic external shocks.



### Hungary: one country, two media systems

### GÁBOR POLYÁK; ÁGNES URBÁN

In: Aljosha Karim Schapals; Christian Pentzold (eds.): Media Compass: A Companion to International Media Landscapes. 2024 pp. 70-83.

### Wiley Blackwell

### Abstract

The most important dividing line in the post-2010 Hungarian media system is access to public resources; half of the media system has access to public advertising, frequency capacity, and public interest information, while the other half is excluded. One of the key actors in the Hungarian radio market is the public service radio, with KossuthRádió, which operates as a public talk radio station and is the most listened to channel. The youngest segment of Hungarian online media is specifically built around social media. In fact, two media systems with completely different motivations and with completely different material and informational leeways coexist. The pro-government media is admittedly on a political mission to keep Fidesz in power. The non-government media, on the other hand, follow the traditional professional and ethical standards of journalism, aiming to control the powers that expose abuses and provide the public with impartial information.



# 'Eliminating conservation'? The re-regulation of Hungarian administrative procedure in the Act on General Administrative Procedure

### ISTVÁN BALÁZS; GYÖRGY GAJDUSCHEK; ISTVÁN HOFFMAN

In: Fruzsina Gárdos-Orosz (ed): The Resilience of the Hungarian Legal System since 2010: A Failed Resilience? 2024 pp. 37-55.

### Springer

### Abstract

The chapter analyses the resilience of the general rules of administrative procedural law in Hungary. Traditional doctrinal analysis, historical comparison and the sociology of legislation are applied to show the extent to which legislative transformation reflects the challenges of the socioeconomic environment after 2010. The chapter argues that the objectives declared by the legislator are not reflected properly in the legislative text. In the case of most of the legislative changes, neither the jurisprudential nor the sociological analysis can identify the expected positive impact. Legislative declarations concerning elevated public access or simplifications of the administrative procedure are in sharp contrast with the fact that, due to the reform of administrative procedure, review is inaccessible to the majority of clients. While the reform-related arguments that are officially put forward advertise the advantage of judicial legal protection, access to this and other forms of review is minimal; the advantage is not supported by statistical data.



# Sustainability and economics of biodiesel production

#### TAMÁS MIZIK; GÁBOR GYARMATI

In: Reference Module in Materials Science and Materials Engineering. 2024

#### Elsevier

#### Abstract

The world energy needs show a continuously increasing. Replacing fossil resources with renewable ones is of utmost importance. Biodiesel production provides this opportunity, especially in the transportation sector where road transport is responsible for 77% of the greenhouse gas emissions. The major biodiesel producers are Indonesia, Brazil, the USA, the EU, and China by having 86% of the global production. Among them, the USA is the most cost-efficient producer, while in terms of economic importance, the Indonesian biodiesel sector is the largest. Although even first-generation biodiesel can provide significant environmental advantages, different types of advanced biodiesel perform even better.



## The Court of Justice of the EU and CIL interpretation: Close encounters of a third kind?

#### TAMÁS MOLNÁR

In: Marina Fortuna; Kostia Gorobets; Panos Merkouris; Andreas Føllesdal; Geir Ulfstein (eds.): Customary International Law and Its Interpretation by International Courts: Theories, Methods and Interactions. 2024 pp. 156-185.

#### **Cambridge University Press**

#### Abstract

It is uncontested that the European Union (EU) – endowed with distinct international legal personality (pursuant to Article 47 of the Treaty on European Union) and being a subject of international law – is bound by relevant norms of customary international law (CIL). Rules of CIL form an integral part of the EU legal order, and the Court of Justice of the EU (CJEU) must use CIL at least as an interpretive tool. Still, the CJEU's interpretations of CIL norms and the interpretative methods and techniques it employs have received little attention in legal scholarship. This chapter aims to map and understand the ways in which the CJEU interprets CIL rules and compares them to those that exist for the interpretation of treaties under the Vienna Convention on the Law of Treaties.



### **Orban's big football reform: Wings or shackles?**

#### ZSOLT HAVRAN; ZOLTÁN JANDÓ

In: Dariusz Wojtaszyn; Daniel Fitzpatrick; Roland Benedikter (eds.): The Political Economy of European Football: Perspectives from Central and Eastern Europe. 2024 pp. 180-204.

#### Routledge

#### Abstract

Since its election in 2010, sport has been a strategic sector to Viktor Orbán's Fidesz government. The development of Hungarian football is of particular concern to the prime minister. He has publicly declared stated his aim of developing Hungarian football and reinventing a strong national identity. The period up to 2021 has seen significant changes in Hungarian football, fuelled by the inflow of high levels of state intervention and financial support. The forms of this state largesse are mixed and include both direct and indirect subsidy. Most of the funding is directed to Hungarian men's professional football clubs, which have made disproportionately little improvement over the years compared to other Central European championships. We argue this is likely due to excessive levels of funding and nonperformance-based remuneration - political connections are the main determinant of resource allocation. The chapter analyses both the replacement of professional clubs in the first division and the change in clubs' ownership. We assert that almost all clubs in the first and second divisions are managed/founded by a government representative or an entrepreneur, who has won public tenders. Using available Hungarian company register and financial statement, as well as international databases, the chapter provides insights into the systemic transformation of Hungarian football.



## Orbán goes to the Balkans: How does the support of Hungarian government affect club football in neighboring countries?

#### **ZSOLT HAVRAN**

In: Dariusz Wojtaszyn; Teodor Borisov; Maros Melicharek (eds.): Football in the Balkans II: A Social and Political Phenomenone. 2024 pp. 141-178.

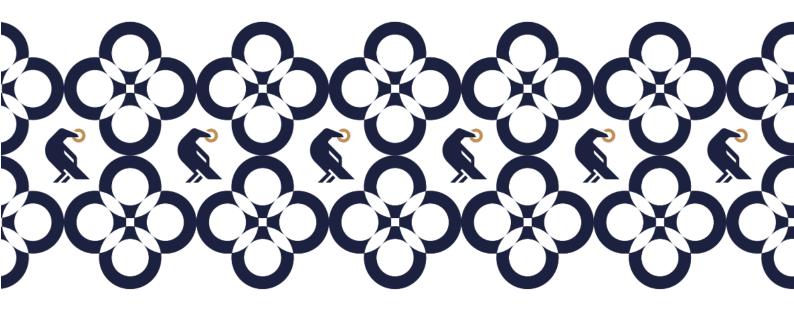
#### Peter Lang

#### Abstract

Viktor Orbán, who has been leading the Hungarian government since 2010, has made sport a priority strategic area and allocated significant financial resources to it. Orbán's policy has always been to address the Hungarian territories and population beyond the borders of Hungary, hoping to gain significant political capital. (Since 2014, this population has also been able to participate in the Hungarian parliamentary elections.) The chapter focuses on the engagement of the Hungarian state in regional football in Slovakia, Romania, Croatia, Serbia, Ukraine, and Slovenia. The main question of the research is what form Hungarian involvement in the neighboring countries has taken, and what the sporting, financial/business, and social impact has been in recent years.



## BOOKS





## Handbook of Terrorist and Insurgent Groups: A Global Survey of Threats, Tactics, and Characteristics

SCOTT N. ROMANIUK; ANIMESH ROUL; AMPARO PAMELA FABE; JÁNOS BESENYŐ

2024

**CRC Press** 

#### Abstract

Handbook of Terrorist and Insurgent Groups: A Global Survey of Threats, Tactics, and Characteristics examines the most current and significant terrorist and insurgent groups around the world. The purpose is to create a descriptive mosaic of what is a pointedly global security challenge. The volume brings together conceptual approaches to terrorism, insurgency, and cyberterrorism with substantive and empirical analyses of individual groups, organisations, and networks. By doing so, not only does the coverage highlight the past, present, and future orientations of the most prominent groups, but it also examines and illustrates their key characteristics and how they operate, including key leaders and ideologues. Highlighting specific, individual groups, the chapters collectively present a robust and comprehensive outlook on the current geography of terrorism and insurgency groups operating in the world today. This comprehensive volume brings the collective expertise and knowledge of more than 50 academics, intelligence and security officials, and professionals together, all of whom are considered subject experts in their respective areas of research and practice. The volume is based on both desk-based and fieldwork conducted by experts in these areas, incorporating analyses of secondary literature but also the use of primary data including first-hand interviews on the various groups' regions of operation, their tactics, and how their ideologies motivate their actions.



## **Optimal Transport on Quantum Structures**

#### JAN MAAS; SIMONE RADEMACHER; TAMÁS TITKOS; DÁNIEL VIROSZTEK

2024

Springer

#### Abstract

The flourishing theory of classical optimal transport concerns mass transportation at minimal cost. This book introduces the reader to optimal transport on quantum structures, i.e., optimal transportation between quantum states and related non-commutative concepts of mass transportation. It contains lecture notes on

- classical optimal transport and Wasserstein gradient flows
- dynamics and quantum optimal transport
- quantum couplings and many-body problems
- quantum channels and qubits

These notes are based on lectures given by the authors at the "Optimal Transport on Quantum Structures" School held at the Erdös Center in Budapest in the fall of 2022. The lecture notes are complemented by two survey chapters presenting the state of the art in different research areas of non-commutative optimal transport.



## **Interactions Between EU Law and International Law: Juxtaposed Perspectives**

TAMÁS MOLNÁR; RAMSES A. WESSEL

2024

#### **Edward Elgar**

#### Abstract

Juxtaposing perspectives, this insightful book brings together the various dimensions of the relationship between EU law and international law. As the multifaceted interplay between these two legal orders has become increasingly complex with expanding EU policy areas and the development of the EU as a global (normative) actor, this book offers a timely contribution to this important field of study.



## Modern Hungarian Political Thought: Ideologies and Traditions

ZOLTÁN BALÁZS; CSABA MOLNÁR

2024

#### **Palgrave Macmillan**

#### Abstract

This book introduces the reader into the discursive political pluralism of modern Hungary, roughly from the mid-19th century, with a particular emphasis on the spectrum of contemporary political thought. The book relies on Michael Freeden's method of ideology analysis, focusing on concepts, principles, values, as well as interrelations, but it puts a greater emphasis on nonverbal traditions as bearers of political thought to explain how political pluralism can subsist in periods of dictatorship. Through this analysis, the authors demonstrate how and why contemporary Hungarian political pluralism is a reflection both on the current trends in Western political thought and on its own past.



### **Cognitive Aspects of Virtual Reality**

#### ILDIKÓ HORVÁTH; BORBÁLA BERKI; ANNA SUDÁR; ÁDÁM CSAPÓ; PÉTER BARANYI

2024

Springer

#### Abstract

This book outlines a range of user experiments, providing comprehensive evaluations that underline the rationale behind implementing collaborative 3D virtual offices in corporate settings and 3D classrooms in educational institutions. In this book, radically new scientific approaches are taken for studying user effectiveness in the realm of 3D graphical interfaces. The emergence of VR is seen in the book as a pivotal moment in the evolution of information technology, marking a shift from the era of DOS and Windows to immersive digital spaces. Through extensive research and experimentation, it is convincingly demonstrated that integrating 2D user interfaces, such as windows, images, and 2D widgets, into 3D digital environments significantly enhances user effectiveness in terms of online collaboration, memory, recall, and comprehension of complex workflows. Moreover, valuable advice and design principles are offered to guide the creation of such working 3D digital environments.

**Committee chair:** Tamás Bartus, Vice-Rector for Faculty and Research

#### **Committee Members:**

Dr Valentin Brodszky, Professor Dr Tamás Kristóf, Associate Professor Dr Tamás Kocsis, Associate Professor Mónika Fischer, Director General of the University Library

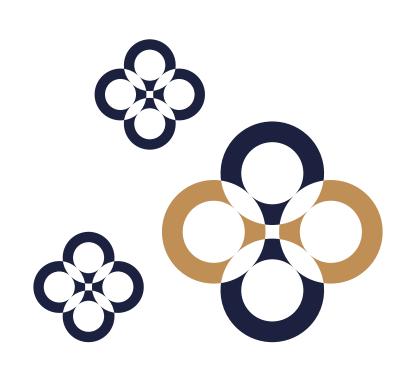
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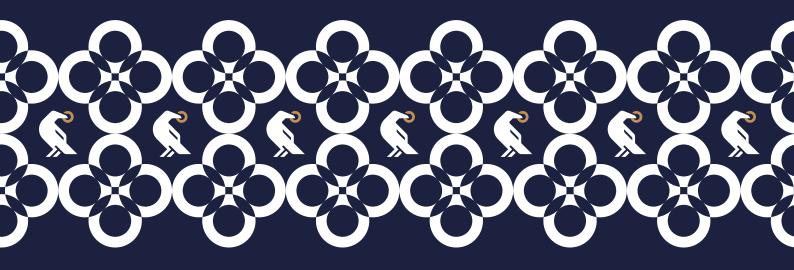
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