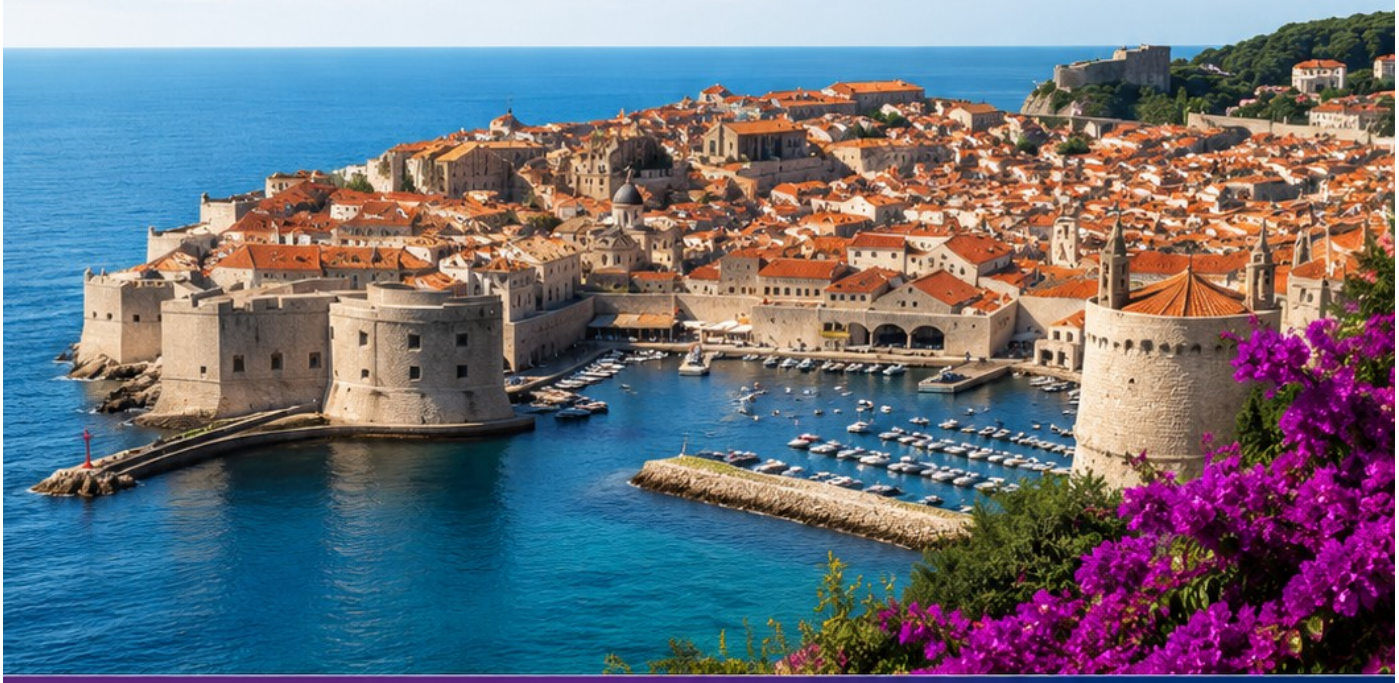
14th HIGHER EDUCATION INSTITUTIONS CONFERENCE

HEIC 2026

THE FUTURE OF HIGHER EDUCATION:
THE ROLE OF AI IN LEARNING,
TEACHING AND RESEARCH



BOOK OF ABSTRACTS

DUBROVNIK, CROATIA | 3–4 SEPTEMBER 2026

ZSEM Zagreb School of Economics and Management | EUonAIR European University Alliance | LSB Luxembourg School of

WELCOME NOTE

Dear guests and friends,

It is with great pleasure that I welcome you to the 14th Higher Education Institutions Conference (HEIC 2026), hosted by the Zagreb School of Economics and Management (ZSEM). Over the years, HEIC has grown into an international forum bringing together academics, higher education leaders, researchers, and practitioners to exchange ideas and reflect on the challenges and opportunities shaping the future of higher education.

This year's conference theme, "The Future of Higher Education: The Role of AI in Learning, Teaching and Research," reflects a transformation that is already profoundly changing universities. Artificial intelligence is influencing not only how students learn and faculty teach, but also how research is conducted, how institutions make decisions, and how we understand the roles and responsibilities of universities in society.

The HEIC 2026 programme approaches these developments from several complementary perspectives. Our keynote lectures, panel discussions, workshops, and research presentations explore questions of leadership and institutional purpose, the ethical and responsible use of AI in education, emerging models of human–AI collaboration in research, new competencies required by students and professionals, and innovative approaches to learning and teaching.

The abstracts collected in this volume reflect the international and interdisciplinary character of these discussions. They bring together research and experiences from different countries, institutions, and academic fields, illustrating both the remarkable opportunities created by artificial intelligence and the questions that still require careful research, critical reflection, and open dialogue.

HEIC has always been more than a conference programme. Its value comes from the exchange of perspectives, the conversations that continue beyond individual sessions, and the connections established among colleagues from different institutions and countries. I hope that HEIC 2026 will once again provide an inspiring environment for such exchange and create opportunities for new ideas and future collaboration.

On behalf of the Zagreb School of Economics and Management, I would like to thank our keynote speakers, panelists, authors, reviewers, partners, and all participants whose contributions have made HEIC 2026 possible.

I wish you an inspiring and enjoyable conference and a memorable stay in Dubrovnik.

Best regards,

Mato Njavro, PhD
Dean, Zagreb School of Economics and Management

CONFERENCE PROGRAMME

Hotel Dubrovnik Palace • Dubrovnik, Croatia • 3–4 September 2026

Thursday, 3rd September 2026	
08:00 – 09:00	Registration
09:00 – 09:15	Opening speech: dr. sc. Mato Njavro
09:15 – 09:45	Keynote 1: prof. dr. sc. *Johan Roos '' The Fourth Value: Human Magic in the Age of Algorithms''*
09:45 – 10:45	Panel 1: *Higher Education at a Turning Point: AI, Leadership and Purpose* • Prof. Johan Roos (Professor | Advisor | Co-inventor of LEGO® Serious Play®) • Prof. Carlo Maria Gallucci Calabrese, Chief Executive Officer, Università Cattolica del Sacro Cuore • Eileen McAuliffe, PhD, Executive Vice President and Chief Thought Leadership Officer, AACSB International • Prof. Mato Njavro (Moderator)
10:45 – 11:15	Coffee break sponsored by AACSB
11:15 – 11:45	Keynote 2: Prof. Eileen McAuliffe (Executive Vice President, Chief Thought Leadership Officer, and Managing Director, EMEA at AACSB)
11:45 – 13:15	AACSB workshop
13:15 – 14:15	Lunch
14:15 – 15:00	Panel 2: Ethics of AI in Education: Key Challenges and Practical Solutions? • Markus Raueiser, Professor International Business and Director Teaching and Learning, CBS International Business School • Prof. Maha Mahdi Al-Khaffaf, Professor of Management Information Systems and Director of International Relations, Applied Science Private University (ASU), Jordan • Dr Monika Sońta, Assistant Professor, Kozminski University; Visiting Scholar, Riga Business School • Prof. Kristijan Krkač (Moderator) EUonAIR Management Board meeting (14:15-16:15)
15:00 – 16:40	Paper presentations
Closing of the conference Day 1	
Special Side Event (Free of Charge) *Organised by the EUonAIR European University Alliance* *This event is held alongside the conference and is not part of the official conference programme.	
16:45 – 17:00	MyAI University Keynote: Andrzej Rudko, Educational Resources Development Coordinator / EUonAIR bureau, Kozminski University
17:00 – 17:30	EUonAIR Panel: The Intelligent Society: AI, Mobility and the Future of Smart Cities

	• Magdalena Gawrońska, Holistic Mobility Support Center Manager, Kozminski University • Laia Prat Cots, UAO CEU EUonAIR Alliance Project Manager, UAO CEU • Prof. Dubravka Kovačević (Moderator)
20:00	**Dinner**
Friday, 4th September 2026	
09:00 – 09:15	Registration
09:15 – 09:45	Keynote 3: Peter van der Hijden (independent higher-education strategy adviser, Former EU Commission as Head of Sector for Higher Education Policy and contributed to the development of Erasmus, the Bologna Process and the EU's university modernisation agenda) *'' Could Europe achieve higher impact with a lighter touch?''*
09:45 – 10:30	Panel 3: The Co-Scientist Era: How AI Is Rewriting Research • Prof. Vilte Auruskeviciene, ISM University of Management and Economics • Prof. Swen Seebach, Vice-Rector, UAO CEU • Prof. Andrej Novak (Moderator)
10:30 – 11:00	Coffee break sponsored by AACSB
11:00 – 12:00	Workshop – Mikael Gorsky "*Directing autonomous agents for management tasks: practical workshop*"
12:00 – 13:00	Lunch
13:00 – 16:30	Paper presentations 4InnoPipe 2 meeting (until 15:00)
Closing of the conference Day 2	
18:30	Dubrovnik City Tour

KEYNOTE SPEAKERS

Johan Roos, PhD

Professor | Advisor | Co-inventor of LEGO® Serious Play®

The Fourth Value: Human Magic in the Age of Algorithms

Johan Roos is an internationally recognized strategist, author, educator, and advisor specializing in leadership, strategy, and the impact of artificial intelligence on organizations. A co-inventor of LEGO® Serious Play®, he has held senior leadership positions at leading international business schools, including Hult International Business School, Copenhagen Business School, and the Stockholm School of Economics. Today, he advises executives and boards around the world on navigating AI-driven transformation. His latest book, Human Magic: Leading with Wisdom in an Age of Algorithms, explores how leaders can combine human judgment, creativity, and wisdom with the power of AI to build resilient, future-ready organizations.

Eileen McAuliffe, PhD

Executive Vice President, Chief Thought Leadership Officer & Managing Director, EMEA, AACSB International

Eileen McAuliffe serves as Executive Vice President, Chief Thought Leadership Officer, and Managing Director, EMEA at AACSB. As a member of the executive team, she leads global thought leadership initiatives and champions the quality, relevance, and societal impact of business schools worldwide. Prior to joining AACSB, she was Pro Vice-Chancellor (Global) and Executive Dean of the Faculty of Business, Law, and Social Sciences at Birmingham City University. She also brings extensive industry experience from executive tax advisory roles at ConocoPhillips and contributes to global policy through the United Nations Platform for the Collaboration on Tax.

Peter van der Hijden

Independent Higher Education Strategy Adviser and Policy Influencer

Could Europe Achieve Higher Impact with a Lighter Touch?

Peter van der Hijden is an independent higher education strategy adviser and policy influencer based in Brussels. He worked for the European Commission for 23 years in education, transport, research, and innovation, including as Head of Sector for Higher Education Policy. He played a central role in the development of the Erasmus programme, the Bologna Process, and the EU Modernisation Agenda for universities. He studied law at Maastricht University, where he began his career as Vice-Registrar of the University Council and Policy Officer for Education and Research. In 2025, his article “Could Europe Achieve Higher Impact with a Lighter Touch?” was published by University World News and six other journals.

PANEL DISCUSSIONS

HEIC 2026 • Dubrovnik, Croatia • 3–4 September 2026

PANEL 1 • Higher Education at a Turning Point: AI, Leadership and Purpose

Johan Roos — Professor | Advisor | Co-inventor of LEGO® Serious Play®

Carlo Maria Gallucci Calabrese — Chief Executive Officer, Università Cattolica del Sacro Cuore

Eileen McAuliffe, PhD — Executive Vice President and Chief Thought Leadership Officer, AACSB International

Mato Njavro — Moderator

PANEL 2 • Ethics of AI in Education: Key Challenges and Practical Solutions?

Markus Raueiser — Professor International Business and Director Teaching and Learning, CBS International Business School / CBS Cologne Business School GmbH

Prof. Maha Mahdi Al-Khaffaf — Professor of Management Information Systems and Director of International Relations, Applied Science Private University (ASU), Jordan

Dr Monika Sońta — Assistant Professor, Kozminski University; Visiting Scholar, Riga Business School

Prof. Kristijan Krkač — Moderator

PANEL 3 • The Co-Scientist Era: How AI Is Rewriting Research

Prof. Vilte Auruskeviciene — ISM University of Management and Economics

Prof. Swen Seebach — Vice-Rector, UAO CEU

Prof. Andrej Novak — Moderator

PAPER PRESENTATION SCHEDULE

Thursday, 3 September 2026 • Dubrovnik

Paper Session 1 – AI, Higher Education and Institutional Transformation

Session Chair: Karmela Aleksić-Maslać

Time	Authors	Paper
15:00	Mikael Alemu Gorsky, Ilya Levin	Directing Autonomous Agents: New Core Competency for the MBA Graduate
15:20	Andrzej Rudko	Integrating AI Avatars into Higher Ed: Balancing Technology and Academic Quality
15:40	Edda Apfenthaler, Maja Martinović, Zoran Barac	Accreditations as Drivers of Organizational Learning and Strategic Development in Higher Education
16:00	But Dedaj	The Impact of Artificial Intelligence on the Economic Professions
16:20	Ivan David Dogan, Matej Nakić, Goran Oblaković	Beyond Screen Time: Smartphone Salience as a Cognitive Predictor of Problematic Smartphone Use

PAPER PRESENTATION SCHEDULE

Friday, 4 September 2026 • Dubrovnik

Paper Session 2 – AI, Future Skills and Business Education

Session Chair: Karmela Aleksić-Maslać

Time	Authors	Paper
13:00	Vitaliy Roud	What Knowledge-Intensive Entrepreneurs Still Need to Learn: Skill Gaps in the Age of AI
13:20	Krunoslav Antoliš	Artificial Intelligence in Policing: Technologies, Ethical Challenges, and Implications for Democratic Governance
13:40	Monika Sońta, Lyubomyr Matsekh-Ukrayinskyy, Maciej Mąkosa	From Knowing to Doing: Redesigning Business Education for AI
14:00	Thao Laavunen	From Entrepreneurial Practice to Entrepreneurship Education: A Situated Experiential Framework for Critical Digital Literacy Development

Paper Session 3 – AI, Learning and Innovation in Higher Education

Session Chair: Karmela Aleksić-Maslać

Time	Authors	Paper
14:20	Marija Ivanković	Cognitive Offloading in the Classroom: Evidence from Written and Oral Statistics Exams Before and After ChatGPT
14:40	Maha Alkhaffaf	AI-Driven Learning Analytics Capabilities and Learning Data Quality for Intelligent Academic Decision-Making in Jordanian Higher Education: A Pilot Study
15:00	Yolanda Lopez del Hoyo, Alberto Barceló Soler, Alicia Monreal-Bartolomé, Loreto Camarero Grados, Itxaso Cabrera Gil, Maria Beltrán Ruiz, Marina Ledesma-Casas, Marta Puebla Guedea	Implementation of the GAMBL Program: A Psychoeducational Intervention with a Gender Perspective for Gambling Behavior Prevention in Higher Education
15:20	Branka Remenarić, Ivan Čevizović, Tonka Čevizović	Exploring the Role of Artificial Intelligence in Accounting, Audit, and Tax Education: Insights from Croatian Academia and Practice

ONLINE PAPER PRESENTATION SCHEDULE

Friday, 4 September 2026 • Zoom

Online Paper Session 1 – AI-Enhanced Learning, Teaching and Professional Practice

Session Chair: Goran Oblaković

Time	Authors	Paper
13:00	Sven Dittes, Isabell Steidel, Ralf Dillerup, Brian Boyd	Teaching Digital Transformation Through AI-Simulated Organisations: A Design Blueprint for Interactive Teaching Cases
13:20	Zdravka Biočina, Sunčica Žnidar	The Use of Artificial Intelligence in Business Communication within Croatian Corporate Settings
13:40	Riem Yasin, Carsten Lanquillon	Orchestrating Generative AI in an Immersive Learning Environment: A Participatory Design Study in Higher Education
14:00	Enes Rischert, Viktor Grinewitschus, Niels Bartels, Uta Pottgiesser, Felix Meckmann	From Task Execution to Task Stewardship: AI-Induced Transformation of Task Profiles in Architecture and Engineering and Its Consequences for Higher Education

14:20–14:30 • Short break

Online Paper Session 2 – AI, Digital Transformation and Emerging Challenges

Session Chair: Goran Oblaković

Time	Authors	Paper
14:30	Maria Rosaria Re, Stefania Capogna, Alessandra Natalini	Prompting as a Professional Competence: Analysing Pre-service Teachers' Prompts and Critical Appraisal of AI-Generated Lesson Plans
14:50	Riem Yasin, Samir Yasin, Carsten Lanquillon	From Usage Intensity to Relationship Quality: A Typology of Student-AI Use and Design Propositions for Generative AI in Higher Education
15:10	Yannik Langer, Carsten Lanquillon, Seline Löwe, Tom Ochs, Elias Ottenbacher, Joshua Zürn	Standards for Machine-Readable Course Descriptions
15:30	Matej Ivaniček, Yaraslau Svintsitski	Input-Output Shock Propagation and Spectral Amplification
15:50	Josip Tomašković	Geopolitical Risk, Oil Supply Shocks, and the Macroeconomic Transmission of the 2026 Iran–Israel–U.S. War

THURSDAY, 3 SEPTEMBER 2026 • PAPER SESSION 1
AI, Higher Education and Institutional Transformation

Directing Autonomous Agents: New Core Competency for the MBA Graduate

Mikael Alemu Gorsky and **Ilya Levin**

Holon Institute of Technology, Israel

ABSTRACT

Business schools teach students to converse with generative AI. The work those graduates will do is being reshaped by intentional autonomous agents that execute multi-step tasks across files and applications and return finished deliverables. This paper argues that the gap is wide enough to require a change at the level of the curriculum, and that fluency in directing such agents should become a graded competency in the MBA core. The argument draws on the authors' experience teaching the adjacent discipline to software engineers, and it adapts a discipline-based curriculum for agentic software engineering to the deliverable-centred work of the business graduate. The competency is a single analytical judgment, the direction of an agent, with oversight, verification, and the safe handling of data as dimensions of doing that one thing well. Empirical work on knowledge-worker productivity, on the failure modes of agentic systems, and on how students actually use these tools supports the diagnosis and the design. The paper offers a teaching pattern built around a planted error: the agent produces a result that is plausible and wrong, and the student has to catch it. The value a graduate adds lives in the check. This is a conceptual and pedagogical framework grounded in teaching practice, and the paper sets out the classroom it comes from, the limits of what that classroom supports, and the case for carrying a discipline developed with engineering students into the business school. It closes with two models for placing the competency in a programme, the obstacle of faculty readiness, and an admission that the framework awaits empirical validation.

Keywords: agentic AI, MBA curriculum, autonomous agents, assessment, verification, faculty development

THURSDAY, 3 SEPTEMBER 2026 • PAPER SESSION 1
AI, Higher Education and Institutional Transformation

Integrating AI Avatars into Higher Ed: Balancing Technology and Academic Quality

Andrzej Rudko

Koźminski University, Poland

ABSTRACT

Artificial intelligence is rapidly changing how universities create and share learning materials. This presentation outlines the operational framework behind MyAI University—an initiative within the EUonAIR project designed to help institutions jointly produce modular, AI-supported online courses. Coordinating international micro-courses featuring academic expertise, AI avatars, multimedia, and digital assessments presents unique logistical and quality control challenges. To address this, we present a hands-on production workflow tailored for a multi-partner environment. The presentation will walk through the actual steps of course creation: structuring modules, calculating instructional workload, drafting avatar-ready scripts, and implementing standardized quality assurance checkpoints. We will also share tested solutions to common design bottlenecks, such as aligning learning outcomes with assessments, synchronizing AI narration with visual assets, and maintaining transparency regarding generative AI use. Crucially, this case study demonstrates how to position AI avatars as a practical tool within a facultydriven process, ensuring that technology scales delivery without replacing human oversight. Attendees will receive an actionable blueprint and practical recommendations for scaling digital learning resources and building shared, AI-enhanced educational ecosystems across institutions.

Keywords: AI avatars; artificial intelligence in education; higher education; academic quality; instructional design; interuniversity collaboration; digital learning; quality assurance; EUonAIR; MyAI University

THURSDAY, 3 SEPTEMBER 2026 ● PAPER SESSION 1

AI, Higher Education and Institutional Transformation

Accreditations as Drivers of Organizational Learning and Strategic Development in Higher Education

Edda Apfenthaler[1], **Maja Martinović**[1] and **Zoran Barac**[2]

1 Zagreb School of Economics and Management, Zagreb, Croatia

2 Zagreb School of Economics and Management, Zagreb, Croatia; Luxembourg School of Business, Luxembourg

ABSTRACT

This study examines how accreditations contribute to the development of quality assurance (QA) in higher education institutions through organizational learning. Drawing on Organizational Learning Theory (OLT), a conceptual model was developed linking accreditation, organizational learning, internal QA systems, quality culture, continuous improvement and strategic development, and stakeholder resistance. The qualitative study was based on semi-structured interviews with four experienced QA and accreditation experts from Croatian higher education institutions. Data were analyzed using Reflexive Thematic Analysis and a hybrid deductive-inductive approach. The findings indicate that accreditation can serve as a development mechanism when evaluation results, recommendations, and stakeholder feedback are transformed into organizational learning and embedded in institutional practices. Organizational learning strengthens internal QA systems, which in turn support the development of quality culture and continuous improvement. International accreditations additionally contribute to benchmarking, international recognition, and strategic positioning. Stakeholder resistance may hinder these processes, although its impact depends on institutional context and change management. Leadership emerged as an additional key enabling factor, influencing whether accreditation recommendations are translated into meaningful organizational change.

Keywords: accreditation; organizational learning; quality assurance; quality culture; higher education; strategic development

THURSDAY, 3 SEPTEMBER 2026 ● PAPER SESSION 1

AI, Higher Education and Institutional Transformation

The Impact of Artificial Intelligence on the Economic Professions

But Dedaj

University of Prishtina, Kosovo

ABSTRACT

The study explores the transformative impact of artificial intelligence (AI) on the economic professions, with particular attention to its effects on labour markets, professional skills, and education systems. The emergence and rapid diffusion of artificial intelligence (AI) as a general purpose technology are fundamentally reshaping the organization of work, decision making processes, and the generation of economic value across a broad range of economic activities. Its rapid development and widespread adoption are also creating uncertainty about the future of employment and the types of knowledge and competencies that professionals will need. In this context, preparing the workforce for continuously evolving job requirements has become increasingly challenging, as technological innovation is reshaping occupations and professional tasks at an unprecedented pace. The study therefore emphasizes the need for education and training systems to respond more effectively to these changes. Rather than focusing solely on specialized and technical knowledge, traditional education should place greater emphasis on adaptability, critical thinking, problem solving, creativity, digital competencies, and lifelong

learning. These capabilities can help economic professionals and future workers remain resilient, adaptable, and competitive in an increasingly AI driven labour market.

Keywords: Artificial Intelligence (AI); Economic Professions; Labour Markets; Future of Work; Professional Skills; Education and Lifelong Learning; Digital Transformation

THURSDAY, 3 SEPTEMBER 2026 • PAPER SESSION 1

AI, Higher Education and Institutional Transformation

Beyond Screen Time: Smartphone Salience as a Cognitive Predictor of Problematic Smartphone Use

Ivan David Dogan[1], **Matej Nakić**[1] and **Goran Oblaković**[2]

1 Zagreb School of Economics and Management, Croatia

2 Luxembourg School of Business, Luxembourg

ABSTRACT

Research on problematic smartphone use has predominantly focused on screen time and usage frequency, implicitly treating digital engagement as a quantitative phenomenon. Adopting a cognitive perspective, the present study examines smartphone salience—the extent to which smartphones remain cognitively prominent and mentally accessible—as a proximal predictor of problematic smartphone use beyond usage frequency and individual differences. In a cross-sectional sample of 198 adult university students, we assessed smartphone salience, problematic smartphone use, perceived social relatedness, usage frequency, and demographic variables. Hierarchical regression analyses indicate that salience is positively associated with problematic smartphone use after controlling for age, gender, usage frequency, and social relatedness, and that it explains additional variance beyond usage frequency alone. Contrary to common assumptions, neither perceived social relatedness nor age moderated this association. These findings suggest that, alongside established predictors, smartphone salience represents an additional cognitive aspect that warrants consideration in research on problematic smartphone use, with implications for digital well-being in organizations and higher education.

Keywords: smartphone salience, problematic smartphone use, attention, digital well-being, cognitive preoccupation, higher education

FRIDAY, 4 SEPTEMBER 2026 • PAPER SESSION 2

AI, Future Skills and Business Education

What Knowledge-Intensive Entrepreneurs Still Need to Learn: Skill Gaps in the Age of AI

Vitaliy Roud

Zagreb School of Economics and Management, Zagreb, Croatia

ABSTRACT

Founders in an advanced Croatian technology incubator rate sales and marketing as the gaps that most limit their growth, while close to half call technical and artificial-intelligence skills irrelevant, and most access AI through shared platform interfaces rather than building it in-house. We ask whether the skill gaps that constrain knowledge-intensive entrepreneurial firms shift with the firm's AI strategy, and what the answer means for the future of business education. From a survey of 56 startups at the Zagreb Innovation Centre, we group firms by their digital and AI strategy and relate skill-gap severity to how deeply firms engage AI. Commercial gaps dominate every profile and, far from narrowing as firms commit to AI, they deepen with it: the firms that build their own AI report the largest business-development gap, and the more a firm prioritises AI the

larger its own data and AI gap. AI does not close these gaps; engaging it more deeply raises the demand for the commercial and business-model skills they describe. Because advantage in the age of AI accrues to firms whose business models and processes are organised around knowledge, the competence these founders most lack is the design of a knowledge-centric business model that uses cheap, widely available AI. Teaching that competence, in degree programmes and in the continuing education of working founders, is the direction in which business education must develop.

Keywords: knowledge-intensive entrepreneurship, skill gaps, artificial intelligence strategy, latent class analysis, business education, incubator

FRIDAY, 4 SEPTEMBER 2026 • PAPER SESSION 2

AI, Future Skills and Business Education

Artificial Intelligence in Policing: Technologies, Ethical Challenges, and Implications for Democratic Governance

Krunoslav Antoliš

University of Applied Sciences in Criminal Investigation and Public Security, Ministry of Internal Affairs, Republic of Croatia, Zagreb, Croatia

ABSTRACT

The integration of artificial intelligence into policing marks a shift toward data-driven operational models. Predictive policing applies machine learning and spatial analytics to historical crime data, while computer vision supports facial recognition and license-plate analysis. Natural language processing enables large-scale monitoring of online communication, and drones expand continuous data collection. These tools improve resource allocation and automate labor-intensive tasks, yet introduce substantial ethical and technical concerns. Central among them is algorithmic bias: models trained on historically skewed data risk reinforcing social disparities, reflected in higher false-positive rates for facial recognition among minority groups. Additional issues include the opacity of black-box systems, reduced accountability, and privacy risks associated with mass surveillance. Public opinion research shows conditional support dependent on strong oversight. The future of AI-enabled policing therefore relies on ethical frameworks, rigorous auditing, and evidence-based regulation. The paper also considers how higher-education institutions can embed AI-related policing competencies into criminal justice curricula.

Keywords: Bias, Privacy, Accountability

FRIDAY, 4 SEPTEMBER 2026 • PAPER SESSION 2

AI, Future Skills and Business Education

From Knowing to Doing: Redesigning Business Education for AI

Monika Sońta[1], **Lyubomyr Matsekh-Ukrayinskyy**[2] and **Maciej Mąkosa**[3]

1 Kozminski University, Warsaw, Poland

2 Reutlingen University, Reutlingen, Germany

3 Kozminski University, Warsaw, Poland

ABSTRACT

As artificial intelligence transforms managerial practice, business schools face growing pressure to equip graduates with digital literacy while keeping curricula accessible to non-technical learners. Despite emerging educational initiatives, limited evidence exists on effectively designing these courses within actionable pedagogical frameworks. This paper addresses this gap through two complementary pain-point analyses grounded in thematic inquiry: a corpus of eight hundred thirty-eight unique sources from academic, enterprise, and practitioner platforms, and a longitudinal dataset of six hundred seven

student evaluation records collected across five academic years from one thousand two hundred thirty-six enrolled management students. Findings reveal five systemic obstacles: entry-point paralysis, acute anxiety regarding self-efficacy, shallow enterprise adoption, workplace stigma, and institutional incoherence. Practical application, active tool integration, contemporary case studies, and collaborative pitch projects consistently outperformed traditional lecture-based instruction. Grounded in these empirical insights, this study proposes actionable guidelines for course redesign—including output-auditing assessments, early metacognitive regulation modules, multi-source feedback models, and transparent disclosure protocols—alongside core pedagogical principles supporting agile, continuously evolving curricula for management education.

Keywords: Artificial Intelligence in Education, Management Education, Curriculum Design, AI Literacy, Experiential Learning

FRIDAY, 4 SEPTEMBER 2026 • PAPER SESSION 2

AI, Future Skills and Business Education

From Entrepreneurial Practice to Entrepreneurship Education: A Situated Experiential Framework for Critical Digital Literacy Development

Thao Laavunen

Åbo Akademi University, Turku, Finland

ABSTRACT

This research explores how entrepreneurs develop critical literacy to manage the complexities of modern digital information environments. Drawing on qualitative interviews with local and immigrant business owners in Finland, the study identifies that while formal training provides structure, most entrepreneurs develop these essential skills through self-directed, practice-based learning. Entrepreneurs value education when it is practical, context-sensitive, timely, and directly applicable to their venture, industry, and stage of development. Based on these findings, the study proposes a Situated Experiential Framework for Critical Digital Literacy, linking a recurring entrepreneurial learning cycle with the situational dimensions that shape the critical literacy practices and development. The framework contributes to higher-education entrepreneurship programs by suggesting that critical literacy should be embedded in specific business problems and environments rather than taught only as a transferable technical skill.

Keywords: critical literacy, information literacy, digital literacy, literacy development, literacy training, entrepreneurs, digital information, digital environment, entrepreneurial education, higher education

FRIDAY, 4 SEPTEMBER 2026 • PAPER SESSION 3

AI, Learning and Innovation in Higher Education

Cognitive Offloading in the Classroom: Evidence from Written and Oral Statistics Exams Before and After ChatGPT

Marija Ivanković

Zagreb School of Economics and Management, Croatia

ABSTRACT

Since the introduction of OpenAI's ChatGPT to the masses in late 2022, its effect on education and learning has been both debated and researched. Quantitative subjects, like mathematics and statistics, have traditionally relied on written tests and task-solving to examine knowledge, which makes them particularly exposed to a tool capable of solving such tasks in seconds.

This study analyses the effect of ChatGPT on learning by examining written and oral exam results from the Statistics 1 course at the Zagreb School of Economics and Management, across eight academic years (2017/18–2025/26, excluding 2021/22 due to missing data), split into pre-ChatGPT (2017/18– 2020/21) and post-ChatGPT (2022/23–2025/26) periods. Using the oral exam as a comparison condition less exposed to direct AI assistance, a difference-in-differences design was applied to isolate a ChatGPT-specific effect from general trends and two identified controls. Results show that written exam performance declined relative to oral exam performance following ChatGPT's emergence (did = −0.211, $p < 0.001$). Event-study estimates show this decline as a sharp shift concentrated at the point of ChatGPT's release rather than a gradual pre-existing trend. The pattern is consistent with a cognitive offloading mechanism, whereby AI-assisted preparation produces a shallower understanding that becomes visible specifically once the tool is no longer available, though individual-level AI usage was not directly observed.

Keywords: ChatGPT; difference-in-differences; oral examination; cognitive offloading; academic integrity; quantitative assessment

FRIDAY, 4 SEPTEMBER 2026 • PAPER SESSION 3

AI, Learning and Innovation in Higher Education

AI-Driven Learning Analytics Capabilities and Learning Data Quality for Intelligent Academic Decision-Making in Jordanian Higher Education: A Pilot Study

Maha Alkhaffaf

Applied Science Private University, Amman, Jordan

ABSTRACT

Artificial intelligence (AI) and learning analytics have become key drivers of data-driven decision-making in higher education. However, limited research has examined how AI-Driven Learning Analytics Capabilities and Learning Data Quality influence Intelligent Academic Decision Support and Academic Decision Quality. Accordingly, this study aims to develop and preliminarily validate an integrated research model based on Decision Support Systems (DSS) Theory. A quantitative pilot study was conducted to assess the reliability and validity of the proposed measurement instrument before undertaking a full-scale empirical investigation. The measurement model was evaluated using SmartPLS 4 by examining indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. The findings provide preliminary evidence supporting the suitability of the proposed measurement instrument for testing the hypothesized relationships among AI-Driven Learning Analytics Capabilities, Learning Data Quality, Intelligent Academic Decision Support, and Academic Decision Quality.

Keywords: Artificial Intelligence, Learning Analytic, Learning Data Quality, Intelligent Academic Decision Support, Academic Decision Quality, Decision Support Systems

FRIDAY, 4 SEPTEMBER 2026 • PAPER SESSION 3
AI, Learning and Innovation in Higher Education

Implementation of the GAMBL Program: A Psychoeducational Intervention with a Gender Perspective for Gambling Behavior Prevention in Higher Education

Yolanda Lopez del Hoyo, Alberto Barceló Soler, Alicia Monreal-Bartolomé, Loreto Camarero Grados, Itxaso Cabrera Gil, Maria Beltrán Ruiz, Marina Ledesma-Casas and Marta Puebla Guedea

Universidad de Zaragoza / IIS Aragon, Spain; IIS Aragon, Spain

ABSTRACT

Background: Gambling disorder is a critical public health concern and a behavioral addiction with high prevalence among young adults, leading to severe psychological distress and functional impairment. Despite the intensification of gambling among adolescents and university students, most preventive programs neglect gender-specific dynamics, despite evidence showing that women display distinct gambling patterns, risk factors, and trajectories. While serious games offer promising avenues to boost youth engagement, there is a clear need for digital interventions incorporating a gender perspective. Objective: The GAMBL Project addresses this gap through two evidence-based digital psychoeducational programs designed for higher education settings: GAMBL-OUT (for youth) and GAMBL-HER (for women). This work presents the clinical trial protocols and preliminary implementation outcomes for both interventions. Methods: To evaluate GAMBL-OUT (a digital escape room), a cluster randomized controlled trial was conducted with 414 university students (58.5% female, aged 17–23). Knowledge, intentions, and attitudes were assessed at baseline, immediately post-intervention, and at a 1-month follow-up. Implementation outcomes (e.g., acceptability, feasibility, fidelity) were evaluated qualitatively. Concurrently, GAMBL-HER—a tailored program covering psychoeducation, emotional self-regulation, impulse control, self-care, and stigma reduction—is being evaluated via a randomized controlled trial involving 104 women aged 18 and older. Primary outcomes focus on gambling literacy, attitudes, behaviors, psychological risk factors, and implementation feasibility. Results: For GAMBL-OUT, results revealed a significant reduction in gambling-related thoughts, a decrease in gambling intentions among male participants, and significant improvements in overall gambling literacy and risk perception across all participants. Evaluation of the GAMBL-HER trial is currently ongoing. Conclusion: The GAMBL Project offers a scalable, innovative framework that combines gamification and gender-sensitive approaches to advance behavioral addiction prevention in higher education.

Keywords: Prevention Behavior Disorders Gambling Digital intervention Escape-room digital Mental health

FRIDAY, 4 SEPTEMBER 2026 • PAPER SESSION 3
AI, Learning and Innovation in Higher Education

Exploring the Role of Artificial Intelligence in Accounting, Audit, and Tax Education: Insights from Croatian Academia and Practice

Branka Remenarić, Ivan Čevizović and Tonka Čevizović

Zagreb School of Economics and Management, Zagreb, Croatia

ABSTRACT

Artificial intelligence (AI) is changing the accounting, audit, and tax profession, but little is known about how this shift is being reflected in higher education outside the small number of countries that dominate the international research literature. This study explores the role of AI in accounting, audit, and tax education in Croatia using semi-structured interviews with nine

university professors and two professional-chamber representatives. Findings show that AI integration into Croatian curriculum is highly uneven and mostly individually driven by educators rather than by institutional policy. That means Croatia is adopting changes in curriculum slower than suggested by international bibliometric trends. Despite this lagging adoption, Croatian respondents' judgements about priorities are in line with findings in international studies: critical evaluation of AI output, rather than technical AI literacy, was the most frequently cited competency gap. Audit was the discipline most frequently described as receptive to AI, tax the least, with accounting in between — a differentiation largely absent from the existing international literature, though not a unanimous view among respondents. The study also surfaces a difference in how critically professional-chamber and academic respondents assess graduate preparedness. Implications for curriculum design and academic–professional collaboration are discussed, with due caution given the study's small, hand-picked (not randomly selected) sample.

Keywords: artificial intelligence, accounting education, audit education, tax education, curriculum development, Croatia

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 1
AI-Enhanced Learning, Teaching and Professional Practice

Teaching Digital Transformation Through AI-Simulated Organisations: A Design Blueprint for Interactive Teaching Cases

Sven Dittes, Isabell Steidel, Ralf Dillerup and Brian Boyd

Heilbronn University of Applied Sciences, Germany

ABSTRACT

Digital transformation is commonly taught through conventional case studies in which students apply frameworks to analyse strategy, technology, processes, stakeholders, and change. While useful, this approach does not capture the central challenge of transformation practice: diagnosing ill-structured organisational problems shaped by distributed knowledge, conflicting perspectives, and competing interests. Generative artificial intelligence intensifies this limitation by rapidly producing plausible analyses of conventional cases. In response, we followed a design and development research approach to derive a blueprint for interactive teaching cases, in which client organisations are simulated and grounded in educational concepts such as epistemic friction, organisational sensemaking, and constructive alignment. The blueprint was instantiated as fictional client organisations, each realised as a customised ChatGPT application and validated against explicit readiness criteria before being implemented in a master-level digital transformation course. Acting as external consultants, student teams investigated their assigned organisation by interviewing stakeholder personas and eliciting partial, conflicting, and interest-laden accounts. A pilot evaluation with one cohort shows high acceptance, active engagement, and a positive perceived learning experience, alongside a clear need for greater interaction depth; it is important to note that the evidence speaks to feasibility and acceptability rather than to learning gains. Theoretically, the paper conceptualises generative artificial intelligence as a medium for representing the object of inquiry rather than as a tutor or solution provider. Practically, it offers educators a documented and potentially transferable blueprint – design principles, an authoring schema, and readiness criteria – for building context-rich cases and aligned assessment.

Keywords: digital transformation, generative artificial intelligence, interactive teaching cases, organisational simulation, constructive alignment, higher education

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 1
AI-Enhanced Learning, Teaching and Professional Practice

The Use of Artificial Intelligence in Business Communication within Croatian Corporate Settings

Zdravka Biočina and Sunčica Žnidar

Zagreb School of Economics and Management, Zagreb, Croatia

ABSTRACT

This study examines the use of artificial intelligence tools in business communication among employees of companies in Croatia. It focuses on the frequency and purposes of their use, the most widely used tools, perceived usefulness, organizational support, and expectations regarding their future impact on work. An online survey was conducted in June 2026 using a voluntary convenience sample of 101 employees. Data were analyzed using descriptive statistics and cross-tabulations. The results show that 89.1% of respondents used artificial intelligence tools in their work, while 51.4% used them often or always. ChatGPT was the most widely used tool, reported by 79.8% of respondents. Artificial intelligence was most frequently applied to writing and editing texts, idea generation, translation, and data analysis. Most respondents believed that these tools made their work easier, and almost two thirds reported that their companies encouraged or partially supported their use. More than two thirds expected artificial intelligence to significantly change their work within the next three to five years, with positive expectations prevailing. The findings suggest that artificial intelligence provides useful support for business activities, although its application remains selective and task-specific rather than fully integrated into business communication.

Keywords: Artificial Intelligence, AI tools, Business Communication

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 1
AI-Enhanced Learning, Teaching and Professional Practice

Orchestrating Generative AI in an Immersive Learning Environment: A Participatory Design Study in Higher Education

Riem Yasin and Carsten Lanquillon

Heilbronn University of Applied Sciences, Germany

ABSTRACT

Research on generative AI in higher education has concentrated on individual tools that students operate on private screens, while a different design question stays open. How should several AI functions act together once they become part of a shared physical learning space? This paper reports a participatory design study in three stages that carries student input from preference to a working prototype. Stage one elicited conceptions of an immersive-cognitive learning environment from seven students through modified-Delphi card sorting. Stage two asked twelve students to distribute a weighting budget across twenty AI functions, where support for understanding code, text summarisation, and speech transcription passed a majority-agreement threshold. Guided by the first two stages, stage three evaluated a Unity prototype that coordinates a GPT-4 conversational guide, image generation, speech recognition, and voice synthesis behind two animated characters on a 98-inch multitouch display with six students. Speech input earned the most positive judgements, whereas five of six confused the input fields of the two generative components, and a haptic wearable added no perceived value despite earlier demand. The paper contributes this finding, a replicable process for prioritising AI functions, and design guidance grounded in a working prototype, open to confirmation at scale.

Keywords: generative AI, higher education, immersive learning environment, participatory design, conversational agent, gamification

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 1
AI-Enhanced Learning, Teaching and Professional Practice

From Task Execution to Task Stewardship: AI-Induced Transformation of Task Profiles in Architecture and Engineering and Its Consequences for Higher Education

Enes Rischert, Viktor Grinewitschus, Niels Bartels, Uta Pottgiesser and Felix Meckmann

1 Ruhr West University of Applied Sciences, Mülheim an der Ruhr, Germany
2 Cologne University of Applied Sciences (TH Köln), Cologne, Germany
3 OWL University of Applied Sciences and Arts (TH OWL), Detmold, Germany

ABSTRACT

Artificial intelligence (AI) is changing the knowledge professions faster than education can respond. In architecture, engineering and construction (AEC), planning is organised into defined service phases, which creates a tension between an agile, iterative use of AI and the rigid, task-bound structure of the classical phase model. This paper asks how AI changes the task profiles of planners and, above all, what competences future engineers and architects therefore need. The contribution is a competence framework for AEC higher education, derived from a systematic literature review and substantiated by a nationwide survey of 1,020 students.The review indicates that AI first takes over routine, document-intensive sub-tasks and shifts the human contribution towards oversight, integration and accountability, a role termed task stewardship, with value concentrating in the early design phases. The survey shows that more than 90 percent of students already use AI, while more than half report no structured training, which quantifies a widening competence gap. From these two sources the framework maps shifting tasks onto required future skills and concrete curricular measures for lifelong learning and skills for the future.

Keywords: artificial intelligence in education, future skills, competence gap, task stewardship, engineering education, curriculum innovation

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 2
AI, Digital Transformation and Emerging Challenges

Prompting as a Professional Competence: Analysing Pre-service Teachers' Prompts and Critical Appraisal of AI-Generated Lesson Plans

Maria Rosaria Re, Stefania Capogna and Alessandra Natalini

Link Campus University, Rome, Italy

ABSTRACT

The widespread adoption of generative artificial intelligence is reshaping teachers' professional competences, requiring not only the ability to integrate digital technologies ef ectively into teaching, but also to critically evaluate AI-generated outputs and interact with AI systems through ef ective prompting. Within this context, the present study investigates the development of prompt literacy and critical reflection in initial teacher education. The research was conducted at Link Campus University within the Educational Technology Laboratory of the five-year Primary Teacher Education degree programme (LM-85bis). At the end of the laboratory, 133 pre-service teachers designed a technology-enhanced lesson plan, asked a generative AI system to produce a lesson on the same topic while documenting the prompt used, and finally wrote a critical comparison of the two lesson plans. The corpus was analysed through a mixed-methods content analysis adopting a quantitizing strategy. Prompts were coded according to indicators of quality and contextualisation, while students' reflections were analysed using established frameworks of critical reflection. The study explores the relationship between prompt quality and the depth of critical evaluation of AI-generated outputs, proposing prompt literacy as an emerging professional competence to be fostered within initial teacher education.

Keywords: Artificial Intelligence in Education, Assessment of Learning, New Teaching Methods, Educating students for the future job market

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 2
AI, Digital Transformation and Emerging Challenges

From Usage Intensity to Relationship Quality: A Typology of Student-AI Use and Design Propositions for Generative AI in Higher Education

Riem Yasin, Samir Yasin and Carsten Lanquillon

Heilbronn University of Applied Sciences, Germany

ABSTRACT

Competence frameworks for generative AI in higher education specify what students should be able to do, yet they leave the everyday interaction pattern that produces these abilities under-specified. This paper proposes the quality of the student-AI relationship as this missing design object. Licklider's vocabulary of symbiosis informs this typology, although it replaces his ideal of tight coupling with preserved independent capability. Two states result. Capability-returning use strengthens the student's own capability through delegation; dependent use leaves students unable to produce the delegated work alone. We hypothesise that the interface layer shapes which relationship forms. Three observable markers make the two states assessable, namely verification of AI output, task-scoped delegation, and dependence awareness. Descriptive evidence from two open survey datasets illustrates the markers. Among 218 high-frequency users in a single-institution survey, the markers separate four response combinations (29, 33, 17, and 20 %). In a cleaned global dataset, ethical concern is associated with somewhat lower intensive use, yet intensive use remains common under high concern. The contribution consolidates overreliance, assessment-design, and self-regulation findings into a relationship-quality typology and five design propositions, with functional legibility as the novel proposition.

Keywords: AI in education; human-AI interaction; AI literacy; cognitive offloading, interaction design; student-AI relationship

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 2
AI, Digital Transformation and Emerging Challenges

Standards for Machine-Readable Course Descriptions

Yannik Langer, Carsten Lanquillon, Seline Löwe, Tom Ochs, Elias Ottenbacher and Joshua Zürn

Hochschule Heilbronn, Heilbronn, Germany

ABSTRACT

Module handbooks at German higher education institutions are predominantly maintained as unstructured PDF or Word documents. The absence of a common, machine-readable format blocks reliable processing by AI-based services and turns cross-institutional course comparison – central to exchange programmes such as EUonAIR – into a manual and error-prone task. A systematic literature review shows that no established standard (IEEE LOM, ECTS, ELMO, schema.org/Course) combines pedagogical depth with machine-readability: cognitive-level coding via Bloom's Taxonomy, Constructive Alignment and NLP processability remain unaddressed. Following the Design Science Research methodology, this study develops a best-practice standard for course descriptions that is both humanand machine-readable (PDF and JSON-LD) and encodes learning outcomes by Bloom level. The artifact is evaluated through expert interviews (Mayring qualitative content analysis, criteria K1–K8) and an exploratory controlled experiment in which two large language models process the same module in free-text and in structured form. Structuring raises extraction F1 from 74 % to 94 %, Bloom-classification accuracy from 64 % to 86 % and lowers the hallucination rate from 27 % to 7 %, at the cost of roughly double the input tokens. Because the experiment covers a single module with one run per model– format–task combination, and because the Bloom level is stated explicitly in the structured input but only implicitly in the free text, these figures should be read as the direction and consistency of an

effect rather than as precise performance estimates. The results confirm the value of structured, pedagogically rich course descriptions while identifying authoring effort as the main adoption barrier.

Keywords: Machine-readable course descriptions; Design Science Research; Bloom's Taxonomy; Constructive Alignment; JSON-LD;

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 2
AI, Digital Transformation and Emerging Challenges

Input-Output Shock Propagation and Spectral Amplification

Matej Ivaniček and Yaraslau Svintsitski

Zagreb School of Economics and Management, Croatia

ABSTRACT

This paper analyses how sectoral shocks propagate through the production networks of France and Germany and quantifies the extent to which the standard static Leontief framework underestimates dynamic propagation under capacity constraints. Using OECD Inter Country Input Output tables, we simulate two economically relevant shocks, a 25 percent disruption to the energy sector and a 25 percent disruption to the semiconductor sector, under both static and dynamic constrained formulations. The dynamic model takes the form , where the capacity ceiling is approximated by baseline output. Sector level systemic importance is measured through three complementary indicators: output multiplier, forward linkage and eigenvector centrality of the technical coefficient matrix. Our results show that dynamic amplification is systematic but heterogeneous. Energy shocks amplify uniformly by a factor of 2,2 to 2,3, whereas semiconductor shocks remain largely contained in France but propagate broadly in Germany. Cross country comparison reveals a fundamentally different network structure, energy centric in France and services centric in Germany, with direct implications for stabilisation policy and for the ongoing debate on European industrial reshoring.

Keywords: input-output analysis, Leontief model, production networks, shock propagation, spectral centrality, capacity constraints, reshoring

FRIDAY, 4 SEPTEMBER 2026 • ONLINE PAPER SESSION 2
AI, Digital Transformation and Emerging Challenges

Geopolitical Risk, Oil Supply Shocks, and the Macroeconomic Transmission of the 2026 Iran–Israel–U.S. War

Josip Tomašković

Zagreb School of Economics and Management (ZSEM), Zagreb, Croatia

ABSTRACT

This paper analyzes the macroeconomic transmission of the 2026 conflict in the Middle East involving Iran, Israel, and the United States, viewing it not only as a regional conflict but also as a global supply and logistics shock associated with severe disruption of transit through the Strait of Hormuz. Focusing on the Strait of Hormuz, through which roughly a fifth of world oil and liquefied natural gas (LNG) trade passes, the paper develops a multi-channel transmission framework linking energy supply disruption, maritime and logistics frictions, financial and sanctions fragmentation, geopolitical-risk-driven expectations, and policy responses. It assembles quantitative evidence on energy markets and shipping conditions, together with qualitative evidence on financial-market reactions following the outbreak of hostilities on 28 February 2026, showing a sharp rise in crude oil benchmarks, widening regional gas spreads, elevated war-risk insurance premia, and reported risk-off repricing. The central argument is that a chokepoint-induced shock differs from a conventional oil-price shock because it raises both the cost and risk of moving energy, rather than affecting only market supply, thereby increasing risk premiums

that propagate into core inflation and can generate stagflationary pressures in the global economy. The paper concludes with implications for monetary policy, strategic petroleum reserves, and supply-chain diversification, and argues that the chokepoint lens can be generalized to other critical maritime passages.

Keywords: geopolitical risk, oil price shocks, Strait of Hormuz, chokepoints, stagflation, energy security

AUTHOR INDEX

HEIC 2026 • BOOK OF ABSTRACTS