VOLUME OF PROCEEDINGS

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INTERNATIONAL CONFERENCE ON APPLIED BUSSINESS AND ECONOMICS

21st Edition November 3-5, 2025, Kuwait

Hosted by: The Arab Open University in Kuwait

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Athens, Greece 2025

International Conference on Applied Business and Economics

ICABE 2025 21st Edition:

November 3-5, 2025

VOLUME OF PROCEEDINGS

The International Strategic Management Association (ISMA), Greece
The International University of Science and Technology in Kuwait (IUK), Kuwait

Under the Auspices of Democritus University of Thrace, Greece

International Conference on Applied Business and Economics (ICABE 2025)

21st EDITION ICABE 2025, FINAL PROGRAM
November 3rd – 5th, 2025
Arab Open University in Kuwait

Organized jointly by:

- The Arab Open University in Kuwait
- The International Strategic Management Association, Athens, Greece
- Under the Auspices of Democritus University of Thrace, Greece

In cooperation with:

- The Institute of Management, University of Szczecin, Poland
- The Faculty of Economics, Management and Accountancy, University of Malta, Malta
- The Faculty of Economics and Business Administration, West University of Timisoara, Romania
- The Cotsakos College of Business, William Paterson University, USA

International Conference on Applied Business and Economics (ICABE 2025)

Volume of Proceedings

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Conference's Program
(for the detailed program click the web site www.icabe.gr)

DAY 1: Monday 3 November 2025

08:00-9:00 Registration, Welcome reception

09:00-10:00 Session A1: Opening Addresses (Main Amphitheater)

(Moderator: **Prof. Salah Al-Sharhan, Vice President, IUK**)

Welcome Addresses:
Prof. Salah Saleh Alhammadi, **Rector,** Arab Open University in Kuwait
Prof. Mohamed Terro, **President**, International University of Kuwait, Kuwait
Prof. Waldemar Tarczynski, **Rector,** University of Szczecin, Poland
Prof. Slawomir Bukowski, **Rector,** Casimir Pulaski Radom University, Poland
Prof. Aleksander Ostenda, **Rector,** Academy of Silesia, Katowice, Poland
Prof. Adam Kolinski, **Rector,** Poznan School of Logistics, Poland
Prof. John Malindretos, **Senate Representative,** William Paterson University, USA
Prof. Michalopoulou Maria, **Member of U Council,** Democritus University of Thrace, Greece
Prof. El Thalassinos, **President** ISMA, Chair ICABE, Greece

10:15-12:45: Session A2: Keynote Addresses (Main Amphitheater)

MAIN THEME: "Synergizing Innovation: The Global Nexus of Business, Technology, Education, and Economic Sustainability"

(Moderators: **Prof. Dimitrios Madytinos**, Democritus University of Thrace, Greece, **Prof. Eleftherios Thalassinos,** University of Piraeus, Greece and University of Malta, Malta)

Keynote 1: PROFESSOR KINGA FLAGA-GIERUSZYNSKA
Title: "Effective Economic Justice as a Sustainable Development Goal"

Keynote 2: PROFESSOR ALEXIS ANTONIADES
Title: "AI, Skills, and the Future of Work"

Keynote 3: PROFESSOR GRATIELA GEORGIANA NOJA
Title: "Innovation Financing and Environmental Performance: Evaluating the Sustainability Returns of Firm Investment"

Keynote 4: PROFESSOR DR. HABIL. KESRA NERMEND
Title: "Multi-Criteria Evaluation of Tax Law Using Large Language Models: Towards a Legal Quality Index"

Keynote 5: PROFESSOR DIMITRIOS GOUNOPOULOS
Title: "Innovation and Annual Report Readability"

13:45-15:15: Parallel Sessions (Session A3 Lecture Hall 1, Session A4 Lecture Hall 2, Session A5 Lecture Hall 3, Session A6 Lecture Hall 4)

13:45-15:15: **Session A3 in Hall 1:**
Theme: "Law, New Technology and Business I"
(Moderator: **dr hab. Kinga Flaga-Gieruszyńska Prof. US;** University of Szczecin; Poland, **Prof. Dimitrios Gounopoulos,** University of Bath, UK)

#564 #491 #492 #500 #582

13:45-15:15 Session A4 in Hall 2:
(Moderator: **Prof. John Malindretos,** William Paterson University of N.J., USA, **Prof. Theodore Stamatopoulos,** University of West Attica, Greece)

#548 #520 #482 #484 #518

13:45-15:15 Session A5 in Hall 3:
(Moderators: **Prof. Alexandra Livada,** Athens University of Economics and Business, Greece, **Prof. Nancy Papalexandri,** Athens University of Economics and Business, Greece)

#511 #512 #513 #514 #708

13:45-15:15: Session A6 in Hall 4:
(Moderators: **Prof. Laura Brancu,** West University of Timisoara, Romania, **Prof. Joanna Malecka,** Poznan University of Technology, Poland)

#533 #535 #536 #560 #711

15:30-18:00 Session A7: Keynote Addresses (Main Amphitheater)

(Moderators: **Prof. Thomas Burkhardt,** Director, Institute of Management, Chair of Finance, University of Koblenz, Germany, **Prof. El Thalassinos,** University of Piraeus, Greece and University of Malta, Malta)

Keynote 6: PROFESSOR ANTONIS SIMINTIRAS
Title: "The DNA of Value Creation: Trust, Technology, and Time as the Foundations of Competitive Advantage in the Age of Parity"

Keynote 7: DR. HAB. MALGORZATA TARCZYNSKA-LUNNIEWSKA
Title: "Does Sustainability Matter? ESG, Fundamental Strength and Sustainable Enterprise Value"

Keynote 8: PROFESSOR DIMITRIOS MADYTINOS
Title: "Generative AI and Strategy"

Keynote 9: PROFESSOR ANASTASIOS (TASSOS) MALLIARIS (online)
Title: "Global Trade Imbalances"

Keynote 10: DR. PETER EVANGELOU (online)
Title: "Digital Currencies or Technologies of Electronic Payments?"

Free evening

DAY 2: Tuesday 4 November 2025

08:00-09:00 **Registration, Welcome Reception**

PARALLEL SESSIONS B1-B3
09:00-10:30 Session B1 in Hall 1:
(Moderators: **Assist. Prof. Joanna Bukowska,** Casimir Pulaski University of Radom, Poland, **Prof. Aneta Ejsmont,** Warsaw University of Technology, Poland)

#573 #526 #527 #732 #733

09:00-10:30 Session B2 in Hall 2:
"Law, New Technology and Business II"
(Moderator: **Dr. Hab. Joanna Studzińska** Prof. ALK, Kozminski University, Poland, **Prof. Vlad Dumitrache,** DESMARA Military University, Romania)

#543 #563 #552 #565 #722

09:00-10:30 Session B3 in Hall 3:
(Moderator: **Prof. Ileana Tache,** Transilvania University of Brasov, Romania, **Prof. Gratiela Georgiana Noja,** West University of Timisoara, Romania)

#566 #597 #717 #728 #720

09:00-10:30 Session B4 in Hall 4:
(Moderators: **Prof. Theodore Stamatopoulos**, University of West Attica, Greece, **Prof. Nyanga Solomon,** William University of New Jersey, USA)

#569 #584 #572 #571 #531

10:45-13:15 Session B5: Keynote Addresses (Main Amphitheater)
(Moderators: **Prof. El Thalassinos,** University of Piraeus, President ISMA, **Prof. Antonis Simintiras,** International University of Kuwait)

Keynote 11: PROFESSOR SALAH AL-SHARHAN
Title: "Beyond the Hype: A Framework for AI-Infused Business Education and Academic Program Design"

Keynote 12: PROFESSOR SLAWOMIR BUKOWSKI
Title: "A Few Words About the Paradigms of Economics and Entrepreneurship in the Face of the Challenges of the 21st Century"

Keynote 13: PROFESSOR JELENA STANKEVIČIENĖ
Title: "Green Financial Metrics: Ensuring Economic and Environmental Integrity"

Keynote 14: PROF. DR HABIL. THOMAS BURKHARDT
Title: "Investor's Behaviour under Uncertain Goal Reaching Times: An experimental Analysis"

Keynote 15: PROFESSOR SIMON GRIMA (online)
Title: "Disrupting the World's Wallet: From Monetary Rebellion to Market Stability"

14:15-15:45 Parallel Sessions B6-B9 Lecture Halls 1, 2, 3, 4

14:15-15:45 (Hall 1) Session B6:
(Moderators: **Prof. Andrea Imperia,** Sapienza University of Rome, Italy, **Prof. Konstantinos Liapis** (Department of Economic & Regional Development, Panteion University, Athens, Greece)

#487 #709 #549 #556 #731

14:15-15:45 (Hall 2) Session B7:
(Moderators: **Prof. Elzbieta Salata,** Casimir Pulaski University of Radom, Poland, **Prof. Marcin Budzinski,** Academy of Silesia, Poland)

#600 #704 #701 #705 #714

14:15-15:45 (Hall 3) Session B8:
(Moderators: **Prof. Dr. Malgorzata Tarczynska-Luniewska,** University of Szczecin, Poland, **Prof. Eleftherios Thalassinos,** University of Piraeus, Greece)

#608 #612 #301 #735 #730 #710

14:15-15:45 (Hall 1) Session B9:
(Moderators: **Prof. Jelena Stankevičienė,** Vilnius University, Lithuania, **Prof. Ndu Ikechukwu,** William Paterson University of New Jersey, USA)

#702 #587 #616 #729 #515

16:00-17:30 Session B10: Keynote Addresses (Main Amphitheater)
(Moderators: **Prof. Antonis Simintiras,** International University of Science and Technology in Kuwait, **Prof. Eleftherios Thalassinos,** University of Piraeus, Greece and University of Malta, Malta)

Keynote 16: PROFESSOR JOHN MALINDRETOS
Title: "The Computation of the Exploitation Cost of Leased Convicts after the End of Enslavement till WWII"

Keynote 17: DR. IOANNIS TACHMATZIDIS (online)
Title: "Istamology: From Management to Managementization"

Keynote 18: PROFESSOR NICOLAS ECONOMIDES (online)
Title: "Interoperability Among Mobile Money Networks"

19:30-22:30: Gala Dinner Place TBA

DAY 3: Wednesday 5 November 2025

Special Workshop and Online presentations

09:00-12:30 Workshop: Mindful Consumption (Open Invitation)

"Shaping Conscious Futures through Research, Education, and Collaboration"

Mindful Consumption Institute (MCI) – International University of Science and Technology in Kuwait (IUK)

Workshop Organizers:

Professor Antonis Simintiras, Head of Department and Manager of Research Development and Innovation Office, IUK
antonis.simintiras@iuk.edu.kw;
Professor Eleftherios I. Thalassinos, Chair ICABE 2025, University of Piraeus (ret.), Greece, President ISMA
thalassinos@ersj.eu;

09:00-10:30: Presentation: Mindful Consumption, Prof. Antonis Simintiras

10:30-10:45: Coffee break

10:45-12:30: Panel Discussions

12:30-13:30: Lunch

Online presentations only, Platforms 1, 2, 3, 4

09:00-13:30 Parallel Session C1:
Moderator: **Dr. Poonam Rodrigues** (International University of Science and Technology in Kuwait, Kuwait) poonam.rodrigues@gmail.com;
(15 minutes per article)

#506 #557 #574 #576 #579 #603 #617 #707

09:00-13:30 Parallel Session C2:
Moderator: **Dr. Alexandra-Mădălina Țăran** (West University of Timisoara, Romania) alexandra.taran@e-uvt.ro;
(15 minutes per article)

#525 #528 #529 #532 #538 #544 #559 #562 #570 #577 #619 #703 #706 #715 #716

09:00-13:00 Parallel Session C3:
Moderator: **Prof. Kiran Sood,** Chitrika University India, kiransood1982@gmail.com;
(15 minutes per article)

#539 #554 #567 #568 #581 #585 #601 #606 #712

09:00-13:30 Parallel Session C4:
Moderator: **Prof. Anna Lisowska,** University of Lodz, Poland, anna.lisowska@uni.lodz.pl;
(15 minutes per article)

#488 #551 #590 #596 #609 #610 #611 #613 #614 #615 #618 #620 #621 #622 #623 #625 #705 #734

END OF ICABE 2025

List of Articles, Abstracts

Keynote Articles:

Keynote 1: Effective Economic Justice as a Sustainable Development Goal

Kinga Flaga-Gieruszynska, Professor Dr. Habil. Vice Rector University of Szczecin, Head of the Interdisciplinary Research Team of Civil Procedural Law, Medical Law and New Technologies, Deputy Chairperson of the Scientific Council of the Institute of Legal Sciences, Member of the Scientific Council of NASK (National Research Institute), President of the Arbitration Court in the Western Pomeranian Voivodship in Szczecin, Arbitrator at the Permanent Consumer Arbitration Court, **Poland**

Abstract:
An effective system of economic justice plays a crucial role in achieving the Sustainable Development Goals (SDGs), particularly in the context of building stable, inclusive, and fair economic systems. This article examines the significance of an efficient legal framework and economic judiciary in ensuring fair competition, protecting property rights, and enforcing contractual obligations.

Special attention is given to the role of legal institutions in ensuring equal access to justice and streamlining procedures for resolving economic disputes. The analysis also highlights challenges and best practices related to the reform of economic judiciary systems in different countries.

An effective system of economic justice serves as a foundation for sustainable development, fostering investment, market stability, and economic growth based on principles of fairness and transparency. A new and increasingly relevant aspect in enhancing this efficiency is the use of emerging technologies, including AI, which will also be a subject of analysis.

Keywords: Economic justice, Sustainable development, Inequality reduction, Social policy.
JEL codes: D63, I38, O10, Q56.

Keynote 2: AI, Skills, and the Future of Work

Alexis Antoniades, Professor, Director, and Chair of International Economics
Georgetown University Qatar, **Qatar**

Abstract:
How does artificial intelligence reshape labor markets? What are the broader implications for societies? And who stands to win—or lose—from the AI revolution?

In this keynote address, we tackle these questions through a three-part exploration.

First, we outline the defining characteristics of modern labor markets.

Next, we draw on evidence from 1.5 billion online job postings to uncover how AI is transforming these dynamics.

Finally, we turn to the future, discussing what these trends reveal about the evolving relationship between technology, work, inequality, and societies.

This thought-provoking, data-driven presentation challenges and enriches our understanding of how AI is redefining the world of work.

Keywords: Artificial Intelligence (AI), Workforce skills and human capital, Future of work and labor market transformation.
JEL Codes: O33, J24, J21.

Keynote 3: Innovation Financing and Environmental Performance: Evaluating the Sustainability Returns of Firm Investment

Gratiela Georgiana Noja, Professor, Dr Habil. Vice-Dean & Professor of International Economics at the Faculty of Economics and Business Administration, West University of Timisoara, **Romania**

Abstract:
This study investigates how environmentally responsible and sustainability-oriented investors within the European Union (EU) can harness technological progress and digital innovation to strengthen sustainable business practices and financial outcomes.

Employing a rigorous three-stage methodological framework, we first estimate robust regression models using Huber and bi-weight iterations alongside dynamic Generalized Method of Moments (GMM) estimations with Arellano–Bond procedures.

Second, we apply hierarchical cluster analysis via the Ward method to classify EU technological innovators. Third, we construct Gaussian Graphical Models (GGMs) to analyze network interdependencies across identified innovation clusters.

The research addresses three core questions: (i) Which factors stimulate firms' investments in technology and innovation across the EU, and how do this influence environmental sustainability? (ii) How intensive is technological innovation performance among EU countries? (iii) What structural disparities exist between member states exhibiting low versus high innovation performance?

Main findings reveal significant heterogeneity among EU member states in the determinants and outcomes of technological innovation. Specifically, framework conditions, investment intensity, and innovation activities emerge as the primary drivers influencing both firm-level innovation investments and the attraction of environmentally conscious investors.

Conversely, employment-related impacts play a comparatively minor role in fostering sustainable innovation performance. By combining advanced statistical techniques with a multidimensional assessment of innovation, including human resource capacity, financial support, innovation activities, and sustainability impacts, this study contributes novel empirical evidence on how technological innovation shapes sustainable investment behaviour within the EU context.

Keywords: Technological innovation, investment, performance, sustainability, econometric modelling.
JEL Codes: G56, O32, G31.

Keynote 4: Multi-Criteria Evaluation of Tax Law Using Large Language Models: Towards a Legal Quality Index

Kesra Nermend, Professor, Dr. Habil. Institute of Management, University of Szczecin, **Poland**
With Mateusz Piwowarski, Institute of Management, University of Szczecin and Tomasz Strąk, Institute of Economics and Finance, University of Szczecin

Abstract:
The rapid development of generative language models (LLMs) opens new opportunities in professional fields, including law. Tax law, due to its high complexity, dynamic nature and ambiguity, poses a particular challenge for automatic analysis and interpretation.

This study proposes an innovative, multi-criteria method for assessing the quality of tax regulations and legal interpretations by combining the analytical capabilities of LLM models with the concept of a legal quality index (LQI). The research focuses on Polish private tax interpretations, combining natural language processing, automated legal reasoning and multi-criteria decision-making to evaluate legal texts in various dimensions, including clarity, fairness, compliance and adaptability.

A two-stage experimental study was conducted. In stage 1, four experts evaluated 100 tax interpretations analyzed by four LLM models (Gemini 2.5 Pro/Flash, GPT-4, DeepSeek R1) using a proprietary LQI index. In stage 2, the expert rankings were compared with the rankings generated by the 'LLM as judge' model (OpenAI o3) model, using Spearman's rank correlation coefficient, Rank-Biased Overlap (RBO), and Cohen's κ coefficient to measure agreement.

The results showed significant differences in model performance, with Gemini achieving the highest LQI score. The very high agreement between experts and LLM-based evaluation (Spearman = 0.861, RBO > 0.9, κ = 0.88) confirmed the reliability of automated evaluations, especially for the highest-performing models. The 'critique + re-evaluation' procedure further improved the quality of the analysis. Using multi-criteria stakeholder assessment based on AI-driven reasoning, this study shows that LLM models can serve as reliable tools for evaluating and improving tax regulations.

The proposed legal quality index enables policymakers, tax authorities, and researchers to compare and improve the transparency, consistency, and effectiveness of legal regulations. The results of the study also allow for the creation of a scalable model for evaluating other complex regulatory areas.

Keywords: Large language models, tax law, private tax interpretations, legal quality index, LLM as judge, multi-criteria decision-making, LegalTech automation.
JEL Codes: K34, C55, O38.

Keynote 5: Innovation and Annual Report Readability

Dimitrios Gounopoulos, Professor in Accounting and Finance in the School of Management at the University of Bath, **United Kingdom**

Abstract:
When disclosing material information to the public, firms that engage in uncertain, yet potentially valuable innovative activities face a significant challenge—they need to balance the benefits of reducing information gaps (information asymmetry) with the costs of potentially helping competitors. Reducing information asymmetry can produce more informed decision-making and better market efficiency (Akerlof, 1970; Healy and Palepu, 2001; Rajan and Saouma, 2006).

However, sharing too much information can give rivals an advantage if strategic plans are disclosed, thereby weakening firms' competitive advantages and risking market share loss (Porter, 1985; Wagenhofer, 1990; Hayes and Lundholm, 1996; Verrecchia, 2001). Such disclosure allows rivals to imitate business models, creating a saturated market with short-lived advantages (Teece, 1986; Healy and Palepu, 2001). Thus, firms must navigate this trade-off, maximize transparency while safeguard sensitive business knowledge and trade secrets.

Our study investigates the 10-K filings of all listed U.S. firms available on Compustat and CRSP during the 1994 to 2020 period. We focus on the plain English attributes of financial disclosure and introduce various innovation indicators to directly identify the effects of annual report readability at different innovation stages. As a proxy for annual report readability, we use the BOG index, which is a metric specifically designed for financial and accounting contexts, named after its creators Bonsall, Leone, Miller and Rennekamp (Bonsall et al., 2017).

The index captures the plain English characteristics of disclosure by identifying violations of plain language principles, the use of complex general vocabulary, and conversational expressions. A high BOG index indicates low readability. We employ five innovation indicators, namely innovation input, innovation output, innovation value, and two proxies of innovation efficiency. These measures can cover different stages and dimensions of innovative activities

Our findings show that despite reducing readability, more complex annual reports positively impact innovation (reflected in augmented R&D investments, more patents, and patents with higher market value) to some extent. However, when firms reduce their annual reports' readability beyond a certain limit, they may encounter other adverse consequences, impeding patent performance. In other words, the relationship between innovation and annual report readability is curvilinear, and there exists an optimal point of complexity for readability.

Employing different aspects of innovative activities, we demonstrate a direct relationship between annual report readability and a firm's ongoing competitive advantage through innovation. We perform a heterogeneous analysis to identify mechanisms, showing that firms use complex and less readable disclosures to protect sensitive information and remain competitive. We also conduct robustness tests, including addressing endogeneity concerns, a comparison of narrative R&D disclosure with annual report readability, and other sensitivity analyses.

Overall, our study contributes to the scarce literature on the implications of balancing information asymmetry and information transparency by examining the effect of 10-K readability on innovation. We highlight which innovation inputs and outputs are affected by

the readability and complexity of 10-K reports, thereby providing more intuitive and comprehensive insights and allowing us to compare the effects of annual report readability at different innovation stages. Importantly, we document a unique curvilinear relationship between corporate innovation and readability.

These findings could provide further insights to managers, enabling them to explore the optimal degree of disclosure readability conditional on firm innovation. Our key findings notably add to the expanding body of literature on financial disclosure and readability.

The findings of this study have profound implications. First, we offer new insights into the link between innovation and annual report readability. While the SEC favors easy-to-read reports due to their positive outcomes, such as higher earnings persistence and greater capital investment efficiency, innovation contains sensitive information crucial for maintaining a competitive position.

Readability, generally understood as the ease of text comprehension, may not be necessary for firms with extensive innovative activities. In competitive markets, safeguarding sensitive information takes precedence over readability, leading innovation-driven firms to favour complex and less readable reports. This approach allows them to focus on innovative strategies while obscuring uncertainty to reassure shareholders and creditors.

Our study addresses both aspects of the readability-innovation dynamic, demonstrating that while complex, less readable reports can enhance corporate innovation, this benefit has a limit. Beyond a certain point, excessive complexity heightens information asymmetry and increases financing costs, ultimately hindering innovation. Our study also offers important implications for policymakers. While the SEC mandates clear communication, plain English writing may not suit all firms. Factors like competition, uncertainty, and returns also matter. Policymakers should thus determine whether low readability is a strategic choice or an attempt to conceal poor performance. Our analysis shows that innovation positively correlates with low readability in high performing firms up to a certain limit, indicating that some degree of complexity can be acceptable and may outweigh the downsides of information asymmetry.

Overall, our study contributes to the scarce literature on the implications of balancing information asymmetry and information transparency by examining the effect of 10-K readability on innovation. We highlight which innovation inputs and outputs are affected by the readability and complexity of 10-K reports, thereby providing more intuitive and comprehensive insights and allowing us to compare the effects of annual report readability at different innovation stages.

Importantly, we document a unique curvilinear relationship between corporate innovation and readability. These findings could provide further insights to managers, enabling them to explore the optimal degree of disclosure readability conditional on firm innovation. Our key findings notably add to the expanding body of literature on financial disclosure and readability.

Keywords: Annual report readability, Bog index R&D Paten.
JEL codes: M41, O32, O33, O34.

Keynote 6: The DNA of Value Creation: Trust, Technology, and Time as the Foundations of Competitive Advantage in the Age of Parity

Antonis C Simintiras, Professor of Marketing at the International University of Science and Industry in Kuwait, **Kuwait,** and Professor Emeritus at Swansea University, Wales, **UK**

Abstract:
In a world where technology has become a great equalizer—where algorithms, platforms, and data are accessible to all—the foundations of competitive advantage, shifting from what organizations *possess* to how they *learn, relate, and adapt*. This work introduces the concept of The DNA of Value Creation**,** a model that redefines sustainable advantage through the interplay of three enduring strands: Trust, Technology, and Time**.** Together, these elements form a living system of value creation, one that evolves continuously through collaboration, transparency, and renewal.

The presentation begins by addressing the guiding paradox of modern strategy: when technology eliminates traditional barriers to entry, what remains to differentiate one firm from another? The answer lies not in access to digital tools, but in the *conduct* that governs their use. In the emerging era of parity, advantages are no longer structural—it is behavioral and relational. The organizations that lead are those capable of transforming access into insight, speed into learning, and technology into trust.

The evolution of value creation is traced through four historical eras. The Exchange Era emphasized efficiency and standardization, defining success through transactions. The Relationship Era shifted the focus to continuity and satisfaction, recognizing value as co-created through trust. The Network Era introduced collective learning and ecosystemic collaboration as sources of shared growth. Finally, the AI Era ushers in a phase of *co-evolution*, where human and technological intelligence interact symbiotically to create adaptive, transparent systems of value.

At the heart of this progression lies trust**,** the most enduring source of competitive strength. Trust converts promises into predictable outcomes, allowing collaboration to flourish in conditions of uncertainty. It is built incrementally and compounds over time, forming the social capital that sustains innovation and resilience. As transparency becomes a new norm, trust transforms from a moral virtue into a measurable strategic asset, the ultimate multiplier of loyalty and long-term value.

Technology**,** in this framework, acts as a catalyst rather than a core. It amplifies human capability but does not replace it. The fusion of *human intelligence*—empathy, judgment, and ethics—with *technological intelligence*—data, speed, and scale—creates a new form of *collective intelligence*. This hybrid capability enables organizations to sense, interpret, and adapt faster than any static model of advantage could allow. Yet the potential of technology is realized only when guided by human purpose and relational understanding.

Time provides the final dimension of enduring value. True advantage is not instant; it compounds through learning, experience, and renewal. Time tests resilience, exposes fragility, and rewards consistency. Organizations that sustain advantage are those that view time not as a constraint but as a collaborator—leveraging iterative learning loops and long-term relationships to transform knowledge into wisdom. In this sense, time becomes both the validator and the amplifier of trust and technology.

The DNA Model of Value Creation proposes that these three strands—trust, technology, and time—interweave into a single, dynamic code for strategic renewal. Each strengthens the other: trust enhances the use of technology, technology accelerates learning over time, and time deepens trust through proven reliability. This interdependence reframes competitive advantage as *co-evolutionary*: an ongoing process of adaptation and shared growth rather than a finite contest of dominance.

Strategically, this model calls for a recording of performance metrics and managerial focus. Firms must cultivate trust velocity—the speed at which credibility and reliability are established in dynamic markets. They must balance short-term efficiency with long-term equity, using technology to deepen meaning rather than dilute it. Above all, they must understand that value is not created in isolation, but within living ecosystems of relationships, data, and experience that evolve together over time.

In conclusion, the presentation argues that the future of advantage is not technological, but human. Trust anchors organizations in integrity, technology empowers them with intelligence, and time validates them through endurance. The essence of sustainable value creation lies not in algorithms or assets, but in the wisdom of how they are used. The DNA of value creation, ultimately, is written not in code—but in conduct.

Keywords: Value Creation, Trust and Technology, Competitive Advantage.
JEL codes: L21, O33, D23.

Keynote 7: Does Sustainability Matter? ESG, Fundamental Strength and Sustainable Enterprise Value

Malgorzata Tarczynska-Lunniewska, Dr. Habil. Institute of Economics and Finance, University of Szczecin, **Poland**

Abstract:
Issues related to a sustainable approach to the functioning of the world have become a permanent feature of the contemporary economic paradigm. Sustainable activity, based on respect for the environment, people, and the world, now encompasses every level of social and economic life. The modern world is heading in this direction. However, is it necessary to regulate what should be the norm? This question is part of the current debate on ESG.

A sustainable approach in the context of enterprises requires activity in many areas. It is not only financial results that count, but also stakeholder relations, environmental impact, and compliance with sustainable development guidelines.

This presentation aims to show the relationship and evolution among ESG, fundamental strength, and corporate value, which result from aspects of the sustainable functioning of the modern economy and the world.

The functioning of a company, or rather the conduct of business, is taking on a different dimension today. ESG influences how business is conducted by driving strategic, structural, and cultural changes.

ESG regulations are often perceived as bureaucratic requirements and burdens on companies. At the same time, they are forcing a profound transformation in the way business is conducted: from a model based on efficiency and profit to one based on holistic value. These changes are shaping a new fundamental force within the company. Fundamental strength remains a multidimensional category.

However, it absorbs new directions for the functioning of the company, resulting from ESG and a broader perception of its value as such. Values, not only economic or financial, but values consistent with the principles of sustainable development.

Keywords: ESG Performance, Sustainable Enterprise Value, Corporate Fundamentals.
JEL Codes: Q56, G32, M14.

Keynote 8: Generative AI and Strategy

Dimitrios Madytinos, Professor, Department of Management Science & Technology, Democritus University of Thrace, Kavala University Campus **Greece**

Abstract:
The rise of generative artificial intelligence (AI) has become a transformative force in modern business strategy. By harnessing machine learning models that can create original content, such as text, images, designs, code, and simulations, organizations are redefining how they innovate, market, develop products, and make decisions.

This study examines the strategic implications of generative AI, focusing on its role in driving new forms of value creation, improving operational efficiency, and reshaping competitive dynamics across industries. It also addresses the challenges associated with its adoption, including ethical concerns, data privacy risks, intellectual property issues, and potential workforce disruptions.

Drawing on current research and industry practices, this study explores how companies can integrate generative AI into their strategic frameworks to build sustainable competitive advantages.

The findings indicate that effective implementation requires not only technical expertise but also adaptive leadership, a culture of continuous learning, and strong governance to ensure that AI-driven innovation aligns with organizational objectives and broader societal values.

Keywords: Generative Artificial Intelligence, Business Strategy, Strategic Management, Innovation, Digital Transformation, Competitive Advantage, Ethical AI, Organizational Change.
JEL Codes: O33, L21, M15, D83, O31.

Keynote 9: Global Trade Imbalances

Anastasios (Tassos) Malliaris, Professor, Quinlan School of Business, Loyola University Chicago, Department of Economics Department Chair and Professor of Economics; Walter F. Mullady, Sr., Professor of Economics and Finance, **USA**

Abstract:
Global imbalances refer to the unequal distribution of trade surpluses and deficits among countries. May generalize to balance of payments. Why do Global Imbalances persist? (Contrary to Hume's mechanism). US balance of payments deficits produces an asymmetric US dollar; this means that US balance of payments deficits instead of reducing the value of the dollar they have increased it.

Increases in the global supply of dollars from the US deficits are not sufficient for the global demand for dollars, so the dollar's value has on average increased. A global savings glut in search of US safe assets supports a strong dollar. Dollar asymmetries can influence global economic stability, monetary policy decisions and geopolitics. Recall the GFC.

What economic policies can reduce global financial fragility? Tariffs, industrial policies, faster growth, monetary policies, more safer assets, other?

Persistent US balance of payments deficits. US Dollar has evolved asymmetrically and remains relatively strong. The Global Economy is producing a saving glut. The demand for safe assets remains strong while the supply of safe assets such as government bonds, corporate bonds, currencies, and gold remains in limited supply.

The shadow financial system has greatly expanded. Central banks focus mostly on price stability and economic growth. Global financial stability remains a challenge.

Keywords: Global Trade, Current Account Imbalances, International Economics.
JEL Codes: F14, F32, F41.

Keynote 10: Digital Currencies or Technologies of Electronic Payments?

Peter Evangelou, Ph.D., Northwestern University, Chicago, Post-Doc University of Chicago, Chicago, President, Metrofin Mortgage Banque, Inc., Chicago, **USA**

Abstract:
The debate over effective and efficient monetary design, considering a plethora of electronic payment technologies, including cryptocurrencies, CBDCs, platforms, and virtual currencies, rests on the role of paper currency in the economy and its substitutability.

The social institution of paper currency improves the allocation of resources. It monitors, reveals, and enforces customers' actual purchasing power. Within the structure of this institution, paper currency fundamentally serves as an almost costless, recognizable, and credible monitoring device and information signal.

Besides its fundamental monitoring and signaling functions, paper currency also serves as a unit of account a means of payment, and a very transient abode of purchasing power. This classical triad of money's functions is an integral part of the said institution. Yet this classical triad of money's functions is necessary but not sufficient to establish a fiat object as currency.

Competing electronic payment technologies have emerged and are developing to meet customer preferences for payment methods, thereby generating profits from anticipated lucrative transactions and processing fees. Banks are losing turf.

Although effective means of executing payments, these electronic payment technologies are not digital money, that is, digital currencies, as the name of some implies. Paper currency is their common foundation, and if that fails, so do all the electronic payment technologies.

Therefore, they are not substitutes for paper currency, any more than moonlight is a substitute for sunlight. But they could create opportunities for electronic counterfeiting, fraud schemes, money laundering, and private seigniorage, which could block or distort the functions of paper currency, leading to their own failure.

The social institution of a virtual currency is a perfect substitute for the social institution of paper currency, with all its evolutions, including commercial banks and electronic payment technologies, in all considerations, except in emergencies. Even if there were prefunded electronic wallets that could effectuate payments during, for example, prolonged power outages, they would not be simpler, more convenient, or cheaper than carrying some cash or getting cash from ATMs powered by batteries or solar panels.

Therefore, central banks, rather than adopting a pure virtual currency monetary system, should share their technology expertise, leverage their financial strength, and join forces with the banking industry and private payment providers to develop an effective and efficient standard system of electronic payments, while retaining banking and paper currency, and encouraging innovation and competition.

Keywords: Digital Currencies, Electronic Payment Technologies, FinTech / Payment Systems.
JEL Codes: E42, G21, O33.

Keynote 11: Beyond the Hype: A Framework for AI-Infused Business Education and Academic Program Design

Salah Al-Sharhan, PhD., Professor of Systems Design Engineering, International University of Science and Technology in Kuwait, **Kuwait**

Abstract:

This keynote advances the discussion beyond theory to present a holistic, multi-layered Academic Program Development (APD) framework designed to systematically embed AI across the interdisciplinary business curriculum and overall program architecture.

The proposed framework is explicitly oriented toward shaping futuristic Business Administration programs, with a strong emphasis on innovative teaching and assessment methodologies that move beyond traditional models.

The talk positions AI capabilities as a foundational pedagogical element in designing Business Administration academic Programs and underscores the imperative of preparing graduates who can drive the transformation in the evolving global workforce.

Keywords: AI in Business Education, Curriculum Design, Academic Program Innovation.
JEL codes: I23, M15, O33.

Keynote 12: A Few Words About the Paradigms of Economics and Entrepreneurship in the Face of the Challenges of the 21st Century

Slawomir Bukowski, Professor, Rector of Casimir Pulaski Radom University, **Poland**

Abstract:
The 21st century brings extremely complex and dynamic challenges, which not only call into question the existing mechanisms of the economy, but also prompt reflection on the theoretical foundations on which modern economics is based.

Financial crises, climate change, digital transformation, growing social inequalities and the erosion of trust in public and market institutions mean that economists, decision-makers and entrepreneurs are increasingly looking for new interpretative frameworks capable of capturing the complexity and unpredictability of the modern world. The economic paradigms shaping thinking about the economy – from neoclassical to institutional or ecological – are not only a set of analytical tools, but also an expression of fundamental philosophical assumptions concerning the nature of man, the logic of socio-economic systems and the role of the state.

At the same time, the growing pressure for more sustainable development is forcing a redefinition of entrepreneurship, which is transforming from a strictly profitable activity into a vehicle for social innovation and systemic transformation (Porter and Kramer, 2011; Yunus, 2010).

The aim of this presentation is to present the evolution and contemporary significance of paradigms of economics and entrepreneurship in the context of the challenges of the 21st century. The author attempts to synthesize orthodox and heterodox perspectives, analyzing their adaptation potential to new realities and indicating the directions of further research on the model of economy based on values, innovation and responsibility.

The article is an invitation to a discussion on what kind of economy and what kind of entrepreneurship we need to meet the challenges that are becoming increasingly global, systemic and existential. So, a few questions for discussion:

Are maximizing actions an innate human instinct? Are they dictated by survival instinct? So, is it natural to strive to maximize profit – i.e., in the short term the rate of return on capital, and in the long term to multiply the owner's wealth (the value of the company)? So, is it also natural to maximize utility within your income and given prices? Are methodologically rational actions dominant, while irrational ones are marginal? Is the concept of homo economicus justified as the basis of many paradigms in economics? I will not answer, maybe I will suggest, let's research and discuss? After all, learning is also about asking questions.

Keywords: Economic Paradigms, Entrepreneurship, Economic Challenges.
JEL codes: B40, L26, O31.

Keynote 13: Green Financial Metrics: Ensuring Economic and Environmental Integrity

Jelena Stankevičienė, Professor, Department of Finance at Vilnius University, with Julija Buzinske, **Lithuania**

Abstract:
This study examines the role of the Green Weighted Average Cost of Capital (Green WACC) as a tool for assessing environmental and financial integrity in municipal waste management. It aims to reduce greenwashing by aligning municipalities' environmental claims with their actual ecological and financial performance.

The research employs a three-stage methodology: a review of literature on greenwashing, sustainable waste management, and WACC determination; analysis of financial data from Lithuanian municipalities; and the development and empirical application of a conceptual model for calculating Green WACC.

The results indicate that municipalities with stronger waste management performance achieve lower costs of capital, while weaker performance leads to higher borrowing rates. This suggests a direct link between sustainability practices, financial efficiency, and the credibility of green claims.

Although the findings are based on Lithuanian municipalities, the proposed model offers a foundation for broader application. Practically, the Green WACC framework provides municipalities with a quantitative means to evaluate and improve their financial and environmental outcomes.

By promoting genuine green initiatives, municipalities can enhance access to funding, reduce greenwashing, and advance sustainable development goals. The study contributes a novel integration of financial and environmental metrics through the introduction of the Green Progress (GP) measure.

Keywords: Green Finance / Sustainable Finance, Environmental Metrics, Corporate Sustainability Reporting.
JEL Codes: Q56, G32, M14.

Keynote 14: Investor's Behaviour under Uncertain Goal Reaching Times: An experimental Analysis

Thomas Burkhardt, Professor Dr Habil. Institute of Management, Chair of Finance, University of Koblenz, **Germany**

Abstract:
We study risk preferences when uncertainty concerns the time needed to reach a fixed monetary target, rather than the payoff size. These preferences are foundational for Time-Optimal Decision Making and Portfolio Selection, where the investor's objective is to attain a goal (e.g., a wealth level) as early as possible.

We run incentivized choice experiments that elicit certainty equivalents for lotteries over waiting times. Lotteries pay a fixed amount after either a short or a long wait with equal probability. Certainty equivalents are elicited with the Becker–DeGroot–Marschak mechanism; overall payoffs use a random-lottery incentive scheme. Design variants cover different frames and task orders. The participant pools include university students and members of the public.

The "earlier-is-better" preference is strongly confirmed. Most participants exhibit startling risk-seeking attitudes over waiting time; risk-neutral choices are less frequent and risk-averse ones are rare. The magnitude of risk-seeking is economically moderate: certainty-equivalent waiting times are typically about 7–15% shorter than the expected waiting time. Treatment effects are small, while an alternative certainty-equivalent perspective induces slightly more risk-averse responses.

When objectives are stated as target attainment, investors may willingly accept tail risk in time in exchange for a higher chance of reaching the target early. This supports time-optimal portfolio views, but challenges the assumption of risk averse behavior, and underscores the relevance of first-passage-time models for risk measurement.

This is, to our knowledge, the first systematic experimental evidence on risk preferences over goal-reaching time. It complements classic value-risk studies by articulating and testing a dual, time-based perspective on investment decisions under risk.

Keywords: Time-optimal decision making; waiting-time risk; goal-reaching time; first-passage time; experimental finance.
JEL codes: D81, C91, G11.

Keynote 15: Disrupting the World's Wallet: From Monetary Rebellion to Market Stability

Simon Grima, Professor, Dean, Faculty of FEMA, Head Department of Insurance and Risk Management, University of Malta, and Professor University of Latvia, **Malta, Latvia**

Abstract:
The emergence of Bitcoin in 2009 marked the beginning of a profound transformation in global finance. This challenged the traditional role of states, central banks, and financial intermediaries. Re-shaping the monetary systems we know today. What began as a technological experiment has evolved into a geopolitical and economic phenomenon, shifting power away from centralised institutions toward decentralised, borderless networks.

There is a dual nature of this disruption. While decentralisation promises greater autonomy, financial inclusion, and innovation, it simultaneously generates volatility, regulatory uncertainty, and governance dilemmas.

The absence of conventional monetary policy tools has left most cryptocurrencies vulnerable to speculative cycles and instability, limiting their effectiveness as reliable stores of value or media of exchange.

To address this structural weakness, the use of perpetual options is explored. That is, derivative instruments with no expiry date. They can serve as a stabilising mechanism by enabling continuous hedging, introducing implicit monetary policy levers through funding rates, and deepening liquidity. Perpetual options can dampen volatility without replicating centralised control.

When embedded within decentralised finance (DeFi) ecosystems, these instruments can support stablecoin pegs, protect collateral values, and create a market-based stability layer analogous to central bank operations, but governed by transparent protocols and incentives.

The argument presented here is not merely technological but institutional. The future of digital finance will depend on how we stabilise power, not just decentralise it.

Effective governance, ethical design, and inclusive regulatory frameworks will be essential in transforming crypto from a speculative asset class into a functional monetary system. Perpetual options, properly structured, offer a promising pathway toward a self-regulating digital monetary order that balances innovation with systemic stability.

Keywords: Cryptocurrency, Bitcoin, decentralisation, perpetual options, DeFi, monetary stability, governance, volatility, financial innovation.
JEL Codes: E42, G01, E44, O33.

Keynote 16: The Computation of the Exploitation Cost of Leased Convicts after the End of Enslavement till WWII

John Malindretos, Professor, Dept Head, William Paterson University of New Jersey, Head, Cotsakos Business College, **USA**

Abstract:
The notion of using prisoners for labor is one that is old as time. Exploiting labor at a lowcost, at the time, was an appealing and attractive way to turn a vast profit margin compared to using paid or indentured labor for larger industrial projects.

Exploitation costs, also commonly known as labor exploitation, are costs that are associated with overworking and taking advantageof a convict through forced labor and carrying out the work. The demand for labor exploitation grew during the 19th century where both industrial and agricultural work relied on exploited workers.

Southern states, especially those that were impoverished at the time, would use the system of convict leasing to generate revenues by leasing convicts to wealthy individuals or large corporations. The slave labor continued through this exploitation after the emancipation of black slaves, allowing the system to deeply ingrain itself into the history of America even further.

Convict leasing, the practice of leasing convicts out to companies for a low price with theexpectation of profit, plagued America throughout its early history, garnering injustice and mistreatment from the foundations of the American justice system. In the nineteenth century, and leaching into the twentieth century, convict leasing became increasingly popular in southern states.

These southern states, recently morally and economically wounded from the Civil War, ending in 1866, turned to convict leasing for work on plantations and on larger industrial jobs that required a large and inexpensive labor force. The racialized prison system during convict leasing has been long forgotten and disregarded, even though this period of injustice has steered the history of the United States.

Keywords: Convict Leasing, Labor Exploitation Costs, Historical Economic Analysis.
JEL Codes: N31, J41, B25.

Keynote 17: Istamology: From Management to Managementization

Ioannis Tachmatzidis, Dr. Chair, International Centre of ISTAMOLOGY, Managing Director MALAMA INSTITUTE for Psychological Applications, **Greece**

Abstract:
“Management” is a well-established term that consists of certain principles. However, given the rapid developments in technology and sustainability issues such as digitalization, AI and ESG, as well as the continuous updated law regulations, turn them from being processes to becoming regime modes, thus, as Istamology proposed, “digitalism”, “AIsm” and ESGism.

These operate on a global environment, “Globalism”, providing a new framework for economic and business processes where changes occur in fast pace. Consequently, strategic and business planning, may not address, in time, the speedy and continuous changes, advancements and crises.

Istamology, a unique approach on systemic interactions, suggests considering “Management” in a continuously, even volatile, changing procedure, proposing the term “Managementization”, to more effectively assimilate the above influences.

Discussion includes analyses on strategic and communication management, SWOT analysis, game theory, investment, risk management.

Keywords: Strategic management, business planning, organizational behaviour, communication management, game theory, risk, investment, psychology, philosophy, sociology.
JEL codes: M10, M12, L26, O31.

Keynote 18: Interoperability Among Mobile Money Networks

Nicolas Economides, Professor, Executive Director of the NET Institute, New York University, Stern's Business College, **USA**

Abstract:
In many developing countries of Africa and Asia, cell phones are used (i) to transfer money across individuals; (ii) to securely self-transport money, and (iii) to save/store money. These banking networks ride on top of wireless telecommunications networks.

Traditionally, each banking network was confined to the network of a telecom carrier, and transfers were available only within the carrier's network, making it incompatible with banking networks of other carriers.

In Tanzania, mobile banking under incompatibility was well established for a decade until September 2015 when the second, third, and fourth largest carriers established full compatibility of their banking networks. Analyzing a comprehensive dataset of banking transactions provided by a large telecom carrier in Tanzania, this paper discusses pricing under compatibility, contrasts with pricing under incompatibility.

We analyze the transaction termination fees (cash-out fees) in this unregulated environment, and assess the individual and collective incentives for compatibility, noting that the largest carrier has remained incompatible.

Despite very high prices for transfers across networks set up commercially under compatibility, the introduction of compatibility resulted in substantial consumer surplus gains. We calculate further potential welfare gains under a number of counterfactual regulatory scenarios.

Keywords: Mobile Money, Interoperability, Network Economics, Pricing and Competition, Consumer Welfare.
JEL Codes: D43, G21, L96.

Presented Articles:

#301 AI Implementation in Smart Cities of European Union and Neighboring Countries, Using Multi-criteria Assessment of DESI Levels

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Abstract:
This study presents a dynamic multi-criteria assessment of the digital readiness of European Union and selected neighboring countries for implementing artificial intelligence (AI) in smart cities. Using Vector Measure Construction Method (VMCM), a synthetic indicator was developed based on DESI data for years 2020–2024.

The analysis revealed significant differences in digital maturity and allowed to distinguish both leaders and idlers in the digital transformation process. Countries such as Ireland, Hungary and Greece demonstrated the most dynamic improvements, driven by growth in e-government, e-commerce, and online financial services. On the other hand, countries like Poland and Slovakia showed measurable progress but remained at an intermediate level of readiness.

The findings emphasize the importance of multidimensional development, policy coherence, and infrastructural investment for successful AI adoption in urban governance. Our VMCM approach proved effective in identifying not only the state but also the trajectory of digital transformation, offering valuable insights for decision-makers and planners in the context of smart urban development.

Keywords: Artificial intelligence, Smart cities, Digital transformation, DESI, Multi-criteria analysis VMCM.
JEL codes: O33, R58, C44, O52.

#482 Attitudes Towards Artificial Intelligence: A Perspective of Generation Z Representatives

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Abstract:
The article explores the attitudes of Generation Z towards artificial intelligence (AI), based on empirical research conducted among 880 respondents. The study examines

key factors shaping their perceptions, including AI's impact on employment, education, privacy, and ethical issues.

The results indicate a duality in attitudes—while many respondents appreciate AI's potential for innovation and efficiency, they also express concerns regarding data security, job displacement, and ethical risks. The research highlights that individuals with higher digital literacy tend to have a more positive perception of AI.

The findings emphasize the need for educational initiatives that promote awareness and address ethical concerns, ensuring that Generation Z can engage with AI in an informed and responsible manner.

Keywords: Artificial Intelligence (AI), Generation Z, Attitudes and Perceptions, Technology Adoption.
JEL codes: O33, M31, D91, C83.

#484 Life science business in aspect of sustainable development - case of modern medical diagnostic

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Abstract:
The life sciences industry plays a key role in promoting sustainability by developing healthcare solutions that improve quality of life while reducing environmental and social burdens. Modern medical diagnostics, a key life sciences sector, makes a significant contribution, enabling early disease detection, individualized treatment and efficient use of healthcare resources.

Innovations in diagnostic technologies, such as molecular diagnostics, artificial intelligence (AI)-driven imaging, and point-of-care testing, enhance healthcare accessibility and affordability. These advancements reduce the need for invasive procedures and hospital visits, minimizing healthcare-associated carbon footprints.

The aim of the publication is to present the business aspects of the life science sector in terms of not only its contribution to sustainability, but also its investment opportunities, income attractiveness and market stability. The methodology of the work is based on analysis of statistical data, industry reports and scientific publications.

The relevance of this publication and its innovative development consist primarily in the interdisciplinary connection of issues concerning the life science industry with economics and global business. The information presented has both scientific and practical business value.

Keywords: Life science business, sustainable development, medical diagnostic.
JEL codes: F10, F18, Q01.

#487 Toward Better Governance: Investigating the Financial Impact of Board Characteristics in European Union Firms Using SEM and Data Mapping

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Abstract:
Company effective management is essential for achieving strategic objectives and increasing financial performance, depending on the strategic planning focus, which involves analyzing the business environment, identifying opportunities and challenges, and developing an action plan to achieve the proposed objectives. This paper aims to investigate the relevance of efficient management in achieving company objectives and evaluating financial performance, more specifically, to assess the impact of board management characteristics on firm profitability.

Our research methodology was employed on relevant data extracted from the LSEG (former Refinitiv/Thomson Reuters Eikon) database for the fiscal year 2023, applying three distinct methods, respectively, data mapping, structural equation modelling (SEM), and robust regression models (RREG).

The results provide a detailed perspective on the relationship between board management characteristics and financial performance, revealing the existence of multiple effects of gender diversity within companies in the European Union, along with the assessment of their economic potential and financial linkage. Moreover, our research findings highlight the importance of women's participation in leadership positions and gender diversity within organizations, proving that these aspects are positively associated with companies' financial performance.

Alongside, the existence of Corporate Social Responsibility (CSR) activities and the effective participation of the board of directors in meetings related to these activities can achieve positive long-term results and have a significant impact on financial performance, therefore, the promotion of gender diversity and corporate social responsibility should be a priority within the policies and strategies adopted at the European Union level. This initiative would not only support fair and sustainable economic growth but would also strengthen corporate financial performance.

From a managerial perspective, the findings suggest that companies should prioritize the refinement of board structures and executive leadership practices, ensuring alignment with governance best practices and long-term value creation. Incorporating sustainability metrics into strategic planning and decision-making processes can

further enhance organizational performance, underscoring the interconnectedness of governance quality and financial outcomes.

For investors and stakeholders, the study provides evidence that firms with well-structured boards, transparent management practices, and proactive integration of sustainability considerations tend to exhibit stronger financial performance.

The results highlight a pressing need for policymakers and regulatory bodies to design and implement frameworks that strengthen corporate governance practices across European firms. Governments should develop policies that encourage financial institutions to adopt robust corporate governance practices, including promoting gender diversity on boards, while authorities should support and develop training and skills development programs for board members to improve management skills and the ability to manage risks in a complex and dynamic environment.

Keywords: Corporate governance, Board characteristics, financial performance, Structural equation modeling (SEM) / Data mapping.
JEL codes: C34, M41, C38, L25.

#488 Irregular Immigration and Smuggling at the Serbian Romanian Border, a Wavelet Approach

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Abstract:
The paper analyses the link between irregular border crossings, smuggling crimes, and total irregular immigrants at the Serbian Romanian border using wavelet methodology. It distinguishes between irregular and smuggled immigrants, covering data from January 2015 to December 2023.

The empirical methodology employs a wavelet-based approach, decomposing time series into two components: one representing time and the other representing frequency. The key to this process lies in a wavelet function, which is typically characterized by having zero mean and infinite energy, with the Morlet wavelet being a commonly used example. The empirical analysis utilizes the Wavelet Coherency (WTC) method, which enables the examination of the co-movement between two time series, x_n (i.e., irregular crossing cases, smugglers, and migrant smuggling crimes) and y_n (i.e., alternatively using irregular immigrants, smuggled immigrants, and the total number of irregular immigrants).

This is achieved through their continuous wavelet transformed (CWT) forms. The empirical strategy is deployed in three WTC scenarios with respect to the considered dependent variable: one for irregular immigrants, one for smuggled immigrants, and another for the total number of irregular immigrants. Each scenario interacts the

independent determinants one by one (i.e., irregular crossing cases, smugglers, and migrant smuggling crimes) with the alternative dependent variable.

First scenario: High frequency (up to the 12-month band of scale)- almost all variables are in phase; Medium frequency (12-32 months)- positive relationship between cases and immigrants from January 2019 to December 2023.

Second scenario: High frequency- most variables are out of phase; Medium frequency -most variables remain out of phase.

Third scenario: High frequency-general positive co-movement, with specific exceptions; Medium frequency - coherence between cases and total immigrants within the 12-14-month band from August 2020 to December 2023. Interestingly, no co-movement is observed at the low frequency, over 32 months band of scale (i.e., long-run), suggesting that the observed interactions are primarily short to medium-term phenomena.

First, the results offer valuable insights for stakeholders in migration governance. Targeted efforts should prioritize identifying vulnerable individuals among irregular migrants, such as unaccompanied minors or those in need of international protection, while ensuring the protection of their fundamental rights.

Second, the strong coherence between smuggling networks and irregular migration underscores the urgency of dismantling these networks through international cooperation, intelligence sharing, and operational measures.

Third, the absence of long-term co-movements (beyond 32 months) suggests that these relationships are highly reactive and predominantly short-term. This finding has important implications for sustainable policy development, as it indicates that policies should not only respond to immediate migration pressures but also incorporate long-term resilience strategies.

Finally, the development of long-term solutions is crucial to avoiding repetitive cycles of short-term crisis management and fostering the sustainable governance of migration flows. If there are any questions, feel free to contact us.

Keywords: Irregular immigration, Human smuggling, Border security, Wavelet analysis.
JEL codes: F22, K42, C32, O17.

#491 Influence of modern technologies to the commercial dispute resolution in Eastern Europe

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Abstract:

This presentation/article will examine the influence of modern technologies, such as online dispute resolution, artificial intelligence or blockchain, on commercial dispute resolution in Eastern Europe, especially in Lithuania, Latvia, Estonia and Czech Republic. It aims to assess how these technologies affect procedural efficiency, transparency, accessibility, and trust in civil proceedings, with particular attention to post-transition economies and EU legal standards.

The presentation will mainly be presented by comparative approach and review of recent case studies from selected Eastern European jurisdictions. Legislative developments and court digitalization strategies will be analyzed using both doctrinal and socio-legal approaches.

The findings will suggest how policymakers and judicial administrations should invest in digital infrastructure, develop harmonized procedural rules for technology-assisted dispute resolution, or provide targeted training for judges, lawyers, and business users.

Keywords: Online dispute resolution, civil procedure, Eastern Europe, artificial intelligence, civil justice, commercial disputes.
JEL codes: K40, K41, O53, C88.

#492 Legal aspects of using AI in health care as a manifestation of the goal of good health and quality of life (SDG3)

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Abstract:
The development of artificial intelligence (AI) offers significant opportunities to improve the quality of healthcare and increase the efficiency of healthcare systems around the world. It can support the achievement of Sustainable Development Goal 3 (SDG 3) – "Ensure healthy lives and promote well-being for all at all ages."

The use of AI in diagnostics, patient monitoring, medical data management, and health risk prediction can contribute to improving access to services, enhancing their quality, and making better use of resources. However, this development also poses significant legal and ethical challenges, including responsibility for decisions made by AI systems, protection of patient privacy and personal data, ensuring transparency and comprehensibility of algorithms, and preventing algorithmic discrimination.
This article attempts to identify key legal issues related to the implementation of artificial intelligence in the health sector, analyzing them in the light of international human rights standards and EU regulations, such as the General Data Protection Regulation (GDPR) and the draft AI Act.

The main objective of the study is to show how proper regulation of AI use can support the achievement of SDG 3, while ensuring respect for patient rights, technological safety, and public trust in modern medical solutions.

Keywords: Artificial intelligence in health care, Health law and regulation, Sustainable Development Goal 3 (Good Health and Well-being), Ethics and legal compliance.
JEL codes: I18, K23, O35, L51.

#500 The impact of new technologies on social rights

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Abstract:
Technological progress has introduced profound transformations to the established structures and mechanisms governing human societies. While it presents substantial opportunities for enhancing individual and collective well-being, it simultaneously generates novel challenges and risks. One notable development, the expansion of platform-based work (commonly referred to as the gig economy), frequently operates outside traditional labor protections.

This trend contributes to precarious forms of employment and undermines established mechanisms for collective bargaining. Furthermore, the increasing reliance on algorithmic decision-making in both public and private sectors raises significant concerns regarding transparency and the potential for discriminatory outcomes. These concerns are particularly pronounced for vulnerable populations but may ultimately affect broad segments of society.

The persistence of digital divides—rooted in disparities related to age, socioeconomic status, and geographical location—further exacerbates inequality in the realization of social rights, including access to healthcare, education, and social security.

In addition, the extensive collection and utilization of personal data heighten privacy risks, necessitating the implementation of robust legal and institutional safeguards to prevent misuse and ensure data protection. While new technologies hold considerable promises for enhancing the accessibility and efficiency of social rights provision, their deployment must be accompanied by comprehensive regulatory frameworks that promote fairness, equity, and accountability.

Keywords: New technologies / Digital innovation, social rights, Human rights, Technology policy.
JEL codes: K38, O33, J18, L86.

#506 Effect of Capital Flight and Trade Openness on Manufacturing Sector Performance in Selected African Countries (1981 - 2021)

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Abstract:

This study examines the effect of capital flight and trade openness on manufacturing sector performance in ten African countries from 1981 to 2021. The study employs a cross-sectional augmented autoregressive distributed lag (CS-ARDL) model and panel causality test to analyze the data. The results indicate that in both the short run and the long run, capital flight, trade openness, inflation rate, and exchange rate do not have a significant impact on the manufacturing sector's performance.

However, the interest rate has a significant negative effect on the manufacturing sector's performance in both the short run and the long run. The panel causality test results reveal that there is no evidence of a causal relationship between capital flight and manufacturing sector performance.

However, there is evidence of unidirectional causality running from trade openness to the performance of the manufacturing sector. Additionally, the performance of the manufacturing sector influences changes in the interest rate, inflation rate, and exchange rate.

Specifically, manufacturing performance leads to changes in these variables in a unidirectional manner. Based on these findings, the study suggests that policymakers should carefully manage interest rate fluctuations and maintain stability to create a favorable manufacturing sector performance.

Based on the panel causality test results, it is recommended to prioritize policies that enhance trade openness and promote competitiveness within the manufacturing sector. Efforts should be made towards improving productivity and encouraging research and development.

Additionally, measures to control inflation and provide incentives for investments in the sector can stimulate growth and amplify its impact on the broader economy.

Keywords: Trade Openness, Capital Flight, Manufacturing Performance, Africa.
JEL codes: F21, F43, L60.

#511 Digital Transformation, Innovation, and Green Transitions: A Panel Data Analysis of Structural Drivers in the European Economy

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Abstract:
This paper aims to empirically assess the impact of key structural factors—digital connectivity, renewable energy adoption, and labor taxation—on the intensity of research and development (R&D) expenditures in the European Union (EU). It seeks to identify to what extent digital transformation and green transition policies are integrated into national innovation efforts across EU member states.

The study employs a panel data regression model (panel OLS), using data from 27 EU countries for the period 2013–2023, sourced from Eurostat. The dependent variable is gross domestic expenditure on R&D (GDERD), while independent variables include the share of renewable energy in final energy consumption (SRNWEN), e-commerce turnover (ECOMSALE), internet access in enterprises (ENTRINTAC), implicit tax rate on labor (ITXRL), and the percentage of enterprises receiving online orders (ENTRORDONLINE). The model is validated through correlation analysis and multicollinearity diagnostics (VIF).

Empirical results reveal that R&D expenditures are positively and significantly influenced by the degree of internet connectivity, renewable energy integration, and labor taxation. The implicit tax rate on labor (ITXRL) shows the strongest positive association, suggesting that fiscal capacity, when well-managed, contributes to national innovation. The digital readiness of enterprises (ENTRINTAC) also emerges as a crucial enabler of innovation. However, e-commerce activity (ECOMSALE) is not statistically significant, indicating that transactional digitalization alone may not suffice to drive R&D investment.

Policy frameworks should strengthen synergies between innovation, digital, and green policies. Investments in digital infrastructure, especially for SMEs, and mission-oriented R&D programs aligned with sustainability targets are recommended. Furthermore, labor tax revenues can be strategically redirected to enhance national innovation systems.

This study provides a novel empirical integration of three policy pillars—digitalization, sustainability, and taxation—into the explanation of R&D intensity. It advances the literature by offering a unified structural perspective on innovation drivers and delivering actionable insights for EU policy design.

Keywords: Innovation policy, R&D expenditure, Digital economy, green transition, Fiscal policy, EU27, Panel data analysis.
JEL Codes: H20, H21, H30.
Acknowledgements: This work was supported by a grant of the Ministry of Research, Innovation and Digitization, CNCS/CCCDI -UEFISCDI, project number PNIV-P8-8.1-PRE-HE-ORG-2024-0212, within PNCDI IV.

#512 Government Revenue Structure and Implications for Fiscal Sustainability in the European Union Context

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Abstract:
This study investigates the structural composition of government revenues and its implications for fiscal sustainability across the 27 European Union (EU) Member States during the period 2000–2022. Considering ongoing challenges such as demographic shifts, economic crises, and the green and digital transitions, optimizing the mix of public revenues has become central to enhancing fiscal capacity and social equity.

The research aims to determine which revenue categories, direct taxes, indirect taxes, social contributions, and non-tax revenues, most significantly affect total government revenues, thereby informing more effective and resilient tax policy.

The empirical approach relies on a multiple linear regression model applied to an unbalanced panel dataset. The dependent variable is total government revenue as a share of GDP, while the independent variables include personal income tax, corporate income tax, general sales taxes, compulsory social contributions, and other non-tax revenues. The model integrates robust statistical diagnostics to ensure validity, multicollinearity testing via VIF, and Pearson correlation analysis to assess inter-variable associations.

Results demonstrate that personal income taxes and general sales taxes are the most influential components, with significant and positive effects on total government revenues. Social contributions also exert a strong positive impact, confirming their role in sustaining welfare systems. Corporate income taxes and non-tax revenues contribute positively, albeit to a lesser extent. The model explains approximately 89% of the variation in total government revenue, underscoring the robustness of the fiscal determinants identified.

The findings provide empirical evidence to support fiscal policy reforms in the EU, particularly in strengthening progressive taxation, enhancing VAT administration, and modernizing the management of non-tax revenues. Policymakers are encouraged to adopt diversified and equitable revenue structures aligned with the objectives of the European Semester, Stability and Growth Pact, and Recovery and Resilience Plan.

This research contributes uniquely by offering an integrated and longitudinal analysis of all major categories of public revenue within the EU context. Unlike previous studies that isolate tax types, this paper adopts a comprehensive model that includes non-tax revenues and recent EU strategies. It provides timely insights for shaping resilient fiscal frameworks in response to post-pandemic recovery, climate commitments, and socio-economic transformation.
Keywords: Government Revenue Structure, Fiscal Sustainability, European Union Fiscal Policy.
JEL codes: H20, H60, H63.
Acknowledgements: This work was supported by a grant of the Ministry of Research, Innovation and Digitization, CNCS/CCCDI -UEFISCDI, project number PNIV-P8-8.1-PRE-HE-ORG-2024-0212, within PNCDI IV.

#513 Clustering the Financial Impact of Sustainability Across European Union Economies

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Abstract:
This study aims to explore the financial implications of sustainability performance across European Union economies by identifying clusters of countries with similar fiscal, environmental, and economic profiles. The research investigates how corporate taxation, GDP per capita, energy consumption, and greenhouse gas emissions interact to shape distinct sustainability trajectories within the EU, with a particular focus on the heterogeneity of these patterns.

The research employs a multidimensional cluster analysis based on Eurostat data covering fiscal indicators, energy use, emissions, and renewable energy adoption for EU member states. The methodology integrates corporate tax rates as a fiscal dimension into sustainability assessment; a perspective less explored in prior studies. The analysis includes the validation of cluster structures through inter-cluster distance calculations, silhouette coefficients, and ANOVA tests to ensure statistical robustness.

The results reveal the existence of four distinct clusters, each characterized by unique combinations of financial performance and sustainability indicators. The study highlights a non-linear relationship between corporate taxation and sustainability

outcomes, showing that high fiscal pressure does not inherently lead to improved sustainability, as evidenced by Germany's position as a high-emission, high-tax economy.

The findings indicate that higher GDP per capita does not guarantee lower emissions, suggesting that decoupling economic growth from environmental degradation remains incomplete in several EU countries. The study emphasizes the importance of designing differentiated fiscal strategies aligned with the sustainability maturity of each cluster.

The clustering approach provides policymakers with a practical framework for tailoring fiscal and sustainability policies to the specific profiles of different country groups. The results support the need for targeted green investment incentives, flexible fiscal strategies, and enhanced green financing mechanisms that account for the structural diversity within the EU. Policymakers should also leverage multidimensional data analytics to continuously monitor and adapt sustainability interventions.

This paper offers an original contribution by integrating fiscal variables into a multidimensional clustering of sustainability performance, providing a more comprehensive view of how financial and environmental factors interact across EU economies.

The study introduces a novel analytical perspective that can inform more nuanced, cluster-specific policy design, moving beyond traditional one-size-fits-all sustainability approaches.

Keywords: Sustainability Performance, Cluster Analysis, Green Fiscal Policy, Financial Performance.
JEL Codes: C10, E62, Q01.
Acknowledgements: This work was supported by a grant of the Ministry of Research, Innovation and Digitization, CNCS/CCCDI -UEFISCDI, project number PNIV-P8-8.1-PRE-HE-ORG-2024-0212, within PNCDI IV.

#514 Identifying Environmental, Innovation, and Taxation Drivers of European Union Sustainability Using Principal Component Analysis

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Abstract:
The increasing importance of sustainability within the European Union requires a deeper understanding of the combined influence of environmental pressures, innovation dynamics, and taxation structures on sustainable development. This paper aims to identify the key economic, environmental, and fiscal drivers that shape the sustainability trajectories of European Union member states.

The study applies Principal Component Analysis (PCA) to a set of eight sustainability-related indicators, including greenhouse gas emissions, material footprints, primary energy consumption, renewable energy use, business R&D expenditure, gross domestic R&D expenditure, implicit labor tax rates, and corporate tax rates. The methodology enables the dimensionality reduction of complex datasets and the identification of latent patterns that cluster the sustainability profiles of European Union countries.

The analysis reveals three principal components that explain approximately 87.67% of the total variance in the dataset. The first component reflects environmental pressures and resource consumption, the second captures innovation efforts and fiscal pressures on labor, while the third isolates corporate taxation pressure. The results show that sustainability within the European Union is shaped by distinct and interrelated clusters of environmental, innovation, and fiscal factors, highlighting heterogeneous national profiles.

The findings provide valuable empirical evidence for policymakers aiming to design integrated sustainability strategies. By understanding how environmental impact, innovation capacity, and fiscal structures interact, policymakers can better tailor their interventions to the specific sustainability profiles of member states, fostering green growth while ensuring fiscal balance.

The paper offers an original contribution by integrating environmental, innovation, and fiscal indicators into a unified empirical framework using Principal Component Analysis. Unlike previous studies that often treat these dimensions separately, this research demonstrates their combined influence on sustainability and provides a novel clustering of European Union countries based on these integrated drivers.

Keywords: Sustainability, Environmental Pressures, Principal Component Analysis (PCA), innovation, fiscal structures.
JEL Codes: F64, O10, O3.
Acknowledgements: This work was supported by a grant of the Ministry of Research, Innovation and Digitization, CNCS/CCCDI -UEFISCDI, project number PNIV-P8-8.1-PRE-HE-ORG-2024-0212, within PNCDI IV.

#515 The Role of Economic Performance and Resource Efficiency in European Sustainable Business

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Abstract:
This study explores the determinants of sustainable business investments in the European Union by examining how economic performance and resource efficiency influence Business Enterprise Expenditure on R&D (BERD). Against the backdrop of the European Green Deal and growing pressures for green transition, the research investigates the extent to which variables such as GDP per capita, energy and resource productivity, municipal waste management, and human capital drive R&D spending across EU countries.

The research adopts a quantitative econometric approach based on a multiple linear regression model using panel data for EU member states. BERD per capita serves as the dependent variable, while five independent variables real GDP per capita, energy productivity, resource productivity, municipal waste per capita, and R&D personnel share capture the economic, environmental, and human capital dimensions of sustainable innovation. The model is estimated to use Ordinary Least Squares (OLS), with robustness checks including multicollinearity diagnostics, residual analysis, and ANOVA validation to ensure statistical reliability.

The findings reveal that human capital, proxied by the share of R&D personnel, is the strongest predictor of business R&D expenditure, followed by GDP per capita and energy productivity. These results confirm the pivotal role of knowledge-intensive labor markets and economic affluence in driving sustainable innovation. Resource productivity and waste management efficiency were found to be statistically insignificant, suggesting that environmental efficiency gains are not yet fully reflected in business R&D decisions, possibly due to regulatory-driven rather than innovation-oriented motivations. The model explains over 80% of the variance in BERD, providing robust empirical support for the identified relationships.

This study provides actionable insights for policymakers aiming to design effective sustainability strategies. Strengthening STEM education, expanding R&D employment, and promoting energy-efficient technologies are essential to fostering innovation-led green growth.
Moreover, differentiated policy support is needed to address the innovation gap between advanced and emerging EU economies, ensuring a more balanced and inclusive transition.

The originality of this paper lies in its integrated analytical framework, which jointly examines macroeconomic, environmental, and human capital drivers of BERD. Unlike previous studies that treat these dimensions separately, this research offers a holistic model validated with recent EU data, making a valuable contribution to the literature on sustainable business investments and innovation policy.

Keywords: Sustainable Innovation, Business R&D Expenditure, Energy Productivity, Human Capital, Resource Efficiency, European Union.
JEL Codes: O3, M2, Q01.
Acknowledgements: This work was supported by a grant of the Ministry of Research, Innovation and Digitization, CNCS/CCCDI -UEFISCDI, project number PNIV-P8-8.1-PRE-HE-ORG-2024-0212, within PNCDI IV.

#518 Exploring the Relationship Between Public Debt and Inflation Expectations: Evidence from Poland

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Abstract:
This study investigates the impact of both domestic and foreign public debt on inflation expectations in Poland, focusing specifically on the responses of Polish businesses from Q3 2008 to Q1 2025. The purpose is to understand how changes in public debt influence the formulation of inflation expectations and to differentiate the effects of domestic versus foreign debt.

The study utilizes quarterly data from the Central Statistical Office of Poland and the National Bank of Poland, incorporating a Vector Autoregression (VAR) model to analyze the dynamic relationships between public debt (both domestic and foreign) and inflation expectations. The analysis employs econometric techniques to explore the interactions and direct effects of public debt on inflation expectations, controlling for variables such as GDP, interest rates, and exchange rates.

The results reveal a statistically significant positive relationship between domestic public debt and inflation expectations, indicating that businesses anticipate higher inflation with rising domestic debt. In contrast, foreign public debt is found to have a negative impact on inflation expectations. The study highlights that the fiscal pressures associated with domestic debt are perceived as a risk of future inflation, while foreign debt influences inflation expectations through exchange rate depreciation and perceived macroeconomic instability.

The findings underscore the importance for policymakers to consider the distinct effects of domestic and foreign public debt when formulating fiscal policies. Understanding these dynamics can help businesses, policymakers, and central banks anticipate inflationary pressures and make informed decisions on fiscal management and monetary policy, especially in times of economic uncertainty.

This research contributes to the literature by distinguishing between domestic and foreign public debt and their respective impacts on inflation expectations in Poland. It also provides valuable insights into the role of businesses' inflation expectations as a critical component of economic forecasting, emphasizing the need for clear communication and transparent fiscal policies to manage inflation expectations effectively.

Keywords: Public Debt, Inflation Expectations, Poland / Emerging Market Fiscal Policy.
JEL codes: E31, H63, E62.

#520 Differentiation in Educational Leaders" Approaches to Student Psychosocial Support: A Latent Profile Analysis

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Abstract:
The aim of the study was to identify school profiles differing in the scope of actions undertaken by headteachers in terms of psychosocial support for students and professional development for teachers.

The study involved 474 school principals and deputy principals. Latent profile analysis (LPA) was employed, and group comparisons were conducted using the Mann–Whitney U tests and chi-squared tests.

Two distinct profiles were identified: Profile 1 – "Schools with Low Levels of Systemic Support" and Profile 2 – "Schools with Integrated Support."

The groups differed significantly in terms of reported student sense of safety, the presence of crisis response procedures, and assessments of the adequacy of educational activities. The findings highlight the need to support schools classified under Profile 1 through systemic measures, training initiatives, and enhanced inter-institutional collaboration. It is recommended that Profile 2 be utilized as a model of good practice.

Keywords: Educational Leadership, Student Psychosocial Support, Latent Profile Analysis / Differentiated Approaches.
JEL codes: I21, I28, C38.

#525 Environmental Risks and Resilience in US Hispanic Regions

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Abstract:
The burden of ecological contamination is known to have more significant negative impact on various minority groups, marginalized and economically depressed groups. Recent economic research has shown that a person's ethnic background is closely linked to their exposure to pollution factors, with real longer-term human health consequences.

Majority of prior ethnic-environmental research was focused on US Northeast and Northern California, nearby major research centers. In contrast, no research has directly compared the experiences of Hispanics across major southern US states with large percentage of ethnically Hispanic groups immigrated from various countries.

To fill this gap in environmental studies, a comprehensive dataset was assembled, blending socio-demographic and financial details, the latest health and ecological contamination statistics.

Statistical correlation analysis was the initial step to systematically examine the relationships between a wide range of environmental contamination indicators (air quality measures, proximity to industrial sites, and levels of hazardous waste) and the prevalence of key health conditions within Hispanic communities.

This approach included control for confounding factors and allowed to isolate the independent effects of each variable on health equity measures. Incorporation of multiple predictors into the regression models helped to assess the relative importance of environmental exposures versus economic disadvantage in shaping health disparities.
The regression analysis offered a comprehensive assessment of how combinations of risk factors contribute to unequal health burdens among Hispanics in different geographic settings, revealing nuanced patterns of vulnerability and resilience across the southern US states.

Keywords: Environmental Risks, Resilience / Adaptation, US Hispanic Regions / Regional Analysis.
JEL codes: Q54, R11, D81.

#526 Analysis of relationship between selected stock exchanges in Euro Area countries: Quantitative approach

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Abstract:
The research carried out will focus on the quantitative analysis of interrelationship among selected stock exchanges in Euro Area countries with the main aiming at evaluating their possible interconnectedness and influence. The study will use statistical and econometric techniques, such as correlation analysis, co-integration testing, and Granger causality, where appropriate, according to gathered data and statistical tests.

The research will also try to determine whether (if at all) to which extent movement on analyzed stock exchanges represented by changes and fluctuations of selected indicators are synchronized.

The findings and the use of the quantitative approach both aim to provide a framework for assessing financial stability in the context of an increasingly integrated European economy; financial integration; market efficiency in the Euro Area; as well as in the context of integration of capital markets in the selected economies.

Keywords: Stock Exchanges, Euro Area Financial Markets, Quantitative Analysis / Market Correlations.
JEL codes: G15, C58, G14.

#527 The Degree of Integration of the Chinese Equity Market into Selected Equity Markets around the World

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Abstract:
The economic reforms initiated by Deng Xiaoping influenced the development of China's financial market. In the 1990s, the first stock exchange was established in Shanghai, followed by Shenzhen. Initially, the development of the equity market focused on the privatization of state-owned enterprises, but over time it opened to foreign capital and quickly became one of the largest and most dynamically developing equity markets in the world.

Despite these advances, the market remains heavily regulated by the state, which impacts on its transparency and stability. The aim of this article is to answer the question to what extent the equity market in China is integrated with selected equity markets around the world.

An econometric model based on the model of increased impact of the common news component on stock market yields by means of GARCH is applied to the analysis of the degree of integration of the Chinese equity market into the eurozone equity market.

Keywords: Chinese Equity Market, Global Stock Market Integration, Emerging Markets.
JEL codes: G15, G12, F36.

#528 Blockchain for Circular Economy: Disrupting Global Supply Chains for a Sustainable Future

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Abstract:
This study investigates how blockchain technology can revolutionize circular economy models by enhancing transparency, traceability, and collaboration across global supply chains. It addresses the challenges faced in transitioning from traditional linear systems to circular models focused on sustainability and waste reduction.

The research combines case study analysis of existing blockchain applications in sustainability and development of blockchain simulation models to assess scalability and security. This mixed-method approach enables comprehensive exploration of blockchain's role in enabling verifiable, decentralized circular supply chains.

Results demonstrate blockchain's capability to provide immutable, real-time tracking of materials and products through their lifecycle, increasing accountability and trust among stakeholders. Furthermore, the study finds that blockchain-enabled decentralized finance (DeFi) can incentivize circular practices by rewarding sustainable behaviors. However, significant challenges such as energy consumption, technological complexity, and regulatory issues remain barriers to widespread adoption.

The research offers a framework for integrating blockchain into circular economic initiatives, providing practical recommendations for businesses and policymakers to overcome adoption hurdles. It highlights strategies for leveraging blockchain to enhance supply chain transparency, reduce waste, and foster stakeholder collaboration, thereby contributing to sustainable business innovation.

This paper bridges the gap between emerging blockchain technology and circular economy theory, presenting novel insights into their intersection. By proposing scalable, blockchain-based solutions for circular supply chains, it contributes to the advancement of sustainable global business practices.

Keywords: Decentralized ledgers, Supply chain management, Sustainable innovation, Environmental policy, Incentive mechanisms.
JEL Codes: L14, Q56, M21.

#529 The Role of Human Capital in Explaining Asset Return Dynamics in the Indian Stock Market During the COVID-19 Era

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Abstract:
Over the past decade, multifactor models have shown enhanced capability compared to single-factor models in explaining asset return variability. Given the common assertion that higher risk tends to yield higher returns this study empirically examines the augmented human capital six-factor model's performance on thirty-two portfolios of non-financial firms sorted by size, value, profitability, investment, and labor income growth in the Indian market over the period July 2010 to June 2023.

Moreover, the current study extends the Fama and French five factor model by incorporating a human capital proxy by labor income growth as an additional factor thereby proposing an augmented six-factor asset pricing model (HC6FM). The Fama and MacBeth two-step estimation methodology is employed for the empirical analysis.

The results reveal that small-cap portfolios yield significantly higher returns than large-cap portfolios. Moreover, all six factors significantly explain the time-series variation in excess portfolio returns.

Our findings reveal that the Indian stock market experienced heightened volatility during the COVID-19 pandemic, leading to a decline in the six-factor model's efficiency in explaining returns.

Furthermore, Gibbons, Ross, and Shanken (GRS) test results reveal mispricing of portfolio returns during COVID 19, with a stronger rejection of portfolio efficiency across models. However, the HC6FM consistently shows lower pricing errors and better performance, specifically during and after the pandemic era.

Overall, the results offer important insights for policymakers, investors, and portfolio managers in optimizing portfolio selection, particularly during periods of heightened market uncertainty.

Keywords: Human Capital, Asset Return Dynamics, Indian Stock Market / COVID-19 Impact.
JEL codes: G12, J24, G11.

#531 Exploring the Impact of Sustainable Technology Adoption on Business Growth and Sustainability in Emerging Economies

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Abstract:

The rapid adoption of sustainable technology to attain sustainability and business growth is an important area of study in emerging economies. This study investigates the impact of sustainable technology adoption on business growth and sustainability in emerging economies. To address this primary objective, we employed a systematic literature review (SLR) guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to analyze data from Scopus and Web of Science databases.

A total of 117 publications published between 2020 to 2024 were screened and analyzed to assess the impact of technology adoption on business growth and sustainability. The results showed that the adoption of sustainable technology for sustainability in emerging economies is categorized into six themes: sustainable industrial ecosystems, digital technology and sustainability, sustainable energy and transportation, green technology in entrepreneurship and urban logistics, Frugal Innovation (FI) and technological capabilities and sustainability in agriculture.

In addition, the study's findings reveal a substantial surge in publications on sustainable technology adoption in emerging economies between 2020 and 2024, underlining the growing recognition of its importance. VOSviewer software was used to analyze the keywords co-occurrence within this field, revealing three distinct clusters: business and industry, development and the economy, and relationships and frameworks.

The findings provide a theoretical contribution and allow identifying significant sustainability practices and challenges that impact business growth in emerging economies in the 4IR era.

The practical implications of these findings are essential to formulating policy recommendations and frameworks focused on the importance of digital innovation in achieving SDGs and fostering economic growth, and the need for collaborative efforts and appropriate frameworks for sustainability in emerging economies.

Keywords: Emerging Economies, SGDs, Sustainable Technology, Systematic Review, Business.
JEL Codes: O33, L26, Q55.

#532 Viewing Institutional Structures as a Reproduction System of New Entrepreneurial Mentalities, Under a Political Economy Perspective

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Abstract:
This paper explores the inter-relations between the key development factors which economic development literature indicates, by using exploration factor analysis (EFA) of a dataset of 43 variables, spanning between 2017-2019, for 61 developed and developing countries.

The aim is to apply systems thinking in the interpretation of results, under DSRP framework, to highlight structural patterns and evolutionary processes that are unified as an economic reproduction system.

The guiding key proved to be the fundamental importance attributed to the innovators and entrepreneurs initiating and driving the process, being the social group that forms synergisms of multi-stakeholder networks, inducing inclusive decision-making and setting the rules for open, active involvement of new entrants.

This political economic perspective creates the ground for theoretical concepts of creative destruction, economic transformation, transition, path creation and systemic innovation to be placed in an exploratory dialogue. The monetary policy perspective offers a privileged view from which to monitor the transformative undertakings and creatively intervene for opening new collaborative pathways.

The theoretical underpinnings lay in the field of new endogenous growth, being a platform for incorporating institutional economics, innovative system approach and complexity theory. With this lens, a structural sequence of strategic dynamism is detected, starting with institutional protection, leading to entrepreneurial culture instigation, enabling productive connections, leading to successful business practices and new mindsets.

With bottom-up inclusiveness as the evolutionary motor, the emerging momentum tries to overcome the historical dependence of practices from old needs, altogether constituting a reproduction system of a new development life cycle.

The methodology produced eleven latent factors/performance indicators within four structural dimensions, integrated into a complex systemic framework that constitutes a holistic approach on economic development.

In conclusion, the article attempts to detect the deeper roots of economic development, the common structural mechanisms within every heterogeneous economic system, which can help the policymaker experiment with institutional interconnections, in his/her role of stimulating the innovative capacity of human capital.

Existing theoretical literature hasn't attempted the integration of the development factors into a single system of free interactions and the corresponding policy

implications are mostly limited to market facilitating adjustments, whereas development policy under systemic modeling can be viewed as a strategic tool for path creation towards a multi-stakeholder's common envisioned future.

Keywords: Institutional Structures, Entrepreneurial Mentalities, Political Economy.
JEL Codes: L26, P16, O17.

#533 Mapping the Family Business Research across the Gulf Cooperation Council Countries: Application of TCCM Framework

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Abstract:
Researchers' interest in studying family businesses across the Gulf Cooperation Council (GCC) region has surged in the last decade. While hundreds of articles are published with diverse and scattered findings, there has been little effort to review, combine, and categorize the literature.

This study presents a framework-based systematic review of 187 articles indexed in Scopus, WoS, and EBSCO databases to understand the relationship and influencing factors related to family businesses in the region.

Bibliographic coupling is used to identify the key clusters in the literature on this topic and the most influential articles. Additionally, the TCCM review framework is adopted to provide a comprehensive overview of the dominant theories applied, the contexts (countries and industries) considered, the characteristics (such as antecedents, consequences, mediating and moderating variables, and their relationships) examined, and the research methods used in family business research across the region over the past fifteen years (2010–2024).

Although literature covers a range of industries, to better understand the relationship between age and entrepreneurship, we need to investigate the emerging technologically driven business sectors further to expand our knowledge. Moreover, it is evident that the Theory of Planned Behavior dominates literature, with other theories being minimally employed. Finally, we utilize the TCCM framework to suggest future research directions.

Keywords: Family Business, Gulf Cooperation Council (GCC) Countries, TCCM Framework / Research Mapping.
JEL Codes: L26, M10, O53.

#535 Enhancing Public healthcare and administrative service quality: The strategic role of artificial intelligence

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Abstract:
The growing demand for high-quality healthcare and efficient administrative services has enhanced the integration of digital health technologies, with artificial intelligence (AI) emerging as a transformative enabler. This research study explores the strategic role of AI in enhancing healthcare and administrative service quality within public healthcare systems. Specifically, it investigates the key human, organizational, technological, and environmental factors that influence the adoption and long-term sustainability of digital health initiatives.

Guided by the Human-Organization-Technology Fit (HOT-Fit) and Technology-Organization-Environment (TOE) frameworks, this research adopts a qualitative methodology, drawing insights from semi-structured interviews with 25 healthcare professionals, administrators, and technology experts.

The findings expose that successful implementation of AI-enabled healthcare solutions is strongly tied to human readiness, leadership engagement, IT infrastructure, regulatory support, and organizational culture. Participants emphasized the importance of digital literacy, trust in AI systems, and stakeholder collaboration as essential elements for sustainability.
The study provides both theoretical and practical implications by extending the applicability of HOT-Fit and TOE frameworks in the context of public healthcare and by offering strategic insights for policymakers and healthcare leaders aiming to improve service delivery through AI integration.

Ultimately, this research contributes to the ongoing global discourse on digital transformation in healthcare, highlighting the multifaceted conditions necessary to ensure AI's meaningful and ethical adoption.

Keywords: Public Healthcare, Service Quality / Administrative Services, Artificial Intelligence (AI) in Public Sector.
JEL Codes: I18, H83, O33.

#536 The Impact of Artificial Intelligence on Entrepreneurial Decision-Making: A Data-Centric Analysis

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Abstract:
In an era defined by digital transformation and data proliferation, artificial intelligence (AI) has emerged as a pivotal force reshaping how entrepreneurs make decisions. This

research study explores the impact of AI on entrepreneurial decision-making through a qualitative, data-driven lens, drawing upon insights from dynamic capabilities (DC) theory, bounded rationality (BR) theory, and the technology–organization–environment (TOE) framework.

Semi-structured interviews with entrepreneurs and AI practitioners reveal how AI enhances opportunity recognition, reduces uncertainty, and supports strategic agility.

The analysis identifies five key factors—technology readiness, data quality, cognitive adaptability, organizational learning, and external ecosystem support—that mediate the influence of AI on decision-making.

Quotation-based evidence illustrates the nuanced relationship between AI tools and entrepreneurial cognition, revealing both opportunities and constraints.

The findings contribute to theory by integrating multiple theoretical lenses into a unified conceptual framework and offer practical insights for entrepreneurs, policymakers, and technology developers aiming to foster AI-driven innovation ecosystems. The paper concludes with implications, limitations, and directions for future research.

Keywords: Artificial Intelligence (AI), Entrepreneurial Decision-Making, Data-Centric Analysis / Business Analytics.
JEL Codes: L26, M15, C88.

#538 Artificial Intelligence and the Future of Interest-Free Finance: The Benefit Sharing Model as a Sustainable FinTech Innovation

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Abstract:
The accelerating convergence of artificial intelligence (AI), blockchain, and sustainable finance is reshaping the global economic landscape. This paper explores the transformative integration of AI into the interest-free finance sector, emphasizing the design and application of the Benefit Sharing Model (BSM) as an innovative, ethical, and technologically advanced financial framework.

Grounded in the principles of Maqasid al-Shariah, the BSM operationalizes equitable risk–benefit distribution using AI-driven predictive analytics, big data, and blockchain-enabled smart contracts. This study situates the BSM within the broader nexus of business strategy, technological advancement, educational transformation, and economic sustainability, aligning with the ICABE 2025 theme of “Synergizing Innovation.”

The paper uses a conceptual design methodology to synthesize multidisciplinary literature, define technical architecture, and explore practical applications in both Muslim-majority and secular markets.

Findings indicate that AI-enhanced interest-free finance can serve as a scalable model for financial inclusion, resilience, and ethical economic growth, contributing directly to several United Nations Sustainable Development Goals (SDGs).

Keywords: Artificial Intelligence (AI) in Finance, Interest-Free / Islamic Finance, FinTech Innovation / Benefit Sharing Model.
JEL Codes: G21, O33, G38.

#539 The Green Digital Revolution: Integrating AI and Renewable Energy for Net-Zero Economies

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Abstract:
The global climate crisis demands urgent systemic transformation to achieve net-zero greenhouse gas (GHG) emissions by 2050. Global climate policy and technological trends converge on an urgent objective: to achieve net-zero greenhouse gas emissions while sustaining economic growth and social equity. Renewable energy deployment — wind, solar, hydro, and modern bioenergy — is central to this effort.

However, the variable and distributed nature of many renewables presents system integration challenges: intermittency, forecasting uncertainty, distributional balancing, and new operational constraints for transmission and distribution networks. Concurrently, artificial intelligence (AI) and deep technologies (e.g., machine learning, edge computing, digital twins, blockchain-enabled transactive energy platforms) have matured to a point where they can optimize complex, large-scale systems in near real-time.

The interplay of AI and renewables — the Green Digital Revolution — offers a pathway to accelerate the pace, scale, and cost-effectiveness of decarbonization. This paper investigates how AI integration into renewable energy systems can support net-zero objectives. We synthesize the latest interdisciplinary research and institutional assessments, evaluate empirical case studies that demonstrate system benefits, identify governance and equity risks, and propose a framework for accelerated and responsible deployment.

It concludes with actionable policy recommendations and research priorities to ensure AI acts as a force multiplier for equitable, net-zero transitions.

Keywords: AI, renewable energy, climate action, digitalization, grid integration, energy forecasting, net-zero, emission, sustainability.

JEL Codes: Q42, O33, Q56.

#543 Legal aspects of using new technologies in road transport

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Abstract:
The development of new technologies in all branches of the economy, which has been observed for years, has not bypassed an important area of the economy, namely road freight transport. Technological developments in transport can be seen in virtually every stage of the freight transport process - from route planning, through transport itself (including the safety of goods) to unloading and, in the future, possibly also claims handling.

Artificial intelligence (AI)-based tools are already gaining popularity among road haulers, which, based on data about the haulers' fleet (vehicle type, load capacity, location based on GPS integration), search for loads offered on freight exchanges and plan routes in a way that increases company efficiency by eliminating so-called empty runs.

In addition, by using topographical data, such tools should be able to calculate, for example, the potential fuel consumption of a given route and the real travel time, which would allow the calculation of the minimum freight rate necessary to achieve the threshold of profitability of a given undertaking. In addition to controlling driver time and driving safety, new technologies can also be used to improve the safety of the goods themselves during transport - reinforced electromagnetic locks for trailers, intelligent curtains that react to cutting and geofencing trigger an alarm when goods are removed from a trailer without authorization are already in widespread use.

In the future, there is also the possibility of fully automated transport using autonomous trucks. During loading and unloading itself, it is also possible to use automated tools, reducing human involvement in these activities. This may raise several important issues relating to the legal aspects of the use of IT tools, automation and artificial intelligence in transport, particularly in the context of liability for damage caused by their malfunction and the distribution of the burden of proof.

While the use of new technologies is unlikely to affect the principles of liability for transport damage under generally binding legal provisions (CMR Convention, national transport laws), the issue of recourse of the liable party to the manufacturer or distributor of these tools and the scope of possible claims is important. This study aims to identify potential problems related to the issue of liability of entities further than the participants in the carriage and to develop ready-made solutions related to them.

Keywords: Road carriage, transportation technologies, transport law, legal liability.
JEL Codes: K15, K22, R41.

#544 The Long-Term Impacts of Federal Reserve Interest Rate Hikes on Income Inequality

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Abstract:
This paper investigates the effects of Federal Reserve interest rate hikes on income and wealth inequality in the United States. We examine the short-term and long-term distributional consequences of monetary tightening, emphasizing the channels through which policy actions influence labor markets, asset values, credit access, and housing affordability.

Higher interest rates slow investment and hiring, disproportionately affecting low-income workers in cyclical sectors and amplifying short-term income inequality. Similarly, rising borrowing costs and mortgage rates constrain homeownership and wealth accumulation for younger and minority households. Conversely, rate hikes mitigate long-term inequality by curbing inflation, preserving real wages, and preventing destabilizing price surges that disproportionately burden low-income families.

We analyze historical episodes, including the Volcker era, the 2015–2018 gradual tightening, and post-COVID hikes, and compare cross-country evidence on the distributional impacts of monetary policy. Our findings highlight the dual role of interest rate policy: short-term exacerbation of inequality versus long-term protection of purchasing power.

Policymakers should consider complementary fiscal measures, such as targeted subsidies, housing assistance, and wage support, to alleviate short-term inequities while achieving inflation stabilization. By integrating historical, empirical, and contemporary evidence, this study offers a comprehensive assessment of how monetary policy interacts with structural inequality in modern economies.

Keywords: Federal Reserve / Monetary Policy, Interest Rate Hikes, Income Inequality / Economic Distribution.
JEL Codes: E52, E58, D31, G21.

#547 Comparing the ROI of Social Media Marketing and Traditional Advertising in Housing-Related Industries

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Abstract:
The housing industry, which includes mortgage lending, real estate, and insurance, maintains stable demand across economic cycles. At the same time, marketing

strategies in this sector are shifting from traditional relationship-based practices toward digital and social media platforms. This transition raises an important question about how new marketing approaches influence the economic return on investment (ROI) in industries where client trust is central.

This study compares the ROI of social media marketing with traditional advertising across mortgage brokers, realtors, and insurance providers. The analysis uses firm-level data from CTR Mortgage Brokers, Capital Insurance, Hegemon Group International, Lifestyle International Realty, BZ Three Enterprises, and some other companies. Activities examined include personalized client gifts, appreciation events, networking groups, social media video campaigns, signs, sponsorships, and other traditional and digital marketing strategies these companies executed.

ROI is assessed through standardized financial metrics such as cost per acquisition (CPA), customer lifetime value (CLV), and return on ad spend (ROAS). Statistical techniques including t-tests, ANOVA, and regression are applied, and results are benchmarked against industry averages from the National Association of Realtors, Statista, and HubSpot.

Findings suggest that traditional marketing remains especially valuable for smaller firms that rely on personal relationships and local reputation, while digital strategies provide larger firms with greater cost efficiency and scalability. The evidence indicates that the most effective approach is a balanced mix of traditional and digital methods, shaped by a firm’s market position, size, and financial resources. As the housing market continues to evolve, the ability to adjust marketing investments across both channels will be critical for sustaining competitiveness and long-term growth.

These insights also extend to other trust-based industries, such as healthcare and financial services, where the balance between personal relationships and digital efficiency shapes economic outcomes.

Keywords: Social Media Marketing, Traditional Advertising, Housing / Real Estate Industry.
JEL Codes: M31, L85, M37.

#548 Amplifying Digitalisation's Impact: Mediation Pathways and Contextual Conditions for EU Economic Development

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Abstract:

This study aims to determine the relationship between the digitalization of public services and economic development. In the context of the European Union, digitalization raises questions regarding how technological advancements associated with public services, along with various influencing factors, can contribute to economic development.

The study employs a complex approach to conceptualize the relationship between e-Governance and economic development. This involves integrating mediation and causal mechanism analyses to identify the pathways through which the digitalization of public services impacts economic development.

Furthermore, to complement this model, a Multilayer Perceptron neural network (MLP) is applied to capture potential non-linear relationships and interactions of control variables such as Research and Development expenditure (R&D), quality of governance, and control of corruption. Additionally, variable importance analysis, specifically utilizing Garson's and Olden's algorithms, is conducted to provide a comprehensive understanding of the determinants of economic development.

The main findings of the research attest to a positive and significant relationship between the digitalization of services and economic development. Our study's results demonstrate that strategic investments in research and development, along with improvements in the quality of governance and effective control of corruption, act as mediators or moderators, amplifying the positive effects of e-governance. In contrast, the Multilayer Perceptron neural network model demonstrates non-linear associations between variables, indicating that the benefits of digitalization are not uniformly distributed and depend on the interaction of diverse contextual factors.

The results offer new perspectives for policymakers aiming to foster sustainable economic development. Investments in digital public services, alongside research and development initiatives and the implementation of effective anti-corruption measures, are identified as essential directions for maximizing economic benefits. These findings underscore the necessity for tailored policy approaches that target both technological progress and institutional quality. Currently, R&D investments are often perceived by policymakers as expenditures, rather than as mediators of development and progress.

This study distinguishes itself not only through its methodological innovation, applying advanced econometric techniques such as mediation and causal mechanism analysis, the MLP model, and variable importance analysis using Garson/Olden algorithms. Beyond these, we aim to bring new contributions to both the economic sphere and public policy. Our work is not limited to merely reconfirming the positive impact of digitalization on economic development in the European Union; more importantly, we also elucidate how this effect occurs, identifying specific channels as well as the non-uniform nature of the results obtained.

Our research highlights the mediating and moderating roles that strategic investments in research and development, the quality of governance, and effective control of corruption hold in amplifying the benefits of digitalization.

Furthermore, we demonstrate through the MLP model that the advantages of digitalization are closely linked to the specific institutional, investment, or political context. This finding allows us to challenge the idea that research and development are mere expenditures but rather a factor of economic development, thus repositioning R&D spending as an indispensable mediator for development.

Therefore, our multifaceted approach, which perceives digitalization as intrinsically connected to institutional quality rather than merely technical progress, offers robust empirical perspectives that can directly influence decision-makers.

Keywords: Economic development, Digitalization of public services, E-governance, Multilayer Perceptron neural networks, Mediation and causal mechanism analyses, European Union.
JEL Codes: O33, F15, O47.

#549 Navigating the Digital Divide: A Mixed-Methods Analysis of Labor Market Transformation in EU Member States

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Abstract:
Digital transformation has a significant influence on productivity and the labor market, creating both challenges and opportunities. Within the context of the European Unio, digitalization raises potential questions regarding workforce adaptation, unemployment, and the harness on the economic benefits provided by new technologies.

This research aims to analyze the effect of digital transformation on labor market and economic development within the EU member states. Our study aims to identify the challenges, opportunities and the main trends created by digitalization, and to evaluate whether digitalization can be considered a solution for labor shortages in European Union or if it represents a source of socio-economic imbalance.

The study employs a mixed-methods approach, integrating both Structural Equation Modeling and Mediation Analysis for the period 2017–2023. Mediation analysis is applied to identify the indirect causal associations through which digitalization influences economic structures and employment, by uncovering intermediate variables (mediators).

Moreover, Structural Equation Modeling provides a deeper understanding of the economic processes through which the impact of digitalization propagates across the labor market. This methodological application combines qualitative analyses with quantitative econometric techniques, thereby allowing for the rigorous evaluation of the hypothesis that digitalization may either serve as a source of social and economic imbalances or provide a solution for labor shortages.

The main fundings of this study indicated that digitalization significantly influences both employment levels and the overall structure of the labor market throughout the European Union. However, this impact isn't consistent; while some member states demonstrate deeper integration of digital technologies and consequently experience more robust job growth in digital sectors, others exhibit slower adoption rates, leading to only marginal effects on their labor markets

Digital transformation represents both an opportunity and challenge for the European Union. To maximize benefits, a complexes strategy is needed that integrates policies to encourage innovation, vocational training and investments in education, and social protection measures with the purpose of mitigating negative effects on the labor market. It is critical to comprehend whether digitalization represents a primary problem or a solution for labor market.

This study offers a new methodological approach to assess the effects of digital transformation on labor market and economic development in the context of European Union. The analysis offers an in-depth understanding of this complex phenomenon, providing possible contributions, both at a theoretical and empirical level.

Keywords: Labor market, European Union, digital transformation, unemployment, Structural Equation Modeling, mediation analysis.
JEL Codes: O03, O38, O47, G32, J60, J68.

#550 Assessing the Effectiveness of Managers' Use of Legislation in Self-Governing Organizations

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Abstract:
The aim of the article is to diagnose the use of social welfare by local government organizations (SGOs) observed from the perspective of the application of law by managers.

The first part of the study examined the literature on the tasks performed by SGOs in the context of public sector reforms in Western Europe. The second part analyzed the

results of a survey conducted among SGO managers. Using the collaborative research approach from the action research group, the analysis of data obtained from all SGOs in Poland was discussed. The study was conducted on a selected research sample of 2,573 SGOs. A separate set of formative indicators was determined for each aggregate, creating indexes, which gave the construct scale a multi-index form. The significance level was 0.05.

The conclusions presented provide information on the extent to which SGO managers apply legal acts and to what extent these activities are adapted to the real needs of social welfare system clients.

The need to define new directions of development was confirmed, which requires adapting legal norms to management systems operating under new operating conditions. The statement that something is a new challenge for social policy can be understood as the hypothesis that we are dealing with a new social problem and the suggestion that it can be solved with the help of a reformed legal system. It is necessary to rationalize public spending by implementing instruments characteristic of managing private sector organizations, such as privatization, efficiency, cost accounting, and the use of benchmarking solutions.

It was confirmed that junior managers believe that applicable legal acts effectively help those in need. Strong correlations were found between statements 32 and 78 in SGOs. This warrants further interdisciplinary research in the areas of law, management science, and quality on how to improve legislative processes in social policy. This should also consider active social policies aimed at permanently removing individuals at risk of poverty and social exclusion from the social assistance system.

Keywords: Managerial Effectiveness, Legislation / Regulatory Compliance, Self-Governing Organizations.
JEL Codes: M12, K22, H83.

#551 The Application of PRINCE2 in IT Projects: A Comparative Analysis of Methodologies

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Abstract:
The purpose of this article is to identify and evaluate the benefits of using the PRINCE2 methodology in IT project management compared to other methodologies used in IT projects.

Two research methods were used: a literature review and a survey. In the first stage, information was collected on the PRINCE2 methodology and other project management methodologies used in the IT sector: Agile, Scrum, Kanban, and PMBOK.

The survey was conducted among project managers, Scrum Masters, and project team members. The research sample included 108 respondents.
Agile and Scrum methodologies were identified as more flexible, allowing for faster adaptation to changing market conditions thanks to their iterative nature and less formal structure. The results of the study confirmed the extensive and formal nature of Prince2 documentation, which often constitutes a barrier to effective implementation of the methodology, especially in organizations that expect rapid changes and a flexible approach to project management.

The results obtained may form the basis for further research on optimizing the use of PRINCE2 and developing hybrid models that will enable the effective combination of formal control mechanisms with the flexibility of agile methodologies. This type of approach may prove crucial in a rapidly changing project environment, where the success of a project increasingly depends on the skillful combination of management techniques.

The study confirmed that PRINCE2 remains a highly valued methodology in the IT industry, especially in the context of projects with a high degree of complexity and risk. Respondents noted that although the use of PRINCE2 involves more work on management processes, its systematic approach to management ensures a higher level of predictability and security of implementation in the project environment.

Keywords: PRINCE2 Methodology, IT Project Management, Comparative Analysis of Project Methodologies.
JEL Codes: M15, L86, M10.

#552 Best Practices for Assessing the Validity of Agent-Based Models

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Abstract:
The paper addresses the critical issue of evaluating the validity of agent-based models (ABMs) in management, where these models are increasingly applied to analyze dynamic and complex adaptive systems. Despite their potential, the absence of widely accepted standards for assessing ABM credibility creates a significant challenge for researchers and practitioners.

This paper aims to review existing validation practices and propose a comprehensive methodological framework that can support the development of more reliable and practically applicable ABMs, ensuring their usefulness in decision-making and policy analysis.

The research adopts a systematic literature review approach, complemented by an analysis of existing frameworks and validation protocols dedicated to ABMs. A bibliometric search was conducted in the Scopus database, covering the period 2000–

2025, to identify the scale of research on ABM validation within the domain of business, management, and related areas. The identified studies were critically examined to determine commonly used methods, their strengths and limitations, and the extent to which formalized procedures are applied in practice. Building on this synthesis, the authors propose a structured multi-level validation framework incorporating conceptual, structural, and empirical assessment strategies.

The study reveals a considerable gap between the increasing adoption of ABMs and the scarce application of systematic validation procedures. Although ABM-related publications have grown steadily over the past two decades, only a small fraction explicitly discusses validation issues.

The proposed framework addresses this deficiency by combining multiple techniques, including verification of model assumptions, calibration procedures, empirical comparison with real-world data, and sensitivity analysis. It further underlines the importance of transparent documentation and the involvement of stakeholders in the validation process to improve credibility and trust in simulation outcomes.

For researchers and practitioners, the proposed framework provides clear guidelines for enhancing the robustness of ABM-based studies. Applying structured validation steps can significantly reduce uncertainty, improve reproducibility, and ensure that ABMs serve as dependable tools in strategic planning, risk analysis, and policymaking, particularly in uncertain and complex organizational environments.

The article consolidates dispersed approaches into a unified, practice-oriented framework tailored for management applications. By bridging theoretical concepts with applied methodologies, it contributes to raising the standards of ABM evaluation and fosters their wider acceptance as credible instruments in intelligent decision-making.

Keywords: Agent-Based Modeling (ABM), Model Validation / Verification, Computational Economics / Simulation Methods.
JEL Codes: C63, C88, O33.

#556 Prediction of financial distress and prospects from the Altman Z-score

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Abstract:
The study aims to predict corporate financial distress by applying the scoring method through the Altman Model, originally developed in the United States in 1968 by Professor Edward Altman—known as the revised Z-Score model (Linear Discriminant

Analysis). Financial risk may generate adverse outcomes and has complex implications not only for the operations of a company but also for its business partners.

Throughout the history of economic thought, risk has remained one of the most intriguing subjects of inquiry and research, being an unavoidable component of any business activity. The prediction of financial difficulties is highly relevant not only for managers but also for external stakeholders of a company. Identifying optimal forecasting methods to anticipate financial distress and facilitate decision-making has been a constant concern among scholars and practitioners. Over time, numerous researchers have contributed to the development of bankruptcy prediction models. The essential challenge lies in anticipating risk and managing it effectively through mitigation, reduction, and continuous monitoring.

Bankruptcy risk assessment models generally rely on a scoring function to forecast whether a company is likely to face insolvency or achieve favorable financial performance soon. While various techniques exist to monitor and measure the financial health of firms, the most widely employed approach remains Altman's Z-Score model - based on linear discriminant analysis of five key financial ratios.

This research applies the Altman model to a sample of European listed companies from various industries, excluding financial institutions. The analysis uses accounting data over an extended period covering several years. The analysis highlights the existence of significant links between the investigated components, reflecting both the coherence of the direction of the effects and variations in their intensity.

The results suggest that certain dimensions of the studied phenomenon have a more pronounced impact, contributing decisively to explaining the differences observed between entities. These findings allow a broader understanding of the mechanisms underlying the analyzed dynamics and can serve as a basis for formulating theoretical and practical conclusions, relevant to the research field addressed.

Keywords: Altman Z-Score, Bankruptcy Prediction, Panel Data Analysis.
JEL Codes: G33, C23, C53.

#557 Digital Marketing in the Education Sector: A Systematic Review of Practices, Methods, and Emerging Trends Using the PRISMA Framework

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Abstract:
Digital marketing has become increasingly important in the education sector, enabling institutions to enhance visibility, attract students, and build sustained engagement. While research on this subject is growing, there is a lack of systematic synthesis that maps practice, methodologies, and contextual applications across studies.

This review aims to: (1) examine the digital marketing practices reported in the promotion of educational institutions; (2) analyze the research designs and analytical methods employed in existing studies; (3) explore the sociocultural nuances and context-specific applications shaping digital marketing in education; and (4) identify current practices, emerging trends, and future research directions.

A systematic review of research articles indexed in the Scopus database was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. Articles were screened, selected, and synthesized based on predefined inclusion and exclusion criteria.

Findings indicate that digital marketing practices in education range from social media campaigns, content-driven branding, and search engine optimization to influence partnerships and data-driven personalization.

Methodological approaches vary, with qualitative, quantitative, and mixed-method designs being utilized, while sociocultural contexts—such as linguistic diversity, local values, and institutional environments—play a central role in shaping strategy adoption. Emerging trends include the increasing role of video-based engagement, artificial intelligence in personalization, and integration of marketing with hybrid learning platforms.

However, gaps remain in longitudinal studies, cross-cultural comparative analyses, and ethical frameworks.

This review provides a comprehensive synthesis of digital marketing research in the education sector. The insights inform both scholars and practitioners, offering direction for future studies and actionable implications for institutions to maximize the potential of digital marketing in achieving visibility, credibility, and stakeholder engagement.

Keywords: Digital Marketing, Educational Institutions, Systematic Review, PRISMA Framework.
JEL Codes: M31, I23, C88.

#559 The behavior of European institutional investors in global uncertainty conditions: Crisis period analysis (2020-2024)

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Abstract:
Recent years have been characterized by unprecedented volatility and uncertainty resulting from a series of macroeconomic, geopolitical, and health shocks.

These shocks have tested the sustainability of financial systems and the adaptive capacity of key market participants. The period from 2020 to 2024 has been particularly challenging, marked by the COVID-19 pandemic, the war in Ukraine, and a significant surge in global inflation—each posing unique challenges to financial stability and investment strategies.

Keywords: Financial stability, Macroeconomic shocks, Investment strategies.
JEL Codes: E44, G01, F62.

#560 Development of Transport Infrastructure in European Union Countries in the Context of Ten-T Network Implementation: A Spatial Analysis for the Years 2013–2022

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Abstract:
The purpose of the article is to develop a synthetic indicator depicting the level of development of transport infrastructure in European Union member states. The analysis aims to quantitatively compare the level of transport infrastructure development across six key categories, identify spatial disparities, determine national investment priorities, and assess the degree of integration into the Trans-European Transport Network (TEN-T).

The study applies multivariate comparative analysis based on Hellwig's method, enabling the construction of a synthetic indicator that integrates data from various types of transport infrastructure. Variables include the length of highways, electrified railroads in operation, high-speed rail network, inland waterways, oil pipelines, and the number of airports. Data from 2013–2022 are normalized against the area of each country to ensure meaningful cross-country comparisons.

The constructed synthetic indicator reveals significant variation in the level of transport infrastructure development within the EU. The highest levels are recorded in the Netherlands, Belgium, Luxembourg, and Germany—countries strongly integrated into the TEN-T network and consistently investing in all transport modes. The lowest values are observed in Central and Eastern European countries, such as Lithuania, Latvia, Romania, and Hungary, indicating a need for intensified investments and structural support under EU cohesion policy.

The indicator provides policymakers and European institutions with a tool for strategic planning of infrastructure investments and identifying areas requiring priority support.

It may also serve as a basis for evaluating TEN-T policy implementation and monitoring progress in reducing infrastructure disparities across the EU.

The study fills a gap in existing research by proposing an integrated approach to the assessment of transport infrastructure across Europe, encompassing multiple transport modes within a unified analytical framework.

The synthetic indicator enables a comprehensive evaluation of infrastructure accessibility and contributes to advancing research on a sustainable and coherent EU transport system.

Keywords: Pans-European Transport Network (TEN-T), transport infrastructure, synthetic indicator (Hellwig's method), multivariate comparative analysis, EU cohesion policy.
JEL Codes: O18, R12, R41, C38, H54.

#562 The Digital Twin Strategist in Action: Linking HR Capabilities to Innovation through Learning

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Abstract:
Companies in the modern world are adopting new and improved technologies to enhance productivity, creativity, and competitiveness in Human Resource Management. This research examines the disruptive role of the Digital Twin strategy on HR process innovation and the mediating organization learning capability.

The study uses a quantitative explanatory design and collects information among 210 IT professionals working in medium- and large-sized IT/ITES companies in India. The analysis of direct and indirect effects between the variables is performed using descriptive statistics, confirmatory factor analysis, and structural equation modeling.

The findings also show that the five dimensions of Digital Twin, which are: simulation design, predictive modeling, strategic alignment, workforce personalization, and change readiness, affect the innovation of HR processes positively. Predictive modeling, workforce personalization, and simulation design are the most impactful of them.

The ability of the organization to learn also increases existing relationships, which is why it is crucial in improving the connection between digital adoption and innovative results. Further examination shows that the staff members who have been in the company over seven years display a higher willingness to innovate, and the female

professionals have higher scores in perceptions of digital and innovation-related aspects.

The paper concludes that a combination of Digital Twin strategies and a well-developed learning culture can help organizations embrace inclusive innovation by balancing technology with people.

Keywords: Digital Twin / Digital Strategy, HR Capabilities / Human Resource Management, Innovation and Organizational Learning.
JEL Codes: M53, O31, M15.

#563 AI Adoption by Micro-Businesses: Current Use, Awareness and Perceived Impact on Sales and Marketing

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Abstract:
This paper examines how solopreneurs and micro-businesses adopt and perceive artificial intelligence (AI) tools in their sales and marketing activities. While AI is widely discussed in larger firms, its use among the smallest entrepreneurial units is still not well documented. The aim is to explore current practices, levels of awareness, perceived effectiveness, barriers to adoption, and expectations for AI's impact on competitiveness and growth.

The research is based on an online survey conducted in March and April 2025 among solopreneurs and micro-business owners from several countries. The survey included questions on demographics, current AI usage, awareness of additional tools, perceived benefits and barriers, and expectations regarding future use. Descriptive statistics were applied to identify adoption patterns and main challenges faced by respondents. The results show that most participants already use AI, mainly for content creation, customer communication, and campaign support. Reported benefits include time saving, higher productivity, and better customer engagement. However, adoption is not without difficulties.
Respondents often mentioned lack of technical skills, time needed to learn, data privacy concerns, and tool costs as significant barriers. A noticeable gap exists between awareness of AI technologies and their active implementation. Many entrepreneurs see the transformative potential of AI, but they remain cautious and selective in actual use. Practical Implications:

These findings are relevant for practitioners who seek to learn from peer practices, as well as for policymakers and educators who aim to design training, awareness, and support programs. By addressing the barriers identified, it is possible to foster more inclusive and sustainable digital adoption among the smallest firms.

The paper contributes empirical insights into how solopreneurs, a group often overlooked in innovative research, engage with AI. It underlines opportunities but also

the limits that need to be addressed if AI is to truly support sustainable business growth.

Keywords: Digital transformation, entrepreneurial innovation, marketing strategies.
JEL Codes: O33, L26, I25.

#564 New technologies towards justice as a sustainable development goal (SDG16)

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Abstract:
The presentation explores the role of new technologies in advancing the United Nations Sustainable Development Goal 16 (SDG 16) – Peace, Justice and Strong Institutions.

Digital transformation of justice systems creates new opportunities to improve access to justice, enhance transparency, and strengthen public trust in institutions. Examples such as e-courts, online dispute resolution (ODR) platforms, the use of artificial intelligence in case analysis, or blockchain-based public registries illustrate how innovation can contribute to more efficient and inclusive justice systems.

At the same time, challenges related to the protection of individual rights, algorithmic bias, and the digital divide must be addressed. The presentation highlights both the potential and the limitations of technology in the pursuit of “justice for all.”

Keywords: New Technologies / Digital Innovation, Justice / Rule of Law, Sustainable Development Goal 16 (SDG16).
JEL Codes: K38, O33, H83.

#565 Corporate Sustainability: The Enhancing Role of Human Resource Management

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Abstract:
Over the past two decades the concept of corporate sustainability has attracted continuous attention by economists, ecologists and policy makers. Sustainable Development is an important issue in the field of management research (Wilkinson 2001, Ehnert 2009). However, its link with Human Resource Management (HRM) is only recently widely established in the literature (Stahl, Brewster, Collings & Hajro, 2020).

HRM practices included in the CSR Programs of a company are often linked with sustainability, business ethics and workplace justice and appear often under the term of Sustainable HRM (Ehnert, Harry & Zink, 2014; Papalexandris, 2022). Lately great emphasis has been placed on the U.N. Sustainable Development Goals (SDGs) and the dimensions of the Environment, Society and Governance (ESG) which form the criteria for documenting and reporting relevant practices implemented by business firms (U.N. 2015). HRM can play an important role in designing and implementing such practices, especially those linked to society. Therefore, HRM is facing the challenge of active involvement in sustainability (Ehnert 2016)

In view of the above, this paper has examined HR practices adding to corporate sustainability which have been applied by major companies operating in Greece for their workforce and for the community in general with the involvement of HR. The main conclusions from our research are that there is room for a wide range of policies and practices which can add to sustainability, and this is an important challenge which HR has already started to meet successfully. Companies can use sustainable HR to enhance their corporate sustainability and enjoy the benefits of a higher reputation and an enhanced ethical profile.

Keywords: Corporate Sustainability, Sustainable Development Goals, Sustainable HRM.
JEL Codes: M14, M53, Q56.

#566 Technological asymmetries and corporate financial stability: an analysis of risk and operational efficiency

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Abstract:
The aim of this article is to examine how technological asymmetries, considered as differences in access to advanced digital tools, AI, IT infrastructure and all technological competencies, affect the financial stability of enterprises. The analysis focuses on identifying mechanisms related to the use of AI in the process of introducing modern technologies. In this case, the analysis of the associated risk is considered.

The study is based on a comparative analysis of financial and technological data from selected SMEs and large corporations from Poland and other countries. In the context of AI and infrastructure, digitization level indicators were used. In the financial context, financial liquidity indicators, debt indicators and risk indicators were considered. Statistical methods, including multivariate regression analysis, were used to determine the correlations between the level of technological advancement and the financial resilience of companies.

The results confirm that companies with a higher level of digitization are more resilient to market disruptions, have better risk management capabilities and lower debt ratios than SMEs. In this case, international cooperation between the economic entities surveyed is essential.
The results show that investments in digitalization and technological competences in the context of cooperation between enterprises not only increase efficiency but also improve the financial resilience of companies, reducing operational risk. The article may be useful for managers, financial analysts and business advisors who are looking for tools to assess risk and plan technological development.

The article brings new value by combining two areas of research: technological asymmetries and corporate financial stability. This article focuses on the microeconomic level, offering empirical evidence of the existence of technological inequalities and their impact on the financial condition of companies of different sizes in the context of the use of machine learning algorithms.

Keywords: Technological Asymmetries, Corporate Financial Stability, Risk Management / Operational Efficiency
JEL Codes: G32, O33, G17.

#567 Eco-Friendly Workplace: Strategies for a Sustainable Future- A Case Study

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Abstract:
This research article will review the measures taken by the selected organization as a case study to promote environmental consciousness and sustainable workplace practices. It also envisages explaining the advantages of having an environmentally friendly workplace and the relation between the measures to be taken in this regard and the organization's vision.

This research is qualitative in nature. The primary data was collected from the organization chosen as the case study. The secondary data includes organizational websites, articles, books, and other resources on the World Wide Web. The collected data from various sources is used for thematic analysis to present the organization's strategies for a sustainable future and eco-friendly practices.

Build a self-sustaining network of stakeholders for inclusive and sustainable development. Virtual offices reduce commuting, saving time and energy while cutting vehicular emissions. Virtual meetings connect stakeholders globally without travel. Eliminates physical infrastructure, saving resources.

Minimal reliance on printouts promotes waste-free operations. Practical Implications: It does look like a dream to have a company culture where choices made at the workplace, including the cups used in the breakroom and the energy sources used in the building, are sustainable. That is the core of the business's sustainable workplace culture, with an attitude focused on social justice and economic sustainability of all activities performed in the given enterprise.

If, therefore, a sustainable organizational culture is promoted in the workplace, there is guaranteed improvement in workers' productivity, satisfaction, and loyalty. When employees realize their business is socially responsible for its impact on the earth, is socially conscious, and engages in change-making processes, they feel privileged to be associated with it.

Keywords: Sustainable Workplace, Green Organizations, Sustainability, Environmental Management, Environmental Impact, Eco-Friendly Workplace, Sustainable Organizational Culture.
JEL Codes: Q01, Q01, Q56, Q53, M54, Q01.

#568 Green Finance Adoption and Credit Risk: Evidence from Indian Banks Using CMIE Prowessiq

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Abstract:
This study examines whether green finance adoption reduces credit risk in Indian banks, with a focus on corporate social responsibility (CSR) intensity, board-level ESG oversight, and renewable lending practices.

Using panel data from 15 public and private banks covering FY2019–2023, information was extracted from the CMIE ProwessIQ database.

Credit risk indicators gross, and net non-performing assets (GNPA, NNPA), provisioning coverage, and interest coverage ratios were regressed against ESG proxies using fixed- and random-effects models. Robust standard errors and Hausman tests were employed to ensure model validity.

The results indicate that higher CSR intensity significantly lowers GNPA ratios, ESG oversight committees strengthen provisioning coverage, and green lending improves interest coverage, reflecting greater solvency.

An ESG maturity index further confirms a negative association with composite credit risk, underlining the resilience benefits of sustainability integration.

The findings provide evidence for regulators such as RBI and SEBI to strengthen ESG-related guidelines by shifting from disclosure toward performance-based norms. For banks, ESG adoption emerges as a strategic tool for risk mitigation, efficient capital allocation, and enhanced stakeholder trust.

This research is one of the first econometric studies to link ESG practices with credit risk in Indian banking. It introduces a replicable methodology using CMIE ProwessIQ and contributes to advancing green finance scholarship in emerging markets.

Keywords: Green Finance, Credit Risk, ESG Oversight, CSR Intensity, Indian Banks, Panel Regression.
JEL Codes: G21, Q56, C33.

#569 Diverse Types of Foreign Exchange Exposures and Hedging by Multinational Enterprises

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Abstract:
We review both the principles of three forms of foreign exchange exposure and the appropriate techniques of hedging.

We critically analyze the relevant literature on corporate exposure and its hedging, while we provide empirical evidence from a respective survey on multinationals.

Two most widely used techniques by international corporations to hedge foreign exchange risk are forward hedging (especially for translation one) and currency diversification of assets or financing. The coverage against translation exposure continues to fall relative to the shift to Financial Accounting Standards (FAS) #52.

Most firms seem to have a better understanding of transaction exposure, which is why they hedge it more frequently. Finally, a number of respondents do not hedge any of the exposures because they understand the hedging as a time-consuming and risky process, which can easily increase instead of decreasing foreign exchange exposure and losses of firms' value abroad.

Knowledge of the advantages and disadvantages of hedging or speculative techniques improves the efficiency of international financial management.

As far as we know, this is the most up-to-date overview in corporate exposure to exchange rate fluctuations.

Keywords: Foreign exchange exposure; translation exposure; transaction exposure; hedging; speculation; international financial management; multinational corporations.
JEL Codes: F31, G32, F23.

#570 Economic Exploitation of Convict Leasing

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Abstract:
The notion of using prisoners for labor is one that is old as time. Exploiting labor at a low cost, at the time, was an appealing and attractive way to turn a vast profit margin compared to using paid or indentured labor for larger industrial projects.

Exploitation costs, also commonly known as labor exploitation, are costs that are associated with overworking and taking advantage of a convict through forced labor and carrying out the work.

The demand for labor exploitation grew during the 19th century where both industrial and agricultural work relied on exploited workers. Southern states, especially those that were impoverished at the time, would use the system of convict leasing to generate revenues by leasing convicts to wealthy individuals or large corporations.

The slave labor continued through this exploitation after the emancipation of black slaves, allowing the system to deeply ingrain itself into the history of America even further.

Keywords: Convict Leasing, Labor Exploitation, Historical Economic Analysis.
JEL Codes: N31, J41, B25.

#571 Economic Determinants of Profitability of Listed Banks in the United States

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Abstract:
Unlike previous studies to date, this paper investigates the relationship between financial performance in terms of profitability and the economic determinants for listed banks in the United States since the end of 2014 when banks are required to maintain minimum capital ratios comprising a common equity tier 1 ratio of 4 percent, a tier 1 ratio of 5.5 percent, a total ratio of 8 percent, and a leverage ratio of 4 percent.

The methodology implements a panel data approach. Data are sourced from annual financial statements of listed U.S. banks for the period 2015 to 2019 representing the new banking regulatory capital ratio regime.

Findings reveal the log of assets variable is significantly positively related to bank profitability; the unemployment variable is highly significantly negatively correlated with bank profitability; and the inflation variable is albeit significantly negatively associated with bank profitability. Surprisingly, the net interest margin variable and GDP variables are not significant; plausible explanations are offered for these anomalies.

Keywords: Banks, Bank Profitability, Return on assets, Regulation, Loan loss provision, Net interest margin, Inflation, Unemployment.
JEL Codes: G21, G32, E44.

#572 A Review of the Determinants of Health Care Internationally

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Abstract:
This study will reexamine the diverse factors influencing health care in the United States. The factors which are prominent in the demand for health care are the price variable of health care, the income level of the population, the age of the population, the technology level of medicine in the country and the supply of nurses and physicians in the country.

A furthermore issue is the definition of health care demand. Different theorists have defined it differently. Specifically, they have defined it as hospital stay (Feldstein, 1971) or visits per capita (Fuchs and Kramer, 1972) or physician visits (Scitovsky and Snyder, 1972) or medical expenditures (Eichner, 1998).

Several other theorists have divided medical care into specific medical services. Newhouse and Phelps divide medical care into inpatient length of stay and outpatient number of visits (1974). In another study (1976) they use probability of use of inpatient and outpatient care. In a third study (Newhouse et al 1993) use medical expenditures on inpatient and outpatient care. In the same study, the authors divide medical services into acute and preventive. We see thus the different aspects of the demand for health care. That is, the definition of health care varies.

Health care is unique as a service in its relationship to price. First, medical insurance is a critical method in which health care is dispensed. The issue of medical insurance influences critically the price of health care. When we talk about the price, we really have four portions of that price.

They are deductible, which is the minimum that the patient must pay before insurance begins to pay non preventive physician services. There is usually a payment, a small amount paid for visits. Thirdly, there is coinsurance. This is a percentage which the patient pays to the physician for usually non-preventive services. Fourthly, there is the maximum amount. This is the amount for which the patient is responsible.

After the maximum, the insurance covers one hundred percent of the costs. Those different portions of the price can be defined as price, and they have been used in the literature in terms of studies of health care service.

Keywords: Health Care Determinants, International Health Systems, Comparative Health Policy.
JEL Codes: I11, I18, F54.

#573 The Health Crisis Effect on the Tourism Business

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Abstract:
The primary objective of this study is to investigate the impact of a severe health crisis—such as the COVID-19 pandemic—on the economic performance of tourism-related stocks globally. The coronavirus outbreak triggered a global recession in the tourism sector in 2020.

In response, governments-imposed restrictions, lockdowns, and fiscal policies aimed at mitigating the effects of the pandemic. We assessed the influence of the health crisis, pandemic, related variables—such as daily reported deaths, cases per million population, the Stringency Index, and the Global Response Index (GRI) on the stock returns of tourism firms using twelve regression models. Drawing on daily data from the Thomson Reuters database, the analysis focuses on 28 countries over the course of the pandemic.

To estimate the relationship between the pandemic and stock returns, we employed Multivariate Regression Models based on Seemingly Unrelated Regressions (SURE) as well as the standard Ordinary Least Squares (OLS) method. The results indicate that the models successfully captured the variance in stock returns for 14 countries in the sample. For most of these countries, the impact of the examined variables was most pronounced within a 10-day window following a health crisis event and diminished after 30 days.

This brevity suggests that the repercussions of the COVID-19 pandemic were characteristic of economic shock. Furthermore, the models fit the data most effectively during two critical periods: (1) the initial spread of the virus (March 5–16, 2020), and (2) the immediate aftermath of the first quarantine announcements in various countries.

These findings highlight the significance of these timeframes in shaping the economic trajectory of the tourism sector. Notably, the number of reported cases and the Stringency Index were most frequently found to be statistically significant supporting the existing literature that underscores the importance of social distancing measures and fiscal policies.

Additionally, our results suggest that the spread of COVID-19 and the investor panic it induced had a greater influence on tourism stock returns than the actual number of pandemic-related fatalities.

This finding emphasizes the need for targeted support to stabilize tourism businesses in the aftermath of health crises, as well as further research into the effectiveness of governmental measures in mitigating economic damage. Future studies should explore which policies have been most effective in curbing virus transmission, calming investor panic, and reducing economic fallout. Moreover, researchers could examine financial strategies designed to enhance the resilience of tourism stocks to future crises.

In conclusion, our findings underscore the critical impact of the early phase of the pandemic and the initial quarantine measures on tourism stock performance. The influence of the pandemic on stock returns was intense but short-lived, typically lasting no longer than ten days following the imposition of restrictions.

This supports the view that the COVID-19 outbreak functioned as a sharp economic shock. Finally, daily reported cases and national policy responses played a significant role in shaping tourism firms' financial outcomes.

Keywords: Health Crisis / Pandemic Impact, Tourism Industry / Tourism Business, Economic Effects / Business Performance.
JEL Codes: L83, I18, D81.

#574 How Artificial Intelligence is Shaping Purchase Intentions: Main Schools of Thought and Topical Trends

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Abstract:
Despite the explosive growth of Artificial Intelligence (AI) applications in marketing and sales, and increasing scholarly interest in this area, there have been very few efforts to systematically review the literature. To date, no existing study appears to have conducted a comprehensive literature review using the Scopus database with up-to-date coverage.

This study aims to fill that gap by reviewing the literature on the impact of AI on purchase intentions. A total of 169 documents were extracted from Scopus, covering the period from 1999 to 2025. A combination of bibliometric analysis and content analysis was employed to examine research performance, map the scientific landscape, and uncover the intellectual structure of the field.

The findings reveal the research performance of the field. Six major schools of thought and two emerging topical trends are also uncovered. Importantly, the study identifies significant research gaps and proposes a future research agenda related to the ethical

aspects of AI applications, the long-term impact of AI on trust and purchase intention, the potential negative effects of AI, the role of consumer creativity, the expansion of theoretical frameworks, and differences across cultures, demographics, and industries.

This work offers both theoretical and practical contributions by conducting a timely review of an emerging and interdisciplinary field.

Keywords: Artificial Intelligence (AI) in Marketing, Purchase Intentions / Consumer Behavior, Trends and Schools of Thought.
JEL Codes: M31, D12, O33.

#576 Context Matters: Exploring the Social Dimension of ESG in Italy and Kazakhstan

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Abstract:
We investigate how the social dimension of sustainability within the Environmental, Social, and Governance (ESG) framework is perceived and practiced by businesses in two contrasting national contexts: Italy and Kazakhstan. Focusing on the “social” pillar—labor rights, inclusion, community engagement, and welfare—the study considers how cultural values, historical legacies, and institutional arrangements shape corporate responsibility and give rise to different interpretations and divergent trajectories of ESG adoption.

We employ an exploratory design, based on two parallel surveys conducted between May and July 2025 with 194 firms and professionals: 80 in Italy and 114 in Kazakhstan. The questionnaire combined multiple-choice questions, Likert-type scales, and open-ended items, covering (i) awareness and understanding of ESG; (ii) current implementation across environmental, social, and governance dimensions; (iii) organizational maturity in adopting ESG; (iv) barriers and incentives; and (v) perspectives for future development.

Descriptive statistics were complemented by deductive–inductive content analysis of qualitative responses to capture cultural framings and moral reasoning patterns.

The results highlight clear institutional and cultural contrasts: in Italy, despite strong EU regulation (NFRD, CSRD, ESRS) and traditions of labor protection and civic humanism, ESG adoption remains fragmented, particularly among resource-constrained SMEs.

In Kazakhstan, by contrast, awareness exceeds 80% and implementation is more advanced, reflecting Asian communitarian values and state-led welfare traditions, even in the absence of a fully consolidated framework. A paradox thus emerges:

Kazakhstan demonstrates strong operational engagement despite regulatory gaps, while Italy has structured EU-driven regulation but struggles with widespread implementation.

The study offers guidance for policymakers and business leaders. In Kazakhstan, it suggests consolidating ESG rules beyond finance and state-owned firms to secure long-term adoption. In Italy, it highlights the need to ease bureaucracy, provide fiscal incentives, and develop simple reporting tools for SMEs. In both contexts, training and ESG literacy emerge as crucial to turn awareness and cultural values into consistent practice.
This paper advances the ESG debate by highlighting the social pillar through a cross-national comparison of two contrasting cultural and institutional contexts. It shows how historical and value-based legacies shape corporate responsibility and generate different trajectories of adoption.

By offering new evidence from underexplored settings, the study illustrates how global ESG frameworks interact with national business ecosystems and provides practical insights for policymakers and practitioners.

Keywords: Corporate governance, Sustainability, Social values, SMEs, Reporting practices, Diversity.
JEL Codes: A13, M14.

#577 Legal Framework for AI in the Light of Work of the Council of Europe

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Abstract:
Artificial intelligence enables problem solving and the performance of tasks that are impossible for humans. It can also revolutionize many sectors and bring significant benefits to society.

However, due to the nature of the underlying technologies, AI poses new risks and challenges for regulators around the world. The European Union's plans for AI are primarily aimed at increasing technological and industrial potential, promoting sustainable development, intensifying research and innovation, and making more data available for creating applications of public interest.

At the same time, the EU legislator is working to establish an appropriate ethical and legal framework, as well as ensuring high standards of safety, product liability, network and information system security, and personal data protection.

The way forward at European and international levels is to establish a legal framework that defines the meaning of artificial systems, raises awareness of the importance and applications of algorithms, and establishes liability for damage caused by artificial intelligence systems.

Digital transformation, EU values and fundamental rights form the basis for using artificial intelligence to benefit and advance humanity. This presentation aims to introduce the legal framework proposed by the Council of Europe and the Council of Europe's European Commission for the Efficiency of Justice (CEPEJ) in the field of artificial intelligence.

It will also cover their work, guidelines, analyses and convention, which are intended to shape a human-centered digital future for Europe that respects human rights, democracy and the rule of law.

Keywords: Artificial Intelligence (AI) Regulation, Legal Framework / Law and Technology, Council of Europe / International Governance.
JEL Codes: K23, O33, K33.

#579 The Interplay between Household Structure, Financial Decisions, and Sustainability: Evidence from Dink Households

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Abstract:
This study investigates the relationship between household behavior and sustainability, focusing on dual-income, no-kids (DINK) households in Lithuania. DINK households represent a growing generation with distinct financial capacities and lifestyle preferences. Thus, this study offers significant insights into the relationship between changing demographics and sustainable development.

A survey was conducted from July to September 2025 involving 45 Lithuanian participants. The questionnaire evaluated five attributes of sustainable living: environmentally conscious consumption, sustainable technology, travel and mobility, green investment, and sustainability mindset. Responses were evaluated to identify patterns in choices related to sustainability among DINK households.

DINK demonstrated considerable interest in sustainable consumption and household habits along with showing strong support for governmental incentives for green investments. On the other hand, DINK demonstrated selectiveness in the adoption of sustainable travel and personal sustainable finance behaviors.

A considerable number of respondents highlighted that a childless lifestyle provides greater chances for engaging in sustainable practices, which, in turn, corresponds to a direct link between household composition and environmental responsibility. Practical

Implications. DINK households showed high support for green programs and engagement in sustainable purchasing and household practices but showed selectivity in sustainable travel and financial behaviors.

Policymakers and businesses should prioritize green financial products, energy-efficient housing incentives, and community programs to utilize DINK's purchasing power and value-driven motivation and, to address sustainable mobility and personal finance gaps.

This research contributes to the limited research on DINK households in European economies undergoing demographic and economic transition. It provides fresh perspectives on how demographic fluctuations affect sustainable consumption and investment by merging household composition, financial behaviors, and sustainability, for research and practice.

Keywords: Dual-income, no-kids, DINK, sustainability, behavioral economics, financial behavior.
JEL codes: E21, G51, Q56.

#581 The Influencing Determinants of Evaluating Performance of Readymade Garments Industries

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Abstract:
This research investigates the influencing determinants of evaluating performance of Readymade Garments Industries such as strategic orientation, digital engagement, and market dynamism. Given the industry's pivotal significance in the national economic landscape and its susceptibility to international competitive dynamics, it is imperative to comprehend how both internal capabilities and external conditions influence organizational performance.

The study employed a quantitative research methodology to gather data from 400 participants who held diverse managerial and operational positions within the RMG industry. Statistical findings employing Pearson correlation coefficients along with multiple linear regression showed that the three variables notably and positively impact organizational performance, with strategic orientation recognized as the main predictor.

Additionally, digital engagement was determined to be essential for augmenting operational efficiency and responsiveness, while market dynamism highlighted the necessity of adaptability in unpredictable contexts. These findings enrich the strategic

management literature about emerging markets and provide practical recommendations for business leaders and policymakers striving to enhance competitiveness, sustainability, and resilience within Bangladesh's garment sector.

Keywords: Performance evaluation, Readymade garments industry, Determinants of industrial performance.
JEL Codes: L60, M10, D24.

#582 Legal Aspects of the Use of AI as a Tool in Support of Public Digital Services

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Abstract:
This article aims to identify the main legal aspects related to the use of artificial intelligence in the public sector and to present recommendations for building a secure and transparent regulatory ecosystem that fosters innovation while safeguarding citizens' rights in the context of digital transformation of public administration.

The research employs a comprehensive legal analysis examining current regulatory frameworks, including the General Data Protection Regulation (GDPR) and the proposed Artificial Intelligence Act (AI Act). The study analyses key problematic areas such as personal data protection, attribution of responsibility for AI-driven decisions, and compliance with transparency, equality, and non-discrimination principles.

The analysis reveals that effective implementation of AI in digital public services requires adaptation of existing legal provisions and development of new regulatory instruments. Main challenges include ensuring data privacy protection, establishing clear accountability mechanisms for algorithmic decisions, maintaining system security, and protecting citizens against risks of misuse or erroneous AI decisions.
The European regulatory framework plays a pivotal role in defining deployment conditions and supervision mechanisms for AI in the public sector. Practical Implications: Public administrations need to develop comprehensive legal frameworks that balance innovation with citizen protection.

This includes establishing clear guidelines for AI implementation, creating robust accountability mechanisms, ensuring transparency in algorithmic decision-making, and implementing security measures to protect against system misuse. Regulatory compliance with GDPR and AI Act requirements is essential for lawful deployment of AI solutions.

This research provides a timely analysis of emerging legal challenges in AI deployment within public services, offering practical recommendations for policymakers and public administrators. The study contributes to understanding how legal frameworks can

enable responsible AI adoption while maintaining democratic principles and citizen rights protection.

Keywords: Artificial intelligence, public administration, digital transformation, data protection, AI regulation, algorithmic accountability.
JEL Codes: K23, H83, O38.

#584 Framework for Ethical Ai-Driven Interactions in Finance

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Abstract:
This paper addresses the growing use of Artificial Intelligence (AI) in finance and the need for a structured, ethical framework to guide responsible development and deployment. It aims to propose a practical and actionable framework that aligns AI-driven financial interactions with core ethical principles, fostering trust, fairness, and accountability.

The framework is developed through a synthesis of existing literature on AI ethics, data governance, responsible innovation, and financial regulations. It incorporates key principles identified in seminal works and regulatory guidelines (e.g., GDPR, CCPA).

The paper provides a detailed conceptual example that illustrates how the framework can be systematically applied in a typical AI-driven financial process. This approach adopts a design science philosophy, constructing a framework composed of core components and demonstrating its practical relevance through the scenario.

The proposed framework encompasses key components such as data governance, algorithm design, deployment and monitoring, and organizational oversight. It highlights how these interrelated elements can be integrated to ensure responsible AI use, emphasizing practices like privacy preservation, fairness metrics, continuous validation, and strong governance mechanisms. The example demonstrates potential pathways for responsible AI implementation, fostering stakeholder trust and regulatory compliance.

The framework provides practitioners with a comprehensive blueprint for embedding ethical principles into AI systems within financial services. It guides responsible practices that can mitigate bias, enhance transparency, and ensure compliance, ultimately supporting responsible AI adoption aligned with societal values.

This paper contributes to the growing body of knowledge on AI ethics by offering a comprehensive and actionable framework specifically tailored to the challenges and opportunities of AI in finance.

Through a detailed conceptual illustration, it bridges the gap between high-level ethical principles and practical implementation, providing valuable guidance for financial institutions aiming to adopt AI responsibly.

Keywords: AI ethics, responsible AI, ethical framework, data governance, algorithm bias, financial technology, fintech.
JEL Codes: G00, G18.

#585 The Economic Value of AI Driven Customer Experience in Digital Business Models

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Abstract:
AI was becoming a new frontier in digital business innovation, enabling better customer experience and yielding tangible financial returns. In this article, it aimed to analyze the economic impact of AI-empowered customer experience in digital media-related business from consumer's paradigm, business function and competitive perspective.

This aim was to address how AI enriches customer relationships, its economic contribution in form of cost-saving and profit-maximization, and threats or challenges and future trajectory.

Quantitative research was designed, where a self-completion, fixed format questionnaire was posted to 250 digital business service users. The findings revealed that AI was able to result in improved level of customer satisfaction and saving time-to-transact, higher adoption of personalization which caused higher tendency to spend with more loyalty.

A ranking analysis indicated that the preferred outcomes were financial cost reduction and customer satisfaction, with the first being preferable. Although speculative, it can be inferred that the companies using AI had better brand reputation and competitive edge than those who did not. AI-enhanced customer experience had already created tangible economic value, the research found but trust, data security and the cost of implementation remained barriers.

Keywords: AI-driven customer experience, Digital business models, Economic value of technology.
JEL Codes: L86, M15, O33.

#587 Cross-Border Accounting Scandals and Frauds

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Abstract:
This research paper investigates the underlying reasons and causes of the continued persistent perpetration of cross-border accounting scandals and frauds by managers of the firms to date. A multi-case analysis methodological approach is adopted.

The objective is to understand the accounting situation of the cross-border accounting scandal and fraud cases in the context of its total historical experience. The findings will be of interest to regulators, academics, practitioners, and students who seek to increase the understanding of accounting's past cross-border accounting scandals and implement that understanding to explain accounting's present and its possible future development.

Keywords: Cross-border accounting scandals, corporate fraud, International financial reporting.
JEL Codes: M41, G38, K22.

#590 Hotel Industry Assessment by Data Envelopment Analysis Based on Text Mining

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Abstract:
Hotel industry assessment by data envelopment analysis based on text mining Measuring the level of customer satisfaction (LCS) with quality service has been a very important part of economic as well as statistical research.

In our study we propose an LCS evaluation technique that applies text mining to data envelopment analysis (DEA).

Hotel customers reviews are scraped from the Internet and analyzed with the aim of determining their sentiment. The sentiment is understood in the sense of entity sentiment referring to the attributes describing the hotel industry. The set of attributes must be determined by the researcher.

The proposed algorithm for determining the sentiment is a novel algorithm focused on the analysis of the positions of words in the sentence rather than the term-frequency–inverse document frequency (TF-IDF) technique. The characteristic features of the algorithm include a) it is basically unsupervised and b) basically it does not need external sources.

The DEA is performed through a model like the output-maximizing multiplier CCR (Charnes, Cooper and Rhodes) model. The Solver software is used to find model coefficients. The model coefficients are subsequently used to determine the LCS. The proposal is applied to a corpus of about 18000 reviews of written by clients of 9 Polish hotels in 2023.

The hotels range from three-star ones to five-star ones. In this way we get an initial insight into the quality of the research carried out.

The results prove that quite satisfactory results can be obtained with the use of our approach as far as determining the LCS is concerned. Key words: hotel industry, tourism, text mining, entity sentiment, data envelopment analysis.

Keywords: Hotel industry performance, Data Envelopment Analysis (DEA), Text mining and big data analytics.
JEL Codes: L83, C61, C88.

#596 The Social Acceptability of Artificial Intelligence in Project Management: A Qualitative Study Perspective

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Abstract:
This paper examines the ethical and organizational implications of adopting artificial intelligence (AI) in project management, particularly concerning practitioners' perceptions and the trade-off between efficiency gains and preservation of human judgment required for social acceptability.
A qualitative design combined a systematic literature review with twelve in-depth semi-structured interviews of experienced project management professionals. Interview transcripts were analyzed using reflexive thematic analysis to identify recurrent themes, perceived barriers, and expectations. Findings from the literature and primary data were synthesized to generate a phase-specific AI utilization model and a set of integrative strategies for responsible adoption.

Results show divergent practitioner views: many participants endorse AI for efficiency and data-driven decision support, while a substantial minority caution that overreliance can erode critical human oversight and legitimacy.

The utility of AI proved phase-dependent—stronger in early project stages (planning and estimation) and attenuated during complex execution and stakeholder-sensitive activities.

Adoption is constrained by technical limitations, organizational readiness, and ethical/regulatory considerations. From the combined evidence, the study proposes a phase-specific model that maps AI suitability across project stages and five integrative strategies to guide implementation.

The paper offers actionable guidance for practitioners and policymakers: (1) human–AI collaborative decision frameworks; (2) phase-specific usage models for tailoring AI tools to project stages; (3) ethical and regulatory governance mechanisms; (4) organizational readiness and change-management practices; and (5) human-centered design standards to preserve accountability and social acceptance.

By foregrounding social acceptability and practitioner perspectives, this study contributes a novel, human-centric phase-specific model and five integrative strategies that have been underexamined in prior research. The model and strategies provide a foundation for empirical validation and extension in larger, more diverse samples.

Limitations include the modest sample size and qualitative scope, which constrain generalizability; nevertheless, the integrated insights afford theoretical refinement of socio-technical decision-making models in projects.

Future research should operationalize the proposed phase-specific constructs, employ mixed-methods and larger cross-cultural samples, and evaluate the effectiveness of the five strategies through field experiments or quasi-experimental designs. Such work will clarify boundary conditions and inform normative guidance for responsible AI governance in project management and stakeholder-centered evaluation metrics.

Keywords: Artificial Intelligence in project management, social acceptability of AI, Qualitative study of technology adoption.
JEL Codes: M12, O33, Z13.

#597 The Economic Cooperation Organization: Path Dependence and Comparison with Other Regional Organizations

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Abstract:
This paper aims to investigate the evolution of the Economic Cooperation Organization (ECO) and the associated phenomenon of path dependence and lock-in, which is experienced by all regional organizations, due to their established frameworks, treaties, and institutional norms.

A comparison with other regional organizations, including the European Union (EU), is also intended, with lessons to be learnt by ECO for deepening its economic integration and facilitating trade between member countries.

The path dependence experienced by other regional organizations is discussed and compared with ECO: ASEAN (Association of Southeast Asian Nations), SAARC (South Asian Association for Regional Cooperation), MERCOSUR (Southern Common Market), and the Arab League.

The study employs a qualitative, comparative, and historical research design to analyze the institutional development of the ECO through the lens of path dependence and to situate ECO within the broader field of regional organizations.

The methodology integrates insights from historical institutionalism and comparative regionalism, relying on both primary and secondary sources. Primary sources include ECO's foundational treaties, official communiques, and policy documents.

Secondary sources consist of academic literature on ECO regional integration, as well as reports produced by international organizations such as the World Bank, UNCTAD, and OECD.

The study concludes that overcoming path dependence requires effort and strategic coordination, proposing some policy recommendations; at the same time, ECO could follow the model of the EU, as the most successful example of regional economic integration.

Keywords: Economic Cooperation Organization (ECO), Regional economic integration, Path dependence and institutional comparison.
JEL Codes: F15, N70, O19.

#600 Telehealth and Remote Patient Monitoring in Kuwait: Biomedical Innovations and Clinical Integration Challenges

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Abstract:
The healthcare landscape in Kuwait is rapidly evolving through the integration of telehealth and remote patient monitoring (RPM) technologies.

This study explores how biomedical engineering innovations—such as wearable biosensors, implantable monitoring systems, and mobile health platforms—are

transforming clinical care models, particularly for patients with chronic illnesses. The real-time collection of biological data (e.g., heart rate, blood glucose, ECG, blood pressure, and oxygen saturation) enables early diagnosis, personalized treatment, and enhanced chronic disease management.
However, these innovations necessitate robust healthcare management strategies and clinical infrastructure to ensure data security, interoperability, patient safety, and clinical decision-making. This paper assesses Kuwait's medical readiness to integrate RPM, identifies key biomedical and clinical implementation challenges, and proposes recommendations for optimizing outcomes through multidisciplinary collaboration.

The findings contribute to the development of a resilient, technology-enabled healthcare system tailored to the needs of Kuwait's population and healthcare needs. To understand the current perception of RPM in Kuwait, a pilot study of healthcare providers (N = 17). Survey results suggested that awareness of RPM remains low.

Approximately three-quarters of respondents had never used RPM, and roughly the same number of respondents were unaware of the technologies available. Nevertheless, there was widespread agreement among providers that RPM offered clear benefits, including reduced unnecessary hospital visits, improved compliance with treatment, and encouraged patients to take on greater participation in managing their health.

The barriers identified explain the slow implementation rates. Lack of appropriate training was the most frequently identified barrier, followed by a lack of regulatory or legal framework to dictate use. Despite the barriers, a considerable majority would support the inclusion of RPM into hospital-based chronic disease management programs.

The findings demonstrated that the system is interesting, but not quite ready. Whereas Kuwaiti healthcare practitioners recognize the potential of RPM, advancement in this field will need to be more than just having technology available. It is going to require structured training for staff, a clear regulatory framework, and investment in supportive infrastructure to allow for sustainable use. Addressing these shortcomings will enable Kuwait to catch up with the international advances in telehealth to directly contribute to the National Development Plan objectives under Kuwait Vision 2035.
Keywords: Telehealth and remote patient monitoring, Biomedical innovations, Clinical integration challenges in healthcare.
JEL Codes: I11, O31, L86.

#601 Why E-Service Quality and Last-Mile Delivery Matters for Marketplace Companies

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Abstract:

This study examines the interplay between e-service quality, last-mile delivery, and customer experience in shaping customer satisfaction within e-commerce platforms. Given the increasingly integrated nature of digital transactions and physical delivery, this research highlights how timely, accurate, and customer-centric last-mile delivery complements digital services to enhance overall satisfaction.

A quantitative, cross-sectional survey was conducted with Indonesian consumers who recently engaged in online purchases and received deliveries. The analysis, carried out using SmartPLS 4 and Partial Least Squares Structural Equation Modeling (PLS-SEM), confirms that both e-service quality and last-mile delivery significantly impact on customer experience and satisfaction.

The mediating effect of customer experience is supported in the relationship between e-service quality and satisfaction, but not in the link between last-mile delivery and satisfaction. The findings underline that aligning digital service features—such as usability, responsiveness, and transaction security—with efficient physical delivery systems leads to improved customer perception, loyalty, and long-term business success. Implications are offered for both theoretical development and managerial practices in digital commerce.

Keywords: E-service quality, Last-mile delivery, Marketplace business performance.
JEL Codes: L81, M31, L97.

#603 System and Technology Integration for Tracking Shipments in Rail Transport on the New Silk Road – Research Results

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Abstract:
The objective of this paper is to analyze the possibilities of improving logistics processes in the import of goods from China to Poland within the New Silk Road by applying GS1 standards, with particular emphasis on radio frequency identification (RFID) technology in rail transport.

The research focuses on the integration of the identification of transport units, goods, and transactions, as well as on indicating the potential of these solutions for improving logistics processes efficiency in supply chains. The paper presents a functional and informational analysis of transport processes and customs procedures along the New Silk Road, considering the transport document flow (CIM, SMGS), identification standards (GTIN, SSCC, GSIN, GIAI), as well as IT systems used by the postal operator and its partners (EN, IPS, ZST, Microsoft Dynamics AX).

On this basis, a logical model for RFID implementation in accordance with GS1 standards was proposed, enabling automatic identification and real-time monitoring of transport units.

The results indicate that current rolling stock and container marking systems are limited in terms of automatic identification and require expert knowledge. The RFID application allows for the creation of a globally unique identification system based on GIAI, linked to the EVN number and container numbers.

The equipment requirements for a train consisting of a locomotive, 40 wagons, and 40 containers were estimated, indicating the need to install 81 passive tags and 48 trackside readers, which enables effective tracking of transport over approximately 9,500 km.

The proposed model integrates identification and monitoring processes, supports the digitization of customs procedures, increases the transparency of goods flows, and enhances the competitiveness of Polish logistics operators in global supply chains. This solution can be used by postal operators, rail carriers, shipment consolidators, customs services, and transport safety supervisory institutions.

The paper contributes to the literature by proposing an integrated, empirical model for the application of GS1 standards in international logistics, combining RFID, GIAI, and the EVN numbering system. This approach enables a quantitative assessment of the transport units flow, enhances system interoperability, and provides a starting point for ongoing research on the digitization and automation of rail transport in Poland in the context of the New Silk Road.

Keywords: Rail transport and shipment tracking, System and technology integration, New Silk Road logistics.
JEL Codes: L92, O33, R42.

#606 Coping with Digital Distractions: A PLS-SEM Analysis of Learning and Productivity among Higher Education Students

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Abstract:
Today, learners are more digitally connected than ever; however, this often comes at the cost of their focus, learning, and productivity. Digital tools have moved from being a handy tool to an integral part of student learning, influencing how they think, communicate, and learn. In higher education, advances in artificial intelligence, immersive tech, and widespread internet access have changed not just teaching methods but the very nature of learning environments.

In this setting, digital platforms seeking students' attention are as common as the search for knowledge itself. A major challenge is digital distraction, which is usually seen as the constant diversion of attention caused by smartphones, social media, and other online stimuli. This research centers on higher education students, often termed "digital natives" (Pew Foundation, 2014), as they belong to the generation most deeply engaged with technology.

Their consistent use of digital devices makes it ideal for studying how digitalization influences engagement, satisfaction, perceived learning, and productivity. The study follows a cross-sectional exploratory study design. Using a questionnaire consisting of 49 items, data were collected from 385 students from various disciplines through judgmental sampling to capture diverse digital engagement profiles.

The study investigates whether student engagement (SE) and overall satisfaction (GS) significantly boost perceived learning (PL), and whether perceived learning subsequently improves student productivity (PD). It also explores whether increased digital distractions (DD) weaken these positive effects within actual academic environments.

To analyze these complex relationships, the study employs Structural Equation Modelling (SEM), a method particularly suited for capturing both direct and indirect effects among latent constructs. Unlike standard regression, SEM allows testing engagement, satisfaction, learning, and productivity together while also assessing the moderating effect of digital distraction. The proposed model tracks how engagement and satisfaction promote learning, productivity, and the influence of distraction as a moderator.

This approach provides deeper insights into how digital technologies both support and limit student outcomes, ultimately clarifying the opportunities and challenges faced in higher education in the digital age. Adopting a balanced approach by leveraging technology in teaching methods will help to cope with this problem and enhance long-term learning.

Keywords: Digital distractions, Learning and productivity, Higher education students.
JEL Codes: I23, C38, M53.

#608 Business Process Management and Sustainable Development: A Case Study on Managerial Effectiveness

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Abstract:
The key elements of Business Process Management (BPM) – namely process: (1) modelling, (2) analysis, (3) design, (4) implementation, (5) monitoring, and (6) optimization – are examined in the case study presented in this publication, which offers a detailed analysis of management effectiveness across various organizational levels of the company under investigation.

The main objective of the study was to identify recommendations for aligning management processes with sustainability requirements by reducing negative environmental impacts, improving working conditions and increasing economic efficiency.

The research encompasses critical management aspects such as organizational structure, personnel policy, production processes, quality management, and environmental protection initiatives, all aligned with the Sustainable Development Goals (SDGs) selected by the company's Board, which are integrated into the enterprise's mission, vision, and values.

The analysis is based on data provided by the company for the years 2021-2023, facilitating a comprehensive understanding of the managerial situation and enabling the identification of areas requiring optimization.

The investigation was initiated due to the company's financial condition: loss of EUR 4 390 634.17, negative key financial indicators: ROA and ROE, 16% employment reduction. The implementation of advanced technologies is compliant with ISO 9001:2000, ISO 14001:2015, and BRC AA+ standards.

Additionally, investments in photovoltaic systems and the modernization of the refrigeration system were undertaken. Practical Implications: Data analysis identified several critical issues: (1) economic growth and decent work, (2) innovation and infrastructure, (3) responsible consumption and production, (4) partnerships.

Recommendations have been proposed regarding the continuation of risk management strategies and cost optimization to improve the company's financial health.

The article integrates the full BPM cycle with the SDG agenda in the specific context of the dairy industry, combining process, technological, and financial perspectives. It provides a practical model for translating BPM activities into measurable sustainable development results and a set of implementable organizational and technological solutions that can be replicated in similar enterprises.

Keywords: Business process management (BPM), Sustainable development, Managerial effectiveness.
JEL Codes: M11, O31, Q01.

#609 Could There Ever Be Progress with Financialized Economy and Nihilistic Societies? The Fruitful Perspective of the Cosmo-systemic Gnoseology

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Abstract:
The two major "monsters" of our era, financialization and nihilism, cannot be confronted without a political decision made by societies themselves; however, societies today remain trapped in "idioteia" (privatism; "ιδιωτεία" in Greek).

In this context, we introduce Cosmosystemic Gnoseolog, which, as a holistic social science and grounded in the historical experience of the Greek anthropocentric cosmosystem, provides the methodological framework for approaching representation and, ultimately, Democracy as synonymous with universal freedom. Within this framework, citizens themselves are enabled to decide upon their own lives and collective prospects.

The study employs holistic critical analysis, both philosophical and scientific, with freedom as its normative core. Gradually, through cosmosystemic gnoseology, we move from the "economic man" of financialization (material ontology) to the "social man" of democracy (social ontology).
The analysis does not reject the three research hypotheses founded: (a) the existence of the "concave curve" of civilization, which justifies the endogeneity of the nihilism, (b) the impossibility of genuine progress within financialized economies, and (c) the fruitful perspective of cosmosystemic gnoseology to advance the large-scale anthropocentric cosmosystem (such as today's nation-states, or even their unions) towards the universal freedom historically realized by the Hellenic cosmosystem until the 19th century AD.

The limitations pertain to the theoretical schools of thought selected as the basis of analysis. The discussion addresses both those currently holding political power and the "incomplete citizens". The epistemology of the mature anthropocentric cosmosystem liberates citizens from privatism, restores to them the political system, and enables them to decide for themselves on economic and political matters.

To the best of our knowledge, this is the first attempt to systematically analyze the issue interdisciplinary and based on universal freedom.

Keywords: Financialized economy, Societal nihilism, Cosmo-systemic gnoseology.
JEL Codes: E02, B41, Z10.

#610 Homo Oeconomicus and Human Existence: A Critical Review of Economic Reality

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Abstract:
We ask the research question: Does the attribution of «meaning» (cause and purpose) to our physical «reality» radically change our perception of it? By altering the field of analysis from the individual-centred behaviour of Homo Oeconomicus (HE), to the sociocentric -existence and coexistence- perception of the «Citizen», which can also reach «Person (Prosopon, “Πρόσωπον” in Greek) », the quality of life can be vertically enhanced.

It is employed a critical ontological framework alongside the “apophatic” epistemological principle, and deductive approach to analyze economic, philosophical literature.

The different perceptions of fundamental concepts, such as truth, society, freedom, or even democracy, make it impossible to reach a consensus even within academia.

Utilitarian efficiency principles (such as luminaries, majorities, irrefutable evidence, lucrative contracts, etc.), traditionally employed by economic science as criteria for distinguishing truth (alitheia, “α-λήθεια” in Greek) from falsehood or right from wrong, have been historically and economically demonstrated to be insufficient on their own for a comprehensive interpretation of the economic reality. Broader gnoseology including ontology (beyond materialism) seems to be required. We show that if the meaning of human existence and coexistence is exhausted in utilitarianism, then it’s logical to slide into an imaginary perception of reality.

Human relationships pre-exist and define the meaning of the political event (i.e., including the societal or economical), while controlling the instinctive needs of the “society of uses”.

The fundamental nature of the concept of politics (politiki, “πολιτική” in Greek), considered ontologically —specifically, the political event as the sphere of interactions— emphasises universal freedom (individual plus societal plus political)

and draws attention to the extent of conceptual alienation, present in contemporary discourse.

To our knowledge, this is the first time that Greek philosophical thought identifies the essential institutional changes required to elevate the «market model» to one that prioritises human (non-atomocentric) and sustainable quality.

Keywords: Homo Oeconomicus, Human existence and economics, Critical review of economic reality.
JEL Codes: B41, D03, Z10.

#611 Disparities Between Female and Male-Led Ventures: Examining the Entrepreneurial Process Through the Lens of Gender

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Abstract:
Entrepreneurship is inherently high risk and uncertain, with entrepreneurs and their start-ups vulnerable to the fluctuations of consumer demand, investor interest, and economic volatility.

Furthermore, as is the case with women across a variety of professions, gender biases hinder the success of female entrepreneurs globally, which led to the hypothesis that if the outcomes of valuation and funding processes are compared between male and female-led startups, female-led startups would often be valued lower and funded less, highlighting the gender bias in entrepreneurial finance.
This study aims to investigate the prevalence of gender bias and its negative impact on female founders of start-ups. Employing a qualitative research format, this research utilizes data collected from one-on-one interviews with over a dozen founders.

During these discussions, founders were asked the same set of questions representing three main categories: raising capital, interacting with investors, and accessing mentors, regardless of their gender. Despite the uniformity of the questions, the responses revealed a stark contrast between the experiences of male and female start-up founders.
This contrast demonstrates that female founders are at a disadvantage in the entrepreneurial world due to their gender. These findings underscore the need for an equitable entrepreneurial ecosystem.

Keywords: Gender and entrepreneurship, Female- and male-led ventures, Entrepreneurial process disparities.
JEL Codes: L26, J16, M13.

#612 AI Adoption and Firm Performance: Dynamic and Cross-Sectional Evidence on Firm ROA

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Abstract:
This study assesses the association between AI adoption and firm performance using a firm-level panel for 2015–2024 and a complementary 2024 cross-section. Performance is proxied by ROA. We estimate pooled OLS with HC1 standard errors, pooled OLS with year indicators to absorb macro shocks, and firm fixed effects (within) models with year indicators and standard errors clustered by firm.

The cross-section implements a stepwise OLS including AI exposure (adoption proxy), R&D intensity, intangible-asset intensity, leverage, and Tobin's Q. Three results obtain. First, in the 2024 cross-section, AI exposure is negatively associated with contemporaneous ROA, robust to adding intangibles, leverage, and Q—consistent with front-loaded adoption costs and delayed benefits.

Second, in the panel, the average pooled association of AI exposure with ROA is statistically indistinguishable from zero, and within-firm estimates are small and imprecise, indicating limited contemporaneous effects after removing time-invariant heterogeneity and common shocks.

Third, intangible intensity is positively related to ROA, whereas R&D intensity and leverage load negatively, and Tobin's Q loads positively; year effects are jointly significant.

Overall, the evidence supports a dynamic, complementarity-based view: AI adoption tends to depress short-run accounting profitability while building capabilities whose payoffs materialize where intangible complements are strong and over multi-period horizons.

Keywords: AI adoption, Firm performance, Return on assets (ROA) analysis.
JEL Codes: O33, M41, M21.

#613 A time varying nexus between exchange rate and oil price volatility: Evidence of VAR-DCC –GARCH approach

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Abstract:
Using daily data ranging from January 2020 to June 2023 we aim to investigate the interconnectedness between the crude oil price and the exchange rate price.

As first step we use the impulse response function to measure the interaction between both variables within a shock that occurred on one of the studied variables.

The findings justify that a shock occurring within the price of the crude oil has a direct effect on exchange rate variability. At the second step we use the VAR-DCC-GARCH to employ the time frequency correlation between both variables.

Keywords: Exchange rate volatility, Oil price fluctuations, VAR-DCC-GARCH modeling.
JEL Codes: C32, F31, Q41.

#614 Better Governance, Better Outcomes? Evidence From Romanian

State-Owned Energy Companies

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Abstract:
This paper investigates whether stronger corporate governance frameworks contribute to improved financial outcomes in Romanian state-owned enterprises (SOEs), focusing on the strategic energy sector. Given the dual role of SOEs in ensuring both profitability and public welfare, the study seeks to clarify how governance reforms impact performance.

A comparative case study approach is employed, examining Hidroelectrica, Romania's largest electricity producer, and Romgaz, the main natural gas producer, over 2018–2024. A Corporate Governance Index (CGI) was developed based on 12 weighted criteria grouped into board independence, oversight committees, transparency and reporting, and diversity and accountability.

Financial indicators—ROA, ROE, net profit margin, current ratio, and debt-to-equity ratio—were analyzed through descriptive statistics, correlation tests, and simple linear regressions to assess the relationship between governance practices and firm performance. The results reveal asymmetries between the two SOEs. For Hidroelectrica, governance improvements—particularly after its IPO—are positively associated with profitability trends and significantly correlated with lower debt levels (CGI–D/E, $p < 0.05$).

By contrast, Romgaz shows weaker associations, with governance reforms linked primarily to net profit margins but lacking significant impact on other financial indicators. These findings suggest that governance reforms translate into measurable outcomes mainly when supported by market discipline and external investor oversight.

The study highlights the role of corporate governance in strengthening financial discipline in SOEs, particularly in strategic sectors under high public scrutiny. For policymakers and managers, results suggest that aligning governance practices with stock market requirements, transparency standards, and sustainability reporting enhances financial resilience and long-term competitiveness.

The paper contributes by constructing a tailored CGI for Romanian SOEs, integrating both international guidelines and local governance codes. It provides one of the first longitudinal analyses of governance–performance linkages in Romanian state-owned energy firms, offering insights for scholars, practitioners, and decision-makers engaged in corporate governance reform and sustainable business transformation.

Keywords: Corporate governance, financial performance, public sector, energy sector.
JEL Codes: G34, L32, G38.

#615 Corporate Entrepreneurship and the Capital Origin of Large Enterprises in Poland

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Abstract:
This study investigates the link between corporate entrepreneurship and the capital structure of large enterprises in Poland.

It analyzes how various ownership forms (domestic, foreign, and mixed) affect the development of entrepreneurial orientation, leadership, resource management strategies, and entrepreneurial culture.

The research adopts a quantitative, longitudinal design. Data were gathered from 100 large Polish companies in two rounds (2019 and 2022) using CATI and CAWI methods. The dimensions of corporate entrepreneurship were validated through Exploratory Factor Analysis, and differences across ownership structures were tested with non-parametric methods (Kruskal–Wallis and Dunn's post hoc).

The results demonstrate notable differences in several dimensions of corporate entrepreneurship depending on capital ownership. Enterprises with foreign or mixed capital achieved significantly higher scores in entrepreneurial orientation, strategic resource management, and top management support compared to firms with purely domestic capital.

However, entrepreneurial leadership showed no significant variation, indicating a convergence of managerial approaches across ownership types. Practical Implications: The study offers practical recommendations for managers and policymakers.

Domestically owned firms could strengthen their competitiveness by adopting entrepreneurial practices often observed in foreign-invested companies, such as innovation support, strategic adaptability, and employee involvement programs.

Policymakers may also foster entrepreneurship by promoting knowledge exchange and international partnerships. Originality/Value: By highlighting capital structure as an

important yet insufficiently explored factor shaping entrepreneurial behavior, this study enriches the corporate entrepreneurship literature. It underlines the contribution of foreign investment to innovation capacity, organizational agility, and governance quality.

The findings provide a basis for further comparative analyses across countries and industries.

Keywords: Corporate entrepreneurship, large companies, entrepreneurial orientation, organizational strategy, leadership, organizational adaptability.
JEL Codes: L26, M14, O32, D22.

#616 Financial Crime, AI and You: Why Awareness Matters

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Abstract:
Artificial intelligence (AI) has become increasingly embedded in financial systems, offering advanced tools for detecting and preventing financial crimes. However, public understanding of AI's role in this domain remains underdeveloped, raising concerns about awareness, trust, and regulatory acceptance.

This study seeks to bridge this knowledge gap by evaluating the extent of public awareness regarding AI applications in financial crime prevention, analyzing the influence of information sources on public perceptions, and exploring the level of knowledge about relevant regulatory frameworks. To achieve this, a cross-sectional survey was conducted to capture users' attitudes toward the adoption of AI in combating financial crimes.

The findings highlight a significant disparity between the rapid integration of AI in financial crime detection and the public's limited awareness, coupled with persistent uncertainty toward regulatory oversight. This misalignment underscores the need for enhanced public education, improved transparency, and trust-building mechanisms in AI-driven financial systems. By contributing to Sustainable Development Goal 16 (SDG 16) on peace, justice, and strong institutions, the study emphasizes the critical role of public engagement and regulatory confidence in strengthening the effectiveness of financial crime prevention strategies.

The paper concludes by outlining directions for future research, including the consideration of cultural influences and the incorporation of larger, more diverse samples to deepen the understanding of public perceptions in this evolving field.

Keywords: Financial crime, Artificial intelligence, Awareness and prevention.

JEL Codes: K42, G18, O33.

#617 Quantification of Sustainable Urban Development: An Analysis of SDG 11 in the European Union Countries

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Abstract:
This article presents a synthetic indicator assessing the implementation of SDG 11 – Sustainable Cities and Communities – in EU member states. The proposed measure enables quantitative comparisons, identification of spatial disparities, and supports strategic planning in the context of the 2030 Agenda.

Hellwig's method was employed to conduct a multidimensional comparative analysis. The indicator was constructed based on diagnostic variables including the share of public transport in passenger traffic, housing deprivation, exposure to noise, road traffic fatalities, premature deaths caused by air pollution (PM2.5), and perceived exposure to crime or vandalism. The analysis covered the years 2013, 2020, and 2023, allowing the identification of long-term changes as well as the assessment of disruptions related to the COVID-19 pandemic.

The synthetic indicator made it possible to rank EU member states in terms of SDG 11 performance. In 2023, the highest scores were achieved by Ireland, Denmark, and Sweden, while the lowest were recorded in Bulgaria, Greece, Romania, Latvia, and Portugal. The results reflect the combined effect of the analysed variables and reveal significant differences in the level of sustainable urban development across Europe.

The indicator serves as a tool for policymakers, urban planners, and EU institutions, enabling the monitoring of progress towards the 2030 Agenda, supporting decisions on resource allocation, and identifying priority areas for intervention. It can also be used to evaluate the effectiveness of EU policies.

The article proposes an empirical, measurable, and integrated approach to assessing sustainable urban development. The synthetic indicator allows for international quantitative comparisons, deepens the analysis of spatial disparities, and enriches the methodology of urban policy research in the EU.

Keywords: Synthetic indicator, Hellwig's method, multivariate comparative analysis, SDG 11, sustainable cities, urban policy.
JEL Codes: C38, Q01, R11, R58, O52.

#618 Capabilities for Digital Development of Artisan-Led SMEs

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Abstract:
This study investigates the key capabilities that support the digital transformation of craft and artisan makers, focusing on small and medium-sized enterprises (SMEs) within the creative sector, seeking to understand factors impacting success.

Using a quantitative method based on survey data collected across five European countries, it analyzes the relationship between core and contextual capabilities as defined by the van Laar methodology, and the construction of business result.

The analysis identifies a significant and proportional growth in the importance of core and contextual capabilities across a range of sectors of the creative industry. The cluster analysis shows a clear connection between the use of digitalization capabilities and resulting business success.

The findings offer practical guidelines for creative sector SME entrepreneurs and decision-makers, enabling them to manage digital transformation more effectively by focusing on key capabilities to enhance business results.

This research addresses a significant gap by specifically focusing on digitalization capabilities in creative sector SMEs, offering a unique perspective on how these businesses can successfully adapt to the digital economy.

Keywords: Craft and artisan makers, creative sector, SME, digitalization, capabilities, ICT.
JEL Codes: M13, O32, L26.

#619 Blue Finance in the Western Balkans: Financial Mechanisms for Fostering Sustainable Economic Development

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Abstract:
The study aims to assess comparatively how financing mechanisms for the blue economy mobilize investments towards sustainable economic development in the Western Balkans.

The analysis is based on six case studies: Albania – Integrated Coastal Zone Management & Clean-Up Project; Bosnia and Herzegovina – Bijeljina Wastewater System; Kosovo – Water Security and Protection of the Iber–Lepenc Canal; North Macedonia – Skopje Wastewater Treatment Plant; Montenegro – Water Supply and Wastewater Infrastructure in the Boka Bay (Tivat and Kotor); Serbia – Novi Sad Wastewater Treatment Plant.

A qualitative approach is employed, utilizing a multi-case study, comparative thematic analysis, and qualitative meta-synthesis. Initially, each case is analyzed separately to identify the financing architecture (grants, development loans, local co-financing, and public-private partnerships), the regulatory framework, and institutional governance, as well as environmental and social outcomes.

Findings are then coded into common themes, compared across countries, and synthesized into a regional operational framework. Credibility is ensured through triangulation of sources, tracing the chain of evidence, and assessing the transferability of results.
The results show a predominance of combined financing mechanisms, which increase the bankability of water supply, sanitation, wastewater treatment, and coastal management projects. Financial sustainability depends on sustainable tariff reform, multi-year planning, and careful engineering preparation of projects, accompanied by transparent procurement.

Measurable environmental and social benefits are evidenced, including reduced pollution, increased water security, and improved urban services.

However, limited technical capacity, fragmented inter-stakeholder coordination, and implementation delays remain common obstacles. Untapped potential is identified for specific blue finance instruments, such as blue bonds, partial risk guarantees, and results-based financing.

It is recommended to create a regional portfolio of projects ready for financing, standardize impact measurement, reporting, and verification, establish a permanent mechanism for technical assistance and project preparation, and harmonize regulations for sustainable tariffs and fair contracting of public-private partnerships. Piloting blue bonds and revolving funds could accelerate the scaling-up process.

The study presents the first integrated comparative synthesis of the blue economy in the region, linking financial design with environmental and social performance, and proposes an operational framework applicable to policymakers, development finance institutions, and local governments.

Keywords: Blue finance, water management, coastal management, sustainable development, environmental and social impact.
JEL Codes: Q01, Q25, Q56, Q58, H54, G23, O13.

#620 The role of effectuation in the decision-making process of small businesses

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Abstract:
The aim is to examine the impact of the environment on the decision-making preferences of small businesses in Poland. In conditions of high market uncertainty, do companies prefer an effectuation or causal approach?

To answer the research question, a quantitative approach was used, based on the analysis of data collected through CATI surveys using a questionnaire.

The survey was conducted in February-March 2024 among 412 Polish entrepreneurs representing micro and small businesses operating in various sectors of the economy.

The analysis confirmed the existence of two main decision-making methods among micro and small entrepreneurs: causal and effectual. The results indicate that most of the surveyed enterprises use elements of both approaches to decision-making, although the causal approach dominates.

Our own research and the available literature indicate that the greatest operational and strategic effectiveness is achieved by entrepreneurs who skillfully combine both approaches, exploiting their synergies. Such an integrated approach not only allows for better adaptation to changing conditions.

Flexibility and adaptability – companies operating in highly volatile conditions should focus on an effective approach, building relationships with partners and limiting losses.

In a dynamic market environment, the ability to react and adapt quickly becomes a key success factor. Entrepreneurs should pay more attention to opportunities and available resources.

Keywords: Entrepreneurial decision-making, uncertainty of the environment, effectuation, causality.
JEL Codes: L26, M14, O32, D22.

#621 Application of Taxonomic Measures to Bankruptcy Prediction

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Abstract:

Research predicting corporate bankruptcy has been conducted for almost a century. A milestone was the work of Altman (1968), who was the first to apply multivariate linear discriminant analysis, combining an indicator-based assessment of companies with mathematical and statistical methods.

At present bankruptcy prediction is provided applying different mathematical methods such as linear discriminant analysis, logistic regression, classification trees, artificial neural networks, random forest, etc.

The pivotal question in bankruptcy prediction is definition of bankruptcy alone which is formulated differently in literature. Some authors define as the cessation of a company's operational activities others consider business entities that formally file for bankruptcy.

In our study we adopt the latter definition creating the sample of 136 Polish manufacturing non-public companies.

Half of them are bankrupts (i.e., filed for bankruptcy with the court in years 2019 – 2022), whereas the rest of them run their business and are companies with a similar amount of assets as bankrupts.

Data used in research has been acquired from the Emerging Markets Information Service EMIS, which contains financial reports information one year prior to the bankruptcy filing. The paper aims to propose new method of predicting bankruptcy.

In our research we construct composite measures of financial efficiency using taxonomic distance to the distinguished pattern. According to the value of these measures calculated for all analyzed companies they are classified to two classes. The results of our experiments show that level of recognition of both groups of companies is quite high, but it depends on the selected pattern.

Keywords: Bankruptcy prediction, Taxonomic measures, financial risk assessment.
JEL Codes: G33, C53, M41.

#622 Dimensions of management competences in the context of international project cooperation

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Abstract:
The aim of this paper is to identify and analyze the key dimensions of managerial competencies that determine the effective management of international partnership projects.

This paper presents the findings of an original questionnaire survey conducted among managers from 26 countries, responsible for international Erasmus+ partnership

projects. The study is further substantiated by insights derived from participant observation involving partnerships actively engaged in the implementation of such projects.

The results indicate that the competencies of managers and project team members are crucial in managing international partnership projects, particularly the ability to communicate and build relations, which significantly supports the project's success. Factors that facilitate and pose challenges to the success of partnership projects implemented in interorganizational settings were also identified.

The multi-threaded research, enriching the scientific layer with an applied dimension, provides a rich set of conclusions for business practice. The study results provide practical guidance for managers and organizations implementing international projects in an interorganizational environment.

The study fills a gap in the literature by providing a comprehensive picture of managerial competencies in the context of interorganizational project collaboration in an international dimension, considering both theoretical and practical aspects.

Keywords: Project management, managerial competencies, international projects, interorganizational management.
JEL Codes: M12, O19, F69.

#623 Patriotic entrepreneurial model – conceptual framework

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Abstract:
This article investigates the preconditions of a patriotic entrepreneurial model—an economic development strategy in which entrepreneurs prioritize local resources, promote local culture and traditions, and engage in social initiatives that strengthen their communities. Building on a literature review, we identify three gaps that justify the study:

Theoretical gaps for the patriotic entrepreneurial model: No clear definition: There is currently no universally accepted definition of the patriotic entrepreneurial model, which makes it difficult to study and understand. It is necessary to develop a coherent definition that considers both economic, social, and cultural aspects.

Methodological gaps for the patriotic entrepreneurial model: Lack of standardized measurements: There is a lack of standardized and tested measurement tools for the patriotic entrepreneurial model. It is necessary to develop appropriate measures and indicators that will make it possible to study the patriotic involvement of entrepreneurs and the impact of their activities on the local community.

Empirical gaps for the patriotic entrepreneurial model: Despite the growing interest in the patriotic model of entrepreneurship, there is a lack of empirical research on the subject. It is necessary to carry them out to study the determinants of this model and identify the key success factors.

The article addresses five research questions: (RQ1) What factors drive the emergence and development of the model? (RQ2) How do entrepreneurs utilize local resources? (RQ3) How does the promotion of local culture/traditions shape strategy? (RQ4) What social activities do firms undertake? (RQ5) In what ways does the model contribute to local development and civic strengthening?

The answers to the research questions are intended to form the basis for the verification of two hypotheses, which are formulated as follows: (H1) Entrepreneurs committed to the patriotic entrepreneurship model will prefer local resources as the basis of their business. (H2) A patriotic model of entrepreneurship will foster community integration and create bonds between entrepreneurs and the community.

Confirming or denying the hypotheses will therefore be tantamount to determining the existence or absence of an impact of the patriotic entrepreneurship model on the growth of national consciousness and the development of the local economy based on the use of local resources.
The study adopts a multiple case study approach with three local cases, combining qualitative and quantitative evidence (interviews, documents, basic metrics) and using mixed-method triangulation to validate findings (Creswell, 2009).

Keywords: Patriotic entrepreneurship, Entrepreneurial models, Conceptual framework.
JEL Codes: L26, M13, Z13.

#625 Entrepreneurial Orientation and Performance of Micro and Small Enterprises Operating in an Uncertain Environment

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Abstract:
Micro and small enterprises currently operate in an environment characterized by high volatility and unpredictability, which compels them to respond rapidly to emerging challenges. In this context, entrepreneurial orientation gains particular importance, understood as a set of attitudes, behaviors, and organizational processes that foster the identification and exploitation of new market opportunities.

The purpose of this study is to examine the relationship between the level of entrepreneurial orientation and the performance of micro and small enterprises.

Quantitative research was conducted in 2024 using the CATI technique among owners of micro and small enterprises in Poland. The final sample was representative, both in size and in random selection, allowing generalization of results to the broader population. A total of 412 complete questionnaires were accepted for analysis. At the data analysis stage, both descriptive and inferential statistical tools were applied, including structural indicators, descriptive statistics, statistical tests (e.g., chi-square, Kruskal–Wallis, and Mann–Whitney U), structural modeling (CFA), Spearman's rank correlation coefficient, and linear regression.

The analysis of the data collected in the research process confirmed that all areas of entrepreneurial orientation were rated highly by entrepreneurs, with the ability to identify market opportunities receiving the highest evaluations in both micro and small enterprises.

Statistically significant differences were also observed when considering the stage of enterprise development—firms in a phase of dynamic growth exhibited a significantly higher level of entrepreneurial orientation.

The interpretation of linear regression models indicated that higher levels of entrepreneurial orientation foster stronger firm performance, with enterprises in the dynamic growth phase achieving, on average, results nearly one point higher than those in the stabilization phase. Practical Implications: The study provides practical implications that enable the effective application of the entrepreneurial orientation concept in managing micro and small enterprises operating in a dynamically changing environment.

The conducted study provides valuable insights for both organizational theory and the practice of managing micro and small enterprises. Nevertheless, the research procedure presented in this paper has certain limitations. These include the national scope of the study and the chosen methodological approach—limited to quantitative research—which did not allow for a deeper exploration of the relationships between entrepreneurial orientation and the performance of micro and small enterprises.

Keywords: Entrepreneurial orientation, micro and small enterprises, firm performance, environmental uncertainty.
JEL Codes: O12, M21, L26, D21.

#701 Identification of CSR Predictors in the Context of Competitiveness in EU Countries – Empirical Analysis

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Abstract:
This study attempts to empirically identify predictors of corporate social responsibility (CSR) and assess their significance for the competitiveness of EU countries.

The aim of the study is to identify factors conducive to the implementation of CSR practices and to examine the spatial variation in CSR levels across EU countries in the context of regional competitiveness.

The article analyzes the spatial variation in the level of CSR advancement in EU countries. First, six CSR predictors were selected, and then calculations were made using basic descriptive statistics. The source data was taken from the Eurostat database.

Next, the Hellwig method was used as a tool for the synthetic assessment of multidimensional phenomena. In the analysis, using the chosen method, a synthetic measure was calculated for individual EU countries based on selected diagnostic variables related to CSR aspects. This allowed for the comparison and grouping of EU countries - the identification of leaders and countries with lower levels of CSR advancement.

Analysis of synthetic indicators allowed for the assessment and comparison of corporate social responsibility levels in EU countries.

The results showed significant differences between countries, with a clear advantage for Western European countries such as Germany, France, and the Netherlands, which achieved higher CSR scores. In contrast, Central and Eastern European countries, including Romania, Bulgaria, and Croatia, were at the bottom of the ranking, achieving very low CSR levels.

The research conducted made it possible to synthesize the complex aspects of CSR and identify EU countries that require strengthening and intensification of sustainable development activities, with particular emphasis on the need to implement CSR policies and practices.

The article contributes to the literature by empirically determining the level of CSR activities in individual EU countries. The identification and quantification of predictors enable a quantitative assessment of the level of CSR in EU countries and provides a starting point for further in-depth research.

Keywords: Corporate Social Responsibility (CSR), Competitiveness, EU countries, empirical analysis.
JEL Codes: M14, F15, L25.

#702 Analysis of the Relationship Between Selected Aspects of CSR Activities and the Competitiveness of Enterprises Using Statistical Tools

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Abstract:
The study attempts to identify and quantify the relationship between corporate social responsibility and the competitiveness of companies operating in the European Union. The aim of the article is to assess the relationship between selected CSR indicators and the competitive position of companies, considering environmental, social and economic aspects.

The article analyses CSR activities in the context of the competitiveness of enterprises in EU countries. First, a critical analysis of the literature on the subject was carried out, then four predictors of enterprise competitiveness were selected. The source data was taken from the Eurostat database.

Calculations were then made using basic descriptive statistics. Six CSR indicators were then arbitrarily defined. The research culminated in determining the direction and strength of the relationship between CSR indicators and the competitiveness of enterprises in the EU. The results of the Pearson correlation coefficients obtained were grouped into four categories.

The analysis of indicators allowed for the assessment and comparison of the competitiveness of enterprises in EU countries. Based on the results obtained, significant differences between countries were identified. The results confirm that the impact of CSR on competitiveness is varied and ambiguous, which indicates the complexity of the relationship between social responsibility and economic performance. It was shown that social responsibility can support competitiveness, but its impact depends on the type of indicator and the specifics of the analyzed area of the economy.

The research conducted has enabled a synthetic overview of the complex aspects of CSR in the context of the competitiveness of enterprises in EU countries. The results of the analysis can be a valuable source of knowledge for managers and decision-makers, enabling them to: make more informed strategic decisions regarding investments in CSR activities that have a real impact on the competitiveness of the enterprise; build a competitive advantage based on sustainable development and social responsibility, which is particularly important in the face of growing pressure from customers, investors and regulatory institutions.

The article contributes to the literature by empirically determining the strength of the relationship between CSR activities and the competitiveness of enterprises in EU

countries. The combination of CSR and corporate competitiveness issues in quantitative terms (statistical tools: correlations were used) is not typical, as most studies focus on a qualitative analysis of the impact of CSR.

The analysis of correlation coefficients allows for measurable confirmation and interpretation of the relationships studied, which may contribute to further research or implementation in the business environment.

Keywords: Corporate Social Responsibility (CSR) activities, Enterprise competitiveness, Statistical analysis of business performance.
JEL Codes: M14, C12, L25.

#703 Evaluation of the Effectiveness of the Information-Based Approach to Project Diagnostics

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Abstract:
The aim of the study is to evaluate the effectiveness of the information-based approach to project diagnostics, where the criterion is the minimum average project delay time due to errors in work. Previously, the effectiveness of this approach has only been assessed when the optimality criterion is the minimum maximum project delay time due to errors in work.

The effectiveness verification was conducted using the Monte Carlo method.

The information method is an effective approach to selecting control points in projects when the optimality criterion is the minimum average project completion time.

The practical significance lies in the fact that it provides another effective method for diagnosing projects.

The result is of particular interest to project managers.

Keywords: Project diagnostics, Information-based approach, Effectiveness evaluation.
JEL Codes: C81, M10, O32.

#705 Gravity Analysis of China’s Trade Relations with New Silk Road Countries

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Abstract:
Control of strategic flows is one of the most important geopolitical issues. The aspirations of the strongest powers and consequently most wars around the world, have always focused on taking control of the key strategic nodes to manage the flow of people, capital, raw materials, food and information.

An effective geopolitical strategy enables identification of these nodes and their control, even by military means, allowing a country to become independent of foreign influence and control subordinate entities. An empire that controls strategic flows can influence the fate of the entire world.

In this context, Chinese economic expansion is an increasingly common topic of public discourse. China is considered a potential new global hegemon, and the New Silk Road is seen as an effective platform for Chinese geopolitical strategy.

By intensifying trade, capital transfers and investment, among other things, the New Silk Road will fundamentally alter the current balance of power and restore China to its the pre-Opium Wars status.

The article presents a study of the trade relations between China and the countries participating in the Belt and Road Initiative (BRI) project. Gravity models were applied to analyze the trade relations between 60 countries from 2004 to 2018 and from 2004 to 2022.
This approach enabled us to identify the factors influencing trade exchange and provide an overview of a country's trade relations with China in comparison with others. Then, based on the fixed effects obtained from the models, the countries were categorized into groups describing the current state of their trade relations with China.

Extending the analysis to the years 2004–2022 enabled us to observe changes before and during the COVID-19 pandemic. This provides a good baseline for future comparisons of changes in China's trade relations with BRI countries after the outbreak of the war in Ukraine.

Keywords: China’s trade relations, New Silk Road countries, Gravity model analysis.
JEL Codes: F14, F15, C23.

#706 Mediation and Equity Law in crises and conflict resolution in the AI(sm) Era

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Abstract:
The paper presents the important role of Mediation, which allows conflict management and dispute resolution in legal cases and business, as well as in major political crises and peace-making processes. Further, Equity law is discussed as a crucial parameter for justice and societal progress.

A thorough review on mediation procedures as well as the application and implications of equity law on an international scale is analyzed. Technological advancements and geopolitical interests in the current times of globalization, digitalization, AI and ESG regulation, provide critical challenges for economic regulation and social cohesion.

The interplay between Mediation and Equity Law provides a valuable framework to deal with such challenges and move towards economic and social development, peace and sustainability.

Keywords: Justice, Business, Economics, Technology, Mediation, Equity, Artificial Intelligence, Dispute Resolution, Negotiation, ESG, Regulation
JEL Codes: K10, K20, K24, K33, K40.

#707 Tracking Innovation: How Technologies Related to AI Shape Financial Development

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Abstract:
Technologies related to artificial intelligence (AI) profoundly reshaping industries and redefining financial systems by enhancing operational efficiency, promoting financial inclusion, and creating new opportunities for sustainable economic growth.

This study investigates the impact of technologies related to AI, measured through the number of technologies related to AI patents, on financial development measured by financial development index and financial market index across 17 countries from 2002 to 2020. This study employs the Cross-Sectional Autoregressive Distributed Lag (CS-ARDL) model, which is well-suited for capturing both short-run fluctuations and long-run dynamics across multiple countries.

The empirical findings reveal that advancements in technologies related to AI have a significant role in driving financial development, with consistently positive and statistically significant for short and long-term effects. These results underscore the critical role of technological innovation as a driver of financial growth, market efficiency, and long-term stability.

By providing empirical evidence, this study offers valuable insights into how AI-related technologies act as catalysts for sustainable financial development, encouraging greater investment in technological advancements. The findings hold significant implications for policymakers, financial institutions, and technology developers, guiding them in formulating strategies that leverage AI for inclusive financial progress and economic resilience in an increasingly digitized global economy.

Keywords: CS-ARDL Approach, Financial Development, Panel data, Technologies related to AI.
JEL Codes: C23, G20.

#708 Do Recognition-Based Heuristics Matter in Entrepreneurial Strategic Decision-Making: Evidence from an Emerging Asian Economy

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Abstract:
When considering the influence of recognition-based heuristics on entrepreneurs' strategic decision-making (ESDM), especially in emerging markets, conventional theories and literature on entrepreneurs' management approach are notably sparse. This study investigates how recognition-based heuristics influence ESDM, particularly in an emerging Asian economy.

Data was collected through a survey completed by 237 owners and senior managers of small and medium-sized enterprises (SMEs) in the service, trade, and manufacturing sectors located in the Pakistani cities of Rawalpindi and Islamabad (twin cities). Data was collected using a convenient purposive sampling technique and snowball sampling method.

A structural equation modeling-artificial neural network (SEM-ANN) based approach was applied to evaluate the role of recognition-based heuristic predictors. The results were authenticated using regression analysis.

The results indicate that recognition-based heuristics—such as alphabetical order, name fluency, and name memorability—have a positive impact on ESDM. This means that recognition-based heuristics are useful tools for entrepreneurs in strategic

decision-making. Entrepreneurs who use recognition-based heuristics are more likely to make effective strategic decisions. The ANN results reveal that name memorability has the highest predictive power in positively influencing ESDM, suggesting that memorability plays a crucial role in facilitating more efficient and informed strategic choices.

This study pioneers research examining the connection between recognition-based heuristics—alphabetical order, name fluency and name memorability—and ESDM in an emerging Asian market. This study contributes to the entrepreneurial management field, particularly regarding the role of recognition-based heuristics in strategic decision-making.

This research area is still in its early stages, even in developed economies, and very little work has been conducted in emerging economies. This study makes a significant contribution to literature in this field. We employed a novel SEM-ANN based evaluation approach that combines the strengths of SEM and ANN.

This integration allows for a comprehensive analysis of both linear and nonlinear relationships between variables, providing a nuanced understanding of the complex dynamics involved in ESDM, and differentiating this study from other studies in the field.

Keywords: Alphabetical order, Name fluency, Name memorability, Entrepreneurs' strategic decision-making, and SEM-ANN based approach.
JEL Codes:

#709 Central Bank Digital Currency vs Cryptocurrencies

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Abstract:
Central Banks faced increasing competition from private operators who offer their digital alternative to physical cash.

The aim of this research is not to present the regulatory question whether a Central Bank should issue a kind of digital currency. The article contributes to the current research debate by explaining how a Central Bank could do this by proposing a token-based system, without distributing ledger technology, to show that the electronic coins issued in the past, based only on software, can be improved to protect privacy in transactions, meet regulatory requirements effectively and offer a level of protection resistant to quantum computers against systemic privacy risk.

Neither monetary policy nor the stability of the financial system would really be affected by this system since Central Bank Digital Currency (CBDC) would replicate physical cash instead of bank deposits.

A wholesale CBDC would be less destabilizing to the current system given that banks and financial market operators have already access to the central bank's digital currency in the form of accounts at this institution, which they use to settle interbank payments.

A retail CBDC, which would be a new form of central bank money available to the public, could be more destabilizing to the current system depending on how it is designed. The more CBDC competes with commercial bank deposits, the greater the threat to bank financing, with potentially negative effects on bank credit and economic activity.

Making counterparty risk-free central bank electronic money available to all could improve the stability and resilience of the retail payments system. It could also provide a neutral payment infrastructure to encourage competition, efficiency, and innovation.

Overall, the costs and benefits of a retail CBDC are likely to differ from one country to another unless economic unions like EE decide to establish a unique system for their member states.
What will be the reaction of cryptos' operators in such a development? Will be the CBDC an effective competitive crypto to Bitcoin and other cryptocurrencies?

Keywords: Central Bank Digital Currency, cryptos, monetary policy, bank deposits.
JEL Codes: E42, G23, O33.

#710 The potential of neurofeedback as a diagnostic tool in the academic environment

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Abstract:
The study analyzes the diagnostic and regulatory potential of EEG-based neurofeedback in identifying cognitive and emotional patterns among individuals functioning in the academic environment. EEG activity was recorded from frontal and central cortical areas (Fz, Cz, C3, C4) under open- and closed-eye conditions.

The aim of the study was to determine to what extent the analysis of EEG rhythms can serve as a basis for the early diagnosis of cognitive overload, stress, and concentration difficulties among students and academic staff. Additionally, the study aimed to

evaluate the potential of neurofeedback as a tool supporting self-regulation of attention processes and emotional tension.

Spectral analysis of brain rhythms revealed an imbalance between slow (delta, theta) and fast (beta, beta2) waves, with notably elevated beta2 amplitudes and increased theta/SMR and theta/beta ratios. These results indicate increased physiological and cognitive tension, difficulties in maintaining concentration, and symptoms of mental fatigue typical of cognitive overload.

Furthermore, a reduced alpha rhythm was observed, suggesting limited relaxation capacity and weakened recovery mechanisms. In contrast, SMR values remained at the upper limit of the normal range, indicating preserved potential for focused attention once excessive tension is reduced. Such EEG profiles are frequently observed among students and academic professionals exposed to chronic stress and multitasking.

Based on neurophysiological indicators, a neurofeedback training program was developed to normalize rhythm proportions by increasing alpha and SMR amplitudes while reducing excessive beta2 activity.

The findings confirm that neurofeedback and EEG assessment can serve as valuable diagnostic and preventive tools in the academic environment, enabling early detection of stress regulation disorders and supporting targeted interventions to enhance cognitive performance and psychological well-being.

Keywords: Neurofeedback, EEG, rhythm, academic stress, attention, cognitive overload, diagnostic tools in education, academic performance assessment.
JEL Codes: I21, I20, C91.

#711 Improving Sustainability through the Demand Side Energy Saving in Construction Materials

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Abstract:
Sustainability quality assurance of life on Earth depends largely on the reduction of emission of GHG (greenhouse gases). GHG, generally, is generated because of human activities associated with Energy production and consumption.

Energy consumed during the construction of buildings and structures, including the embodied energy of concrete and other construction materials, represents a considerable percentage that may reach 40% of the total energy consumed during the whole service life of the structure.

Reducing energy consumed in construction practices along with reducing the embodied energy of concrete and building materials, therefore, are of major importance.

Reducing concrete’s embodied energy represents one of the major green features of buildings and an important tool to improve sustainability, save resources for coming generations and reduce greenhouse gas emissions.

In this paper, different methods to reduce concrete’s embodied energy are discussed and their effect on demand side energy are assessed. Using local materials, pozzolanic blended cements, fillers, along with specifying 56 days strength in design are discussed and assessed.

Proper mixed design, quality control and proper architectural design also affect and reduce embodied energy. Improving durability, regular maintenance and scheduled repair are essential to increase the expected service life of buildings and hence reduce overall resources consumption and reduce energy. These effects are discussed and quantified.

Construction practices also consume considerable amounts of energy. The effects of transporting, conveying, pouring, finishing and curing concrete on energy consumption are also discussed.

Keywords: Sustainability in construction, Energy-saving materials, Demand-side energy management.
JEL Codes: Q42, Q55, L74.

#712 Methodological Improvement of the Accounting and Reporting of Assets and Liabilities in Commercial Organizations

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Abstract:
The paper examines the methodological foundations and practical directions for improving the accounting and reporting of assets and liabilities in commercial organizations.

The study is based on the principle of Internacional Financial Reporting Standards (IFRS) and considers the fair value concept as a key mechanism for enhancing the reliability and transparency of financial information. The article analyses theoretical aspects of recognizing and evaluating liabilities, explores the evolution of accounting methods, and proposes methodological approaches to refine the reflection of assets and liabilities in financial statements.

The findings emphasize the necessity of integrating fair value measurement, improving professional judgement in accounting, and strengthening the link between accounting policies and economic analysis.

Keywords: Assets, liabilities, fair value, accounting methodology, financial reporting, IFRS.
JEL Codes: M41, M40, G32, L21.

#713 The Influence of Digital Transformation in Banking on Consumer Behavior

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Abstract:
In the context of profound transformations in banking operations and the redefinition of strategic and operational models driven by digitalization and globalization, the way consumers interact with banks is also undergoing significant change.

These shifts are reflected in evolving customer expectations and requirements, which have a direct impact on consumer behaviour and the financial decision-making process.

Consumer behaviour reveals a growing demand for digital banking experiences that enable both access to detailed information regarding financial institutions' offerings and interaction with real people or virtual assistants. This dual capability is essential for delivering an efficient and rapid experience in managing personal finances.

Finance has become largely digital, and digitalization has deepened the interconnections and relationships between financial institutions and their clients. This transformation involves the use of emerging technologies that enable a personalized approach to consumer needs, while ensuring transparency, security, and efficiency in financial transactions.

Trust in adopting digital financial and banking services is closely linked to consumers' concerns regarding security, particularly cybersecurity, and directly influences their behaviour and preferences.

The research involves identifying the actual situation regarding consumer behaviour patterns in the context of the digitization of financial and banking services. The conclusions highlight the essential role of consumer-centric digital innovations in increasing customer satisfaction, loyalty, and financial literacy, while also addressing issues of data privacy, digital inclusion, and regulatory compliance.

The study proposes practical solutions for financial institutions seeking to optimize their digital strategies in a rapidly changing technological environment to meet customer demands and needs.

Keywords: Consumer Behavior, Digital Banking, Financial-Banking Services, Financial Inclusion, Banking Digitalization, Digital Transformation, AI in banking.
JEL Codes : G21, D12, O33, L86.

#714 Transitioning from Buycotting and Boycotting to Bettercotting

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Abstract:
Consumer activism has historically relied on an either-or mindset espousing the usual dualistic strategies of either (i) boycotting—withdrawing economic support to punish unethical practices—or (ii) buycotting—rewarding ethical firms through conscious purchasing. While both approaches have influenced corporate behavior, the trade-off often results in more short-term victories, rather than systemic change.

This paper introduces and develops the concept of bettercotting, a proactive and collaborative form of consumer activism that emphasizes direct dialogue, co-created solutions, and long-term accountability. Through case studies in the apparel, fast-food, and technology industries, we demonstrate how bettercotting seemingly attains more viable pathways to structural reform where traditional activism falls short.

Bettercotting encompasses improvements in labor rights monitoring, commitments to reducing single-use plastics, and greater corporate accountability through stakeholder collaboration.

However, the paper also highlights the challenges of implementing bettercotting, including corporate resistance, consumer fatigue, and the complexity of measuring long-term impact. Drawing on recent scholarship in corporate social responsibility (CSR), stakeholder engagement, and digital activism, we argue that bettercotting represents a paradigm shift in consumer–corporate relations.

This aligns with CSR's evolutionary journey towards Environmental Social Governance (ESG), which provides a set of definitive standards to gauge an organization's multidimensional impact on the environment and society at large, in pursuit of transparency and accountability.

By transcending beyond reactive punishment and individualistic reward, bettercotting herald's consumer activism as a shared responsibility, quintessential for co-creating more ethical and sustainable markets.

Keywords: Consumer activism, boycotting, boycotting, bettercotting, corporate social responsibility (CSR), environmental social governance (ESG), stakeholder engagement, sustainability, social movements, digital activism, systemic change.
JEL Codes: D12, M31, Q01.

#715 Transparency and communication in management - how organizations build stakeholder trust

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Abstract:
Stakeholder trust is a key resource determining the legitimacy and ability of organizations to implement strategies, particularly in state-owned enterprises. The aim of this paper is to identify transparency and communication mechanisms that influence stakeholder trust and to develop a practical roadmap supporting the implementation of transparency principles.

The study combines a content analysis of integrated reports from five Polish companies (Grupa Azoty, ORLEN, KGHM, Synthos, Qemetica) with OECD, IIA, and IIRC guidelines. A qualitative benchmarking approach was used.

Findings indicate that state-owned companies have achieved a high level of formal transparency, but there remains a gap between declarative communication and genuine stakeholder dialogue. The proposed roadmap may serve as an operational tool for managers and internal auditors to strengthen stakeholder trust.

Keywords: Transparency, communication, stakeholder trust, governance, integrated reporting, audit, ESG.
JEL Codes: M14, M10, D73.

#716 Public Policy as a Driver of Corporate Sustainability: Evidence from Greek Firms in the Transitional European ESG Landscape

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Abstract:
This paper examines the role of public policy as a driver of corporate sustainability within the evolving European ESG landscape, using Greece as a representative Southern European case. Focusing on the transitional period 2019–2021—between the implementation of the Non-Financial Reporting Directive (NFRD) and the forthcoming Corporate Sustainability Reporting Directive (CSRD)—the study investigates how regulatory expectations and policy initiatives shape governance structures, CSR strategies, and ESG performance.

Drawing on data from the 100 largest Greek firms, the analysis integrates qualitative policy review with quantitative evaluation of ESG performance. A custom sustainability assessment index is constructed through discriminant analysis, and cluster analysis identifies distinct ESG maturity profiles across firms.

The findings reveal that companies with even partial public ownership or participation adopt more structured and comprehensive CSR strategies and higher levels of sustainability maturity, reflecting the influence of regulatory alignment, political oversight, and early adaptation to emerging EU sustainability standards.

The results highlight the dual role of public policy as both regulator and participant, demonstrating how institutional dynamics drive convergence, transparency, and accountability in corporate sustainability practices across sectors during the NFRD-to-CSRD transition.

Keywords: Public Policy, Corporate Governance, CSR, ESG, Sustainability, Discriminant Analysis, Cluster Analysis, Greece, NFRD, CSRD, European Green Deal.
JEL Codes: Q56, M14, F59.

#717 Mapping Customer Journeys to Adaptive Sales Approaches (Linking Sales DNA to Customer Journey)

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Abstract:
Selling has shifted from transactional persuasion to helical, value-driven partnerships. This paper introduces the Sales DNA Framework, linking the non-linear customer journey—from awareness to reinvention—with evolving sales roles—from telling to framing.

The model illustrates how salespeople must adapt continuously, progressing from educators and consultants to integrators, value anchors, strategists, and ecosystem

architects. The aims are to address customer needs for insight, implementation, measurable outcomes, innovation, and market leadership. Selling is reframed as an iterative cycle in which value claiming validates prior collaboration and fuels future co-creation.

The framework advances research on sales and service-dominant logic by highlighting the adaptive, polymorphic roles of the salesperson. Also, managers are given guidance for aligning capabilities, metrics, and incentives with the customer lifecycle in a digital environment.

Keywords: Customer Journey, Value Co-creation, Sales Roles, Adaptive Selling, Helical Sales.
JEL Codes: M31, M21, D91.

#720 Wasta and Strategic Adaptiveness: Cultural Capital, Informal Institutions, and Firm Strategy in Kuwait

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Abstract:
This study examines how wasta - a culturally embedded form of influence and mediation in the Gulf—is leveraged as cultural and social capital to shape strategic adaptiveness of firms in Kuwait. Moving beyond its conventional framing as nepotism, we reconceptualize wasta as a normatively legitimated informal institution that links firms to political, regulatory, and social actors (Weir et al., 2019; 2024, also Farah 2019).

Drawing on social capital, institutional, and legitimacy theories, we embed wasta within Kuwait's diwaniya system - traditional forums which serve as informal arenas for political dialogue and business networking.

Employing survey-based design with Diwaniya participants, we test how firms embedded in these networks enhance their ability to sense environmental changes, seize emerging opportunities, and reconfigure internal resources (i.e. dynamic capabilities).

We hypothesize that wasta positively affects firms' strategic adaptiveness via privileged access to information, insider legitimacy, and resource leverage - but that overreliance yields diminishing returns and strategic rigidity (drawing on literature on the non-linear limits of relational capital, e.g. Hodgson, 2025).

We further examine gendered access to wasta, predicting that male-led firms derive disproportionate benefit from diwaniya connections due to structural exclusion of

women from these informal spaces (as observed in Gulf studies of gender and networks; cf. AlShammari et al., 2025).

By integrating Gulf-specific cultural dynamics into mainstream theories of dynamic capabilities and informal institutions, this research contributes to international business scholarship on nonmarket strategies in emerging economies (Alenezi et al., 2024; cf. Al-Twal, et al., 2024).

The findings deepen understanding of how culturally legitimized political ties both enable and constrain strategic responsiveness, positioning Kuwait as a revealing microcosm of the tensions between traditional social capital and modernization pressure in the Gulf.

Keywords: Wasta, Strategic adaptiveness, Informal institutions, social capital, Diwaniya networks, Kuwait, GCC, Emerging markets.
JEL Codes: L26, Z13, M10.

#722 A Crisis, A Patchwork: The Fragmented Evolution of EU Economic Governance

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Abstract:
Over the past fifteen years, the European Union has had to face some of the most severe international crises ever experienced from an economic standpoint. The subprime mortgage crisis, which originated in the United States and rapidly spread throughout the world in 2007–2008; the European banking crisis; the sovereign debt crisis; and, finally, the COVID-19 crisis—not to mention the political crises triggered in particular by the armed conflicts between Israel and Palestine and Russia and Ukraine, as well as the new international role played by the United States, which seems to be breaking old patterns and alliances.

In the face of all this, the architecture of the European Union's economic governance has proved highly inadequate—an architecture characterized, on the one hand, by the centralization of monetary policy under a very peculiar central bank, perhaps the strangest in the world: one deprived of the function of lender of last resort, with the sole objective of maintaining price stability, and more independent from political power than even the Bundesbank once was; and, on the other hand, by the lack of centralization in fiscal policy.

Over the years, under the pressure of successive economic and financial emergencies, temporary and partial solutions have been stitched *ex post* onto the peculiar institutional fabric of the European Union to address specific problems—whereas an entirely new garment should have been designed and crafted instead.

Yet the overall outcome does not amount to a coherent framework: certainly not one moving toward a genuine European state, nor one capable of effectively confronting the new international crises of political and economic nature.

Keywords: European Union, European Central Bank, Monetary Policy, Lender of Last Resort, Fiscal Policy.
JEL Codes: E58, E61, E62, F55, H12.

#728 Smart Contracts in Decentralised Finance: Operational, Security, and Governance Challenges

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Abstract:
This study systematically examines the role of smart contracts in shaping automated financial services within the decentralized finance (DeFi) ecosystem. Smart contracts, defined as self-executing agreements operating on blockchain platforms without third-party intermediaries, have transitioned from a theoretical concept introduced in the late 1990s to a core enabler of DeFi applications following the emergence of Ethereum.

The research adopts a qualitative approach, drawing on academic literature and industry reports to analyze leading DeFi platforms, including MakerDAO, Aave, Compound, and Uniswap. Through thematic analysis, the study explores both operational mechanisms and regulatory implications of smart contracts.

Findings demonstrate that smart contracts enhance automation, efficiency, and disintermediation, thereby aligning with the principles of Agency Theory and Transaction Cost Theory.

However, persistent challenges are identified, particularly cybersecurity vulnerabilities in Oracle networks, limitations in governance inclusivity, and the absence of standardized auditing protocols.

The study underscores the necessity of developing resilient Oracle designs, comprehensive auditing frameworks, and more inclusive governance structures to ensure the security, scalability, and long-term sustainability of DeFi ecosystems. By integrating insights into vulnerabilities, Oracle reliability, and governance mechanisms, this paper contributes to advancing academic and practical understanding of smart contracts as a transformative force in financial innovation.

Keywords: Smart Contracts, Decentralized Finance, Operational, Governance Challenges.
JEL Codes: G23, K22, O33.

#729 From Risk to Resilience: Cybersecurity and Fraud Detection in FinTech Ecosystems

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Abstract:
This paper examines how FinTech firms in Kuwait and the wider Middle East are confronting escalating cybersecurity threats and fraud risks within an increasingly digital financial ecosystem.

Drawing on expert interviews from Kuwait's FinTech sector alongside secondary data from international case studies, threat intelligence reports, and regulatory publications, the study employs thematic analysis to identify recurring patterns and validate findings.

Results indicate that while artificial intelligence (AI) and machine learning (ML) are widely applied for fraud detection, challenges such as high false-positive rates, opaque decision-making, and susceptibility to adversarial attacks limit their effectiveness.

Insider threats emerged as a particularly pressing concern in the regional context yet remain underexplored in global literature. Emerging solutions, including behavioral biometrics and federated learning, demonstrate promise for enhancing real-time authentication, though adoption is uneven.

Moreover, fragmented regulatory frameworks—both locally and cross-border—complicate compliance and undermine trust. The study contributes theoretically by extending cybersecurity discourse into a Middle Eastern context and practically by offering region-specific insights and recommendations for FinTech firms and regulators.

By situating findings within Kuwait's FinTech ecosystem, the paper underscores distinctive threat patterns, highlights overlooked vulnerabilities and stresses the importance of regulatory harmonization in building digital trust.

Keywords: FinTech, cybersecurity, fraud detection, AI, regulatory compliance, insider threats, Kuwait, Middle East, FinTech governance.

JEL Codes: G23, K42, O33.

#730 The Impact of Oil Price Asymmetry and Economic Policy Uncertainty on Stock Markets: A Cross-Country Analysis

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Abstract:
This study employs asymmetric quantile regression to investigate the asymmetric impact of WTI crude oil prices and economic policy uncertainty (EPU) on stock market returns from May 2014 to December 2024 in oil-importing (China, India, Germany, Italy, Japan, USA, and South Korea) and oil-exporting (Saudi Arabia, Russia, Iraq, Canada, and the United Arab Emirates) countries.

The findings reveal that an increase in oil prices significantly impacts the returns of all countries. For oil-importing countries, an increase in oil prices consistently exhibits a positive impact, with insignificant effects in lower and medium quantiles and significant effects in higher quantiles. Conversely, a decrease in oil prices generally decreases stock market returns across all quantiles.

This study offers valuable insights for investors to manage risks and improve the predictability of oil price fluctuations. It also provides strategies and policy implications for capitalists and decision-makers.

By addressing contemporary issues and using up-to-date data, the study supports financial institutions and portfolio managers in formulating effective strategies.

Keywords: WTI crude oil prices, Economic Policy Uncertainty (EPU), Stock Market Returns.
JEL Codes: G12, Q41, E44.

#731 The Impact of Macroeconomic and Financial Variables on Employment in Greece: Key Findings and Empirical Insights

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Abstract:
This article critically evaluates yet thoroughly analyses the employability in Greece, considering the 21st century's debt crisis as a milestone. The research that has been conducted is committed to delivering a holistic time-oriented approach 1997-2024, in order to take into consideration not only the post-crisis effect on employability but the years before and during as well. which includes the country's debt crisis.

The article consists of two main pillars and contributes to the desired holistic point of view. The first part of the research relates the employment to other Macroeconomic variables, such as the Gross Domestic Product (GDP) and the second with the relationship between employment and Greek stock exchange market indicator (ATHEX). These regressions are managed using complex econometric and statistical models; Dynamic Ordinary Least Squares (DOLS) and ARMA–Maximum Likelihood model.

Our analysis revealed that the crisis impacted the employment in Greece, both GDP and the ATHEX can contribute to predicting future impacts on it.

The article aims to provide an original approach on how financial crisis affected employability in Greece, whilst it concludes not only presenting the findings of the research but providing related content for further academic research.

Keywords: Public policy, Econometric analysis, Mathematical and Quantitative methods.
JEL Codes: E24, E32, F41.

#732 A comparable based valuation method

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Abstract:
This paper examines the valuation of companies in the context of the Athens Stock Exchange (ATHEX) during the period 2005–2023. Primary data from ATHEX are utilized to produce descriptive statistics regarding the evolution of the number of listed companies, the "balance" of listings–delisting, the path of stock market capitalization, and the way in which crises have affected the Greek market.

The main part of the study is valuation methods and their connection with investment decisions. A comprehensive range of approaches is presented: Discounted Cash Flow (DCF) —with FCFF/FCFE, APV, DDM—Relative Valuation through multiples (e.g. P/E, EV/EBITDA, P/BV), Residual Income, EVA/MVA, with theoretical documentation.

In addition, a quantitative/statistical analysis is carried out to investigate which factors influence the capitalizations of companies, using a sample of three companies as a case study. In the same context, it is evaluated which valuation method performs best in relation to the observed capitalizations of the specific companies, under different economic conditions.

The work is concluded with a presentation of the results and the highlighting of conclusions on the usefulness and limits of each method in the Greek context, offering practical notes for investors and decision-makers.

Keywords: Valuation, Financial Ratios, Residual Income, EVA/MVA, ATHEX, Capitalization, Listed Companies, Comparable-based valuation, Firm or asset valuation, financial analysis methods.
JEL Codes: G12, G32, M41.

#733 Abnormal Returns Under a Risk Averse Strategy: Evidence from the Crypto Currency Market

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Abstract:
This paper is devoted to the practical implementation of theoretical implementations of theoretical findings. In this paper it is suggested that investment strategies that combine asset pricing models and coherent risk measures may result in risk that converges to minus infinity and returns that converge to plus infinity.

While additional findings occurred regarding the efficient market hypothesis, yet investor-wise theoretical results clearly suggest that an investor can exhibit returns that outperform the market index by managing a portfolio less volatile than the market. Our aim in this effort is to examine to which extent the theoretical findings are confirmed with real data.

To that end, we utilize data from Crypto currency market, which can be characterized as an emerging market, with a rather volatile profile.

Keywords: Market Efficiency, Predictive Ability, Coherent Risk Measures, Spectral Risk Measures, Risk Premium, Abnormal returns, Risk-averse investment strategies, Cryptocurrency market.
JEL Codes: G11, G12, G14, G23.

#734 Geopolitical dynamics in the Russian Ruble

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Abstract:
In this paper, we analyze the complexity structure of the Russian Ruble (RUB) exchange rate vs the US dollar using the topological approach and the derived diagnostics.

This analysis offers insights regarding the effects of geopolitical events and risks into the underlying nonlinear dynamic structure of the ruble.

Keywords: Geopolitical dynamics, Russian ruble, Exchange rate fluctuations.
JEL Codes: F31, F51, E44.

#735 From Tests to Tasks: Building Data Literacy through Experiential Statistics in Business Schools

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Abstract:

Education plays a vital role in fostering a culture of innovation and sustainability by equipping students with transferable skills that endure beyond the classroom. Yet in many business schools, statistics courses continue to rely on lectures, quizzes, and standardized tests, which limit engagement and provide little opportunity to apply concepts in real-world contexts. This paper presents an innovative alternative: replacing routine assessments with group workshops, mock data collection, and business-oriented projects.

In this model, students actively design surveys, collect and analyze data, and present findings—learning statistics by doing rather than memorizing. Classroom implementation revealed that students, particularly those in English as a Second Language (ESL) settings, achieved faster comprehension, stronger retention, and greater engagement. Crucially, they also developed sustainable skills in teamwork,

problem-solving, and data literacy—competencies central to business competitiveness in the digital economy.

By situating this pedagogy within ICABE's themes, the paper demonstrates how Higher Education Institutions (HEIs) can adapt curricula to embrace innovative teaching practices that cultivate lifelong learning and sustainable skill development, preparing graduates to thrive in global, data-driven environments.

Keywords: Experiential Learning, Business Statistics, ESL Students, Innovative Pedagogy, Sustainable Education.
JEL Codes: A22, A23, I21.