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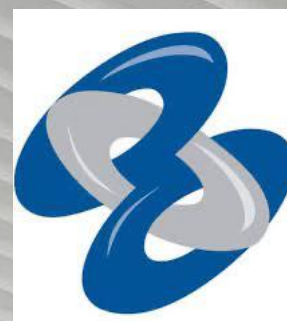
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Economic and Social Survival in Global Changes

Book of Abstracts

Editors:

Nicholas Recker, Jelena Pavicic Vukicevic, Davor Perkovic

Zagreb, 16-17 February, 2024

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CONTENTS

| | |
|-------------------------------------------------------------------------------------------------------------------------------------|----------|
| MONETARY AGGREGATES IN THE EUROSISTEM – ARE THEY STILL IMPORTANT AND WHAT DO THEY SHOW? | 1 |
| Ante Samodol | |
| THE AGE OF POST-GLOBALISM: RISKS AND OPPORTUNITIES..... | 1 |
| Ivor Altaras Penda | |
| TECHNOLOGICAL AND GEOPOLITICAL ASPECTS OF ARTIFICIAL INTELLIGENCE..... | 2 |
| Krunoslav Antolis | |
| DIGITAL HEALTH TECHNOLOGIES – A POTENTIAL FOR IMPROVING HEALTHCARE AND A CHALLENGE FOR PATIENT SAFETY AND EQUAL ACCESS | 3 |
| Antonija Balenovic, Maroje Visic, Jasna Mesaric | |
| EUROPEAN INTEGRATION AS A POSSIBLE SOLUTION FOR THE WESTERN BALKANS PROBLEMS | 4 |
| Anita Britvec, Robert Bosnjak | |
| APPLICATIONS OF THE BALANCED SCORECARD CONCEPT IN RELATION TO SOCIAL DEVELOPMENT | 4 |
| Marin Georgiev, Denis Solovev | |
| EVOLUTION OF THE CONCEPT OF THE BALANCED SCORECARD | 5 |
| Marin Georgiev, Denis Solovev | |
| FUTURE TRENDS IN THE CAMPING INDUSTRY: PERCEPTIONS OF CAMPING MANAGERS..... | 5 |
| Josipa Cvelic Bonifacic | |
| TRANSFORMATION OF THE MENTAL HEALTH SERVICES IN CROATIA - A CASE OF THE UNIVERSITY PSYCHIATRIC HOSPITAL VRAPČE..... | 6 |
| Marko Curkovic, Petrana Brecic, Jasna Mesaric, Domagoj Vidovic | |
| ANALYSIS OF THE EFFECTS OF INTEGRATED ARTIFICIAL INTELLIGENCE IN SMALL AND MEDIUM-SIZED CROATIAN ENTERPRISES..... | 7 |
| Davor Perkovic, Laura Mamic | |
| THE USE OF CYBER SECURITY IN COMBATING MARITIME PIRACY AND TERRORISM | 7 |
| Irina Pecsvary | |
| CROATIAN CONSUMER ELECTRONIC MARKET DURING COVID 19 CRISIS | 8 |
| Ante Vuletic, Toma Pasaric, Pavle Kalinic | |

THE COST-EFFECTIVENESS OF SCREENING A GENERAL POPULATION FOR CARDIOVASCULAR RISK WITH HIGH-SENSITIVITY TROPONIN-I..... 9

Goran Krstacic, Tin Krstacic, Antonija Krstacic

CORPORATE ENTREPRENEURSHIP AS A KEY FACTOR IN PUBLIC SECTOR REFORM IN SERBIA..... 10

Ljiljana Kontic

INSTITUTIONAL FOUNDATIONS FOR FINANCIAL REGULATION OF SOCIAL INNOVATIONS 10

Olga Andreeva, Venelin Terziev

IMPACT OF ARTIFICIAL INTELLIGENCE ON DIGITAL TRANSFORMATION AND ECONOMIC CHALLENGES OF SOCIETY IN GLOBAL ENVIRONMENT: ANALYSIS AND PERSPECTIVES FOR CROATIA UNTIL 2030..... 11

Zvonko Merkas, Ivana Gecek Tuden

MAIDAN AND NOVOROSSIYA – COVERT ACTIONS OR SOCIAL MOVEMENTS? 12

Mirko Bilandzic, Ivan Burazin

HEALTH ORGANISATION STAFF AWARENESS OF THE RISK MANAGEMENT AGENDA - A KEY PREREQUISITE FOR TACKLING COVID-19..... 13

Nikolay Ninov, Lyuba Miteva

GEOPOLITICS OF ENERGY: WHEN ENERGY CYCLES CHANGING COINCIDE WITH POWER CYCLES CHANGING..... 14

Sanja Vujacic, Jadranka Polovic

ON THE PATH TO CARBON NEUTRALITY: PROBLEMS AND PROSPECTS 14

Natalia Vovchenko, Valeria Dmitrieva

ANALYSIS OF EMPLOYEE SALARY SATISFACTION IN THE FINANCIAL INDUSTRY IN THE REPUBLIC OF CROATIA 15

Sara Soldo, Mihael Plecas, Marijana Simic

COMPARATIVE ANALYSIS OF ACCIDENTS AT WORK IN SLOVENIA AND SERBIA..... 16

Tamara Radjenovic, Snezana Zivkovic, Milisa Todorovic, Maja Mesko, Mirko Markic

THE IMPACT OF PROPERTY RIGHTS AND GOVERNMENT INTEGRITY ON THE ECONOMIC FREEDOM: THE CASE OF THE EUROPEAN REGION, THE BRICS COUNTRIES, AND THE USA 17

Meltem Okur Dincsoy, Hamit Can, Enver Erdinc Dincsoy, Venelin Terziev

THE PLACE AND ROLE OF BANKS AS DISTRIBUTION CHANNELS IN THE BULGARIAN INSURANCE MARKET IN THE CONTEXT OF THE COVID-19 PANDEMIC 18

Valentina Ninova, Nikolay Ninov

THE NEW SOCIAL LEADERS AND THEIR INFLUENCE ON THE FORMATION OF THE NEW SOCIAL SYSTEMS..... 18

Venelin Terziev

INVESTORS' PERCEPTION OF SUSTAINABLE INVESTMENTS..... 19

Vlasta Roska

THE INTERCONNECTION BETWEEN EDUCATION AND TAX REVENUE..... 20

Lorena Vokic Kvesic, Mirta Radic

DIGITAL TRANSFORMATION: THE FUNDAMENTAL CONCEPT OF TRANSFORMATION OF BUSINESS ACTIVITIES..... 20

Josko Lozic, Katerina Fotova Cikovic

COMPARATIVE EVALUATION OF MACHINE LEARNING TECHNIQUES FOR RISK ASSESSMENT IN FINANCIAL MARKETS 21

Dmytro Zherlitsyn, Maria Vasilska, Aleksey Mints, Volodymyr Kravchenko

EDUCATION FOR SUSTAINABLE DEVELOPMENT AND AVAILABILITY OF STUDY PROGRAMS AT CROATIAN UNIVERSITIES..... 21

Lidija Bagaric

STATE OWNERSHIP AND FIRM PERFORMANCE – EVIDENCE FROM LARGE CROATIAN ENTERPRISES 22

Boris Crnkovic

REGULATORY FRAMEWORK AND INVESTIGATION OF THE MONEY LAUNDERING..... 23

Yordanka Iliyкова

MONETARY AGGREGATES IN THE EUROSISTEM – ARE THEY STILL IMPORTANT AND WHAT DO THEY SHOW?

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ABSTRACT

This paper examines the contributions to the monetary aggregates of the euro area member states Germany, Slovenia and Croatia and their share in the total aggregates, the interaction of the aggregates of large and small members of the Eurosystem, and the levels of liquidity, monetization and velocity of money in these members. Multiple regression analysis models were used to examine the influence of the German structure of monetary aggregates on the monetary aggregates of Slovenia and Croatia through M1 and M3 aggregates. The results show that there is a positive statistical relationship between the largest items of the German structure M1 and M3 as the largest stakeholder, on the trend of the total aggregates of Slovenia and Croatia. However, this impact, measured by the financial effect of nominal changes in aggregates in Slovenia and Croatia, cannot be considered particularly large. The level of liquidity (M1/M3) shows that the smaller members imitate the liquidity at the level of the ECB more poorly than the largest member. All three members differ in terms of monetization (M1/GDP), as well as in the velocity of money (GDP/M1), although in all three countries there is a trend of increasing monetization and decreasing velocity of money. As a scientific contribution of the research, the existence of the relative heterogeneity of the eurozone with its sub-currency areas is emphasized, with regard to different sizes of contributions, the interaction of contributions of large and small members, as well as indicators based on aggregates that members of the Eurosystem do not yet renounce in the hope of finding a better metric in forecasting price levels based on statistics provided by aggregates.

Keywords: *monetary aggregates, euro system, euro area, Germany, Slovenia, Croatia*

THE AGE OF POST-GLOBALISM: RISKS AND OPPORTUNITIES

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ABSTRACT

We live in a time of global international, geopolitical, economic, technological, and social changes that bring us a whole series of open questions to which we do not have answers and, likely, we will not have them shortly. Such an environment is a source of permanent insecurity. History teaches us that in such times, very destructive scenarios are possible that bring into question the existence of civilizations as we know them today. On the other, optimistic side, if the existing civilizations will survive, we are facing a new shuffling of the cards of power in which, as always, there will be winners and losers in this transition. Can we somehow prepare for it and actively contribute to be on the winning side, this is the main subject of interest in this work.

Keywords: *post-globalism, risks, opportunities, new era*

TECHNOLOGICAL AND GEOPOLITICAL ASPECTS OF ARTIFICIAL INTELLIGENCE

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ABSTRACT

This paper comprehensively explores the multifaceted landscape of artificial intelligence (AI), emphasizing its integration with technologies, companies, cloud platforms, and chip production. AI applications find relevance in diverse contexts, ranging from cloud computing to chip manufacturing facilities (FABs), involving technologies like machine learning, deep learning, natural language processing, computer vision, robotics, and generative models. Major industry players such as Amazon, Microsoft, and Google play pivotal roles in supporting AI development through their cloud platforms. The political dimensions of AI, particularly chip export regulations, are discussed, exemplified by the Netherlands embargoing chip exports to China. The paper highlights the global ramifications of such decisions, especially considering the vital role chips play in AI development. In the U.S., the CHIPS Act seeks to promote domestic chip production for strategic technological control. A geopolitical perspective is presented, emphasizing Taiwan's significance, particularly TSMC, in chip manufacturing and its impact on U.S.-China relations. The intertwining of political, technological, and geopolitical factors is emphasized, underlining the importance of understanding these dynamics in the management of AI in contemporary society. The narrative shifts towards the prevalence of disinformation in the digital age, where advanced technologies are exploited to manipulate information, posing a threat to democracy. The paper advocates for a systematic approach to information verification and the adoption of preventive measures in the cybersecurity domain. The paper reports on a survey conducted at the University of Applied Sciences in Zagreb, exploring perceptions of disinformation frequency, information verification practices, and responses to cyber threats. Findings reveal significant correlations between disinformation frequency perception and information verification, along with differences in experiences and perceptions between university and high school students. In conclusion, the paper underscores the need for standardized learning outcomes in courses covering information and communication technologies and disinformation, aiming to cultivate consistent competencies globally. This approach ensures the quality of information and public discourse, crucial in navigating the challenges posed by AI and disinformation in the contemporary digital landscape.

Keywords: *Artificial intelligence, digital society, social networks, disinformation, education*

DIGITAL HEALTH TECHNOLOGIES – A POTENTIAL FOR IMPROVING HEALTHCARE AND A CHALLENGE FOR PATIENT SAFETY AND EQUAL ACCESS

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ABSTRACT

Technological progress, digital health technologies (DHT) and artificial intelligence (AI) have a great potential for improving processes in healthcare delivery. Many new digital interventions have the potential to deliver transformative gains in the efficiency and quality of the healthcare system. In addition, citizens, particularly the young, also care about having access to the latest technological developments and convenient modern digital solutions, many of which are already classified as medical devices. Rapid developments in DHT have also introduced risks and raised concerns about their security, privacy, sustainability, interoperability and fair distribution of benefits among citizens, particularly among vulnerable groups. At the national and EU policy level, legislators must balance promoting national industrial competitiveness with international requirements for free trade alongside health benefits. A correct balance must be found between ensuring product safety and performance while enabling the innovation needed to deliver better patient approaches and affordable, efficient health care for society. In our work, we will analyze six areas that can affect safety in the provision of digital health care: ethics and integrity, cybersecurity, equal access, environmental sustainability, financial and operational feasibility, and interoperability. Legislators must balance approaches that will ensure strong oversight of patient safety over the long term, while bringing important new advances in diagnosis and treatment and meeting citizen expectations to provide the best health care for all citizens.

Improvement in the provision of health care by implementing innovative technologies will only be achieved if accompanied by effective governance and guidelines that ensure patient safety and public trust.

Keywords: digital health technologies, equal access, governance, privacy, safety

EUROPEAN INTEGRATION AS A POSSIBLE SOLUTION FOR THE WESTERN BALKANS PROBLEMS

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ABSTRACT

The accession of the Western Balkan countries to the European Union is often cited in public discourse as something that will certainly happen and that will solve all their problems after the end of the accession negotiations. Through this research, it was established that independent political and economic indicators unequivocally indicate that not a single country in the Western Balkans is ready for the EU accession, nor will it be any time soon. A much bigger problem is the fact that the EU, as a weak global foreign policy factor, has almost no absorption power to accept new members. That has a very negative impact on whole Western Balkans whose undemocratic political leaders abuse this situation in order to stay in power as long as possible, thus creating a closed circle in which their countries economically stagnate.

Keywords: *integration into the European Union, Western Balkans, democratization, economic development, accession negotiations*

APPLICATIONS OF THE BALANCED SCORECARD CONCEPT IN RELATION TO SOCIAL DEVELOPMENT

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ABSTRACT

The aim of this study is to gather sufficient evidence and arguments in order to prove to society that during the process of change in thinking and especially of effective practical implementation of management models such as the Balanced Scorecard model, high levels of efficiency can be achieved on all hierarchical levels in systems key for the society and the state.

Keywords: *Balanced scorecard, Application, Social Development, Organisation*

EVOLUTION OF THE CONCEPT OF THE BALANCED SCORECARD

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ABSTRACT

This study focuses on the Balanced Scorecard (BSC) which is a performance measurement model that helps organizations achieve their strategic goals. Developing and improving the Balanced Scorecard model is a continuous process that aims to incorporate and link together the four main perspectives. The model helps the organization using it to concentrate on the critical evaluation of its future and achieve better performance on all levels.

Keywords: *Balanced scorecard, Evolution, Management, Organisation.*

FUTURE TRENDS IN THE CAMPING INDUSTRY: PERCEPTIONS OF CAMPING MANAGERS

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ABSTRACT

The purpose of this research is to explore changing trends in the development of camping accommodation, from standard plots to mobile homes. Previously, camping grounds offered only camping plots and very few sheltered types of accommodation. Nowadays, more and more luxurious accommodation is offered, especially mobile homes, transforming camping grounds into camping resorts. Based on a survey of the perceptions of camp managers, this paper explores the future trends in the development of accommodation in camping resorts. Managers' perspectives of camping accommodation development could strongly influence the future shape of camping resorts and more broadly, set new trends in the development of outdoor hospitality. Our findings show that most camping managers believe that innovation, sustainability, and limited growth in the number of mobile homes in campsites is the trend of sustainable camping resort development while the plot development will be strongly based on differentiation and diversification.

Keywords: *tourism, camping industry, mobile homes, camping resorts, outdoor hospitality*

TRANSFORMATION OF THE MENTAL HEALTH SERVICES IN CROATIA - A CASE OF THE UNIVERSITY PSYCHIATRIC HOSPITAL VRAPČE

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ABSTRACT

University Psychiatric Hospital Vrapče is the oldest and biggest, in clinical, academic, and research sense, mental health care institution in the Republic of Croatia. Its establishment in 1879 marked the beginning of organized, systematic care for the persons suffering from mental health disorders in Croatia. During its history, University Hospital Vrapče went through many transformations, always reflecting new developments in the field and, more generally, society, while setting the tone for and of mental healthcare in Croatia. In the context of more recent developments, especially in the last ten years, several important trends emerging in care processes within University Psychiatric Hospital Vrapče can be highlighted. On the one hand, there is a trend of decreasing number and duration of treatments provided within its inpatient care system. On the other hand, there is a parallel trend of increasing number, scope, modalities, and type of services provided within its outpatient care system. For example, in 2015, about 84 % of all services provided within the Hospital were related to inpatient services, while only 16 % to outpatient ones. However, in 2021, that ratio was 64 % versus 36 %, that is, 64 % of the services provided were related to inpatient services while 36 % to outpatient services. At the same time, the average duration of inpatient treatment within the Hospital is steadily decreasing reaching a current average of 25 days (while in 2015 it was about 10 days longer). Furthermore, the Hospital is, among many other things, leading the adoption of new (digital) technologies in the clinical care, teaching, and research processes. Finally, today, on a daily basis, University Hospital Vrapče serves around 1200 patients, half of them through inpatient services while another half through various forms of outpatient services. All these changes are in accordance with the foundational and constitutional values and continuous efforts of the institution, which indeed has a long and fruitful history, and are in line with the most up-to-date global achievements and tendencies in the organization of the modern, comprehensive, person-centered mental healthcare systems.

Keywords: *mental health, mental health services, transformation of services, person-centered care, recovery-oriented care*

ANALYSIS OF THE EFFECTS OF INTEGRATED ARTIFICIAL INTELLIGENCE IN SMALL AND MEDIUM-SIZED CROATIAN ENTERPRISES

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ABSTRACT

Significant development of artificial intelligence (AI) began in the 1950s. For the purposes of this paper, artificial intelligence is considered the system's ability to collect and interpret data, learn and then apply new knowledge to achieve certain results or perform tasks through adaptive behavior (Anica-Popa et al., 2020). AI is understood as the ability of technology to perform tasks and possess skills naturally associated with human intelligence. The subject of this work is the analysis of the effects of the implementation of artificial intelligence in the operations of Croatian small and medium-sized enterprises (SME). The main goal is to determine the importance of applying artificial intelligence and the possibilities of such technology in business. In addition, the authors wanted to determine the level of management satisfaction with the profitability of integrated AI forms in organizational processes. The results of the empirical research showed that all 90 enterprises involved apply at least one form of artificial intelligence. The sample of respondents consisted of executive managers (owners) of different small and medium-sized Croatian enterprises from various industries. It emerged that, to a "larger" and "significantly large extent", the greatest benefits of implementing AI (both in manufacturing and service enterprises), are reflected in: 1. "improvement of production or service processes" (93%), 2. "saving time and resources" (92%) and 3. "increased sales" (82%). As many as 88% of respondents believe that they "achieved better financial results and increased customer satisfaction".

Keywords: artificial intelligence (AI), cognitive technologies, Croatia, integration, small and medium-sized enterprises (SME)

THE USE OF CYBER SECURITY IN COMBATING MARITIME PIRACY AND TERRORISM

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ABSTRACT

This article provides a thorough examination of cybersecurity concerns in the maritime sector, emphasizing the increased susceptibility resulting from the growing digitization and interconnectedness in marine activities. The report emphasizes the crucial importance of

modern technology and cybersecurity frameworks in protecting marine infrastructure, with a specific focus on addressing maritime piracy and terrorism. The study explores different automated maritime systems, including the Automatic Identification System (AIS), Electronic Chart Display Information System (ECDIS), and Global Maritime Distress System (GMDSS), clarifying their two-fold functions in enhancing operating efficiency and ensuring cybersecurity. The importance of aligning global legislation and domestic policy is stressed in order to efficiently address cyber threats. The research further analyzes several cyber-attack vectors, such as malware, ransomware, phishing, and Denial of Service (DoS) assaults, elucidating their possible consequences on marine operations. Examining case studies of effective cybersecurity implementations in autonomous shipping and the incorporation of global cybersecurity frameworks offer practical perspectives on the utilization of strong cyber defense measures. The report promotes the establishment of a robust cybersecurity culture in the marine sector, highlighting the significance of thorough risk management and the incorporation of advanced technologies like AI, machine learning, and blockchain. The conclusion highlights the continuous requirement for the marine industry to adapt its cybersecurity strategy in order to address the ever-changing nature of cyber threats.

Keywords: Maritime Cybersecurity, Digital Maritime Operations, Cyber Threat Management, Autonomous Maritime Systems, International Maritime Regulations

CROATIAN CONSUMER ELECTRONIC MARKET DURING COVID 19 CRISIS

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ABSTRACT

ICT technology and ICT sector has crucial role in shaping global economic and business trends due to globalization movements and activities. Currently, on global level consumer electronic industry has value of more than EUR 1.000 billion with expected CAGR of more than 2% by 2028. This paper brings review of challenges which occurred during latest COVID crisis in 2019. and 2020. The study analyses the resilience of the IT sector during the COVID-19 crisis, highlighting its growth in 2021 and 2022. It further examines the performance of the top 10 companies in the Croatian IT dealer sector, emphasizing the positive correlation between GDP growth and sector performance. The impact of the pandemic on demand for IT equipment, supply chain disruptions, and the subsequent effects on the profitability of IT retail companies are thoroughly examined. Main challenge for consumer electronic industry during latest COVID crisis were lack of products availability due to difficulties in supply chains and

increased demand. In 2020. Croatian consumer electronic market recorded highest sales growth in 2020 of more than 9% while GDP was decreased by more than 8%. Despite challenges posed by COVID 19 pandemic period Croatian consumer electronic industry showed significant resilience based on growth in sales which occurred after COVID Crisis period.

Keywords: *COVID crisis, Croatia consumer electronic industry, inventory, profitability*

THE COST-EFFECTIVENESS OF SCREENING A GENERAL POPULATION FOR CARDIOVASCULAR RISK WITH HIGH-SENSITIVITY TROPONIN-I

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ABSTRACT

To introduce and to estimate the effectiveness of a high-sensitive troponin-I (hsTnI) guided screening program for cardiovascular disease (CVD) and evaluate potential clinical and health economic consequences of applying this program. Existing tests for assessing the risk of cardiovascular diseases such as Framingham Heart Study in U.S. or (EURO)SCORE I and EURO(SCORE) II are not cardio-specific and they most often use only the parameters of age, gender, total cholesterol, smoking, and blood pressure. A study of asymptomatic women aged above 45 years with no specific symptoms and no confirmed or known coronary artery disease who voluntarily participated in a risk assessment and screening program for CVD in Zagreb, Woman Heart Project (WHP) was performed. Participants were stratified into three risk categories according to their hsTnI level. Subjects in the moderate and high-risk class were referred to further non-invasive cardiovascular diagnostic test and coronary angiography or PCI (Percutaneous Coronary Intervention), if required. The number of CVD events and deaths, direct and indirect costs, and quality-adjusted life years (QALY) were assessed over 10 years from a societal perspective. In the model, WHP reduced the incidence of acute CVD events by 180 per 10,000 subjects, equal to a number-needed-to-screen of 56. CVD-related mortality decreased by 40%. Screening asymptomatic female subjects with hsTnI and guiding those at higher risk to further cardiac testing, identified women with coronary artery disease and referred those at high risk to further diagnostic tests.

In a cost-effectiveness analysis, this strategy might reduce the CVD related burden and mortality and would likely be cost-effective. High-sensitivity troponin-I (hsTnI) should be a part of daily preventative test for cardiovascular disease.

Keywords: cardiovascular, cost-effectiveness, high-sensitivity troponin-I, population, screening

CORPORATE ENTREPRENEURSHIP AS A KEY FACTOR IN PUBLIC SECTOR REFORM IN SERBIA

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ABSTRACT

The aim of the paper is to point the role of the corporate entrepreneurship, exploring the key factors named Management support, Work discretion, Rewards, Time availability, and Organizational boundaries in the process of public sector reform in Serbia. In this study, the authors investigated the current state in 12 public organizations in domain of the key factors of corporate entrepreneurship using the Corporate Entrepreneurship Assessment Instrument. A research sample consisted of 523 respondents. Data were processed by appropriate statistical procedures using the SPSS v25. The research results confirmed the starting hypothesis. It highlights the relevance of management support as a predictor of higher creativity and financial support for new innovative project in observed companies. Statistically significant differences were identified within a reward by the female respondents assess much more important for the development of entrepreneurial organizational culture than their male respondents. The results can be a base for the model of public companies transformation that will fit the majority of public companies in Serbia.

Keywords: corporate entrepreneurship, public entrepreneurship, creativity, public sector, Serbia

INSTITUTIONAL FOUNDATIONS FOR FINANCIAL REGULATION OF SOCIAL INNOVATIONS

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ABSTRACT

The article examines the approaches of scientists to the concepts of “institution” and “institutional environment” within the framework of the development of institutional economic theory for the formation of institutional foundations for the financial regulation of social

innovation. The subject-institutional composition of participants in the social innovation process has been systematized. In modern conditions, the need to create a developed institutional environment for the financial regulation of social innovation is a particularly important task, since the effective implementation of social innovation processes contributes to solving socially significant problems of society. When constructing an effective institutional environment for the financial regulation of social innovation, it is necessary to combine existing and newly emerging institutions, to develop areas of key institutions that have confirmed their positive results, the functioning of which ensures an increase in social effects and the level of socio-economic well-being in general.

Keywords: *Social innovation, Institutions, Support institutions, Government regulation Institutions, Social effect*

IMPACT OF ARTIFICIAL INTELLIGENCE ON DIGITAL TRANSFORMATION AND ECONOMIC CHALLENGES OF SOCIETY IN GLOBAL ENVIRONMENT: ANALYSIS AND PERSPECTIVES FOR CROATIA UNTIL 2030

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ABSTRACT

The development of artificial intelligence (AI) is starting to have an increasing influence on the economy and business models around the world. This paper analyzes the impact of artificial intelligence on digital transformation and economic challenges in the global business environment with special reference to Croatia and its significance for Croatian economy until 2030. The impact of artificial intelligence on the level of digital transformation of society and global economic trends, i.e., the economic impact of artificial intelligence in Croatia, is examined using the sample of large joint-stock companies listed on the Zagreb Stock Exchange, and it is considered how artificial intelligence will be integrated into business processes and affect the labor market and business models in Croatia. The degree of digital transformation, indicates, among other things, the degree of improvement of business processes, increase in efficiency and thus the creation of a company's competitive advantage. According to the author's previous research, the digital transformation index itself is based on digitalization and digitization activities in the digital maturity model and indicates the degree of disruptive innovation and changes in business operations resulting from the implemented transformation of the organization. At the same time, artificial intelligence occupies a significant place in the segment of implemented technology of the organization and, according to the research conducted for the purposes of this work, will strongly influence the choice of future data-driven business models, and provide an infrastructure for sharing and analyzing data between companies. This paper investigates the significance of artificial intelligence on data-driven business models, i.e., it examines the significance of service models, data products and data-driven production. It also investigates the extent to which models transform products into

intelligent services and the extent to which data products increase product value through the use of artificial intelligence. Further, it analyzes to what extent artificial intelligence and the selected business model ensure business sustainability and greater user satisfaction. The aim of the paper is to test the importance of artificial intelligence in the digital transformation of society, and to give a critical assessment of the importance of artificial intelligence in the part of implemented technology in society. The subject of the research is determining the measure of the influence of artificial intelligence, the index of digital transformation and other factors on the future creation of new value of business organizations. The paper confirms the importance of artificial intelligence for the index of digital transformation and its increased impact on the digital maturity of business organizations, and thus predicts a significant increase in the newly created value of the observed organizations with the use of artificial intelligence in the future.

Keywords: artificial intelligence, AI, digital transformation, index of digital transformation

MAIDAN AND NOVOROSSIYA – COVERT ACTIONS OR SOCIAL MOVEMENTS?

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ABSTRACT

Social movements are, first and foremost, carriers of identity and social change, but as such, they do not act independently of structural and material limitations. Movements try to achieve the maximum within the material limitations without exceeding the minimum of identity determinations, and thus, three key components are set that determine analyses of movements - identity, structure and resources. The three perspectives are contained in three theories of social movements, namely, resource mobilization theory, political opportunity theory (political process theory) and framing theory. The emergence of a movement requires a political space for mobilization, an organization that will mobilize available resources, and an identity as a basis of which the movement will emerge and resonate its further activities. If at least one of the components is missing, the movement can't emerge. All three mentioned categories can also be a consequence of the intelligence activities aimed primarily at achieving state interest, while the fundamental goal of the movement's activities is social and/or political change. Covert action is an instrument of state interventionism that includes attempts of certain countries to influence events in other countries or territories without revealing their involvement. The element of "plausible deniability" is crucial when distinguishing the hidden activities from the desired political and military ones to intervene and influence political events in a specific country or in a specific area, which can be brought into direct connection, respectively attributed to the government that undertakes them. What if the two mentioned definitions coincide, that is, if the movement's goal is social change, which consequently, in the political sense, leads to the realization of the political goals of another country? In what framework can we then talk about a social movement as a reflection of social tendencies and when it can be

considered primarily as a result of the activities of the intelligence services? The first part of the paper will consider the theoretical framework, which primarily refers to definitions of the terms social movements and covert operations. After the formation of the theoretical framework, the study of two cases of movements in Ukraine that had far-reaching consequences for international security - Maidan and Novorossiia – will be conducted with subsequent comparative analysis. Based on the research, it will be determined in which of the two categories the two analyzed cases can be located, that is, whether they primarily arose due to intelligence activities or as a reflection of social tendencies.

Keywords: Euromaidan, Novorossiia, social movements, covert operations, social conflict.

HEALTH ORGANISATION STAFF AWARENESS OF THE RISK MANAGEMENT AGENDA - A KEY PREREQUISITE FOR TACKLING COVID-19

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ABSTRACT

The pandemic of COVID-19 has provoked the management of hospital medical care facilities to rethink strategies, in the part-risk management program, which is the main task of their risk management. The implementation of these programs is considered an important management tool and a mechanism tested in practice to counteract the unprecedented pressure of risk of such pandemic proportions threatening any healthcare organization (in this case - Multiprofile Hospital for Active Treatment "Heart and Brain" EAD - Pleven). It is of key importance to establish the relationship between the degree of staff awareness of the risk management program and the effective transformation of existing threats into a positive for the healthcare organization, which is also the objective of the study. The thesis asserted in this paper is that only proactive and systematic implementation of a risk management program in the healthcare facility could result positively in ensuring the safety, life and health of patients and staff as well as the organization's assets, market share, accreditation, reimbursement levels, brand value and reputation in the society.

Keywords: awareness, COVID-19, health management, hospital, risks, risk management program, staff

GEOPOLITICS OF ENERGY: WHEN ENERGY CYCLES CHANGING COINCIDE WITH POWER CYCLES CHANGING

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ABSTRACT

The neoliberal globalization model symbolizes 20 million containers that transit the oceans every second according to market laws, to which all segments of human activity are subject. The frenetic movement of people and goods is the nexus of human involvement in climate change. Territories (states) fight against them most effectively by diversifying their economies and the energy resources that drive them. Out of concern over strategic dependencies on countries that are rich in fossil fuels, the West has initiated an energy transition. It was not the first change of the energy cycle, but it was announced as the first that, due to climate change, should be completed in a little more than a quarter of a century. The growing hard power of China and the seriousness of its ecological situation related to the "world factory's" economy dynamics, made China master supply chains, rare metals and green technologies before the West. The accelerated energy cycle change (transition) takes place within a five-year turbulent period in international relations (globalization cycle change), and therefore coincides with the change in the power cycle, when war is most likely. Economically strong China, as a potential challenger (contender) to the USA in the fight for the position of the new world hegemon, and militarily strong Russia, as a dissatisfied secondary power, use this situation to expand their strategic interests at the expense of the West. What the West strongly resists. The planet is gripped by war fever.

Keywords: *systemic, new episteme, energy transition, power transition, structural power*

ON THE PATH TO CARBON NEUTRALITY: PROBLEMS AND PROSPECTS

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ABSTRACT

The energy crisis in the countries of the European Union, which has intensified in recent years, calls into question the achievability of such an ambitious global goal as reducing greenhouse gas emissions. Despite all its importance for future development, the current problem with energy resources does not allow us to maintain the planned pace of reducing greenhouse gas

emissions. The authors of the report emphasize the difficulty of achieving this task. Analysis of individual studies allows us to conclude that in fact achieving zero carbon neutrality is impossible either by 2050, or even by 2100! However, this does not mean that this goal should not be strived for.

Keywords: Carbon neutrality, Climate changes, Green economy, Energy transition

ANALYSIS OF EMPLOYEE SALARY SATISFACTION IN THE FINANCIAL INDUSTRY IN THE REPUBLIC OF CROATIA

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ABSTRACT

Today, more than ever before, different generations of employees are present in the labor market, according to the main characteristics. However, it is harder than ever to find competent employee and even harder to retain them. The subject of this research are the attitudes of employees to the recognition of their work with regard to the amount of their salaries in financial institutions in the Republic of Croatia. The research on attitudes was conducted by an online survey. The responses were processed using the statistical methods "Chi-squared test and "Weight of evidence" based on the answer to the question "I feel valued when I think about my salary". The results of the survey show the levels of satisfaction with the salaries of respondents from the distributions by gender, age, level of education, length of work experience, average net income, the sector in which respondents are employed, the hierarchical structure of management as well as the type, the length of business operation, size and ownership structure of the financial industry in which the respondents are employed, by first showing the group which is most satisfied with the salary and finishing with groups that are least satisfied. The results were interpreted by providing explanation why specific groups were the most or the least satisfied with their salaries.

Keywords: employee salary satisfaction, financial industry, the Republic of Croatia, Weight of Evidence method

COMPARATIVE ANALYSIS OF ACCIDENTS AT WORK IN SLOVENIA AND SERBIA

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ABSTRACT

Accidents at work can result in injuries, disabilities, or even fatalities, profoundly impacting the lives of workers and their families, and having a serious economic impact in terms of productivity loss, increased insurance costs, and potential legal liabilities. Addressing workplace accidents is crucial for protecting workers' health and safety, ensuring economic stability, meeting legislative requirements, reducing the burden on social systems, enhancing the quality of work life, improving international competitiveness, and contributing to sustainable development. Thus, this paper presents a comprehensive comparative analysis of workplace accidents in Slovenia and Serbia, aiming to identify key patterns, underlying causes, and potential prevention strategies. The study analyzes data from the Eurostat database and national occupational safety and health databases covering the period 2019-2021. The research highlights significant differences in the incidence, nature, and severity of workplace accidents in Slovenia and Serbia. The study reveals that Slovenia has a higher rate of severe accidents, as well as a higher frequency of minor incidents. The findings underscore the importance of cross-national studies in understanding and mitigating occupational hazards, thereby contributing to the broader discourse on workplace safety in the European context.

Keywords: *accidents at work, comparative analysis, Slovenia, Serbia*

THE IMPACT OF PROPERTY RIGHTS AND GOVERNMENT INTEGRITY ON THE ECONOMIC FREEDOM: THE CASE OF THE EUROPEAN REGION, THE BRICS COUNTRIES, AND THE USA

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ABSTRACT

Individuals have their own interests, and they can use it as they need. It is important that not to attack or abolish the rights of other people, which means people do not have unlimited economic freedom even it is associated with their own property. The point to be investigate on economic freedom is more freedom leads to higher income, thus less unemployment and higher growth or not. Economic freedom has measured on a country basis with the contribution of the Heritage Foundation and the Fraser Institute since 1990s. In this way, it has become easier and more understandable to examine the effect of economic freedoms on economic growth. In this study, the effects of property rights and government integrity on economic freedom for BRICS, European Region Countries, and the USA were tested by panel data analysis method using annual data for the period 1996-2023. Panel unit root tests, Pedroni and Kao cointegration tests; Panel FMOLS, DOLS, and ARDL methods, Pedroni Causality Analysis Vector and Error Correction Model (VECM) were used. According to the results obtained, it can be said that there is a significant relationship between the variables in the long term.

Keywords: *Economic Freedom, Property Rights, Government Integrity, BRICS, European Region, USA*

THE PLACE AND ROLE OF BANKS AS DISTRIBUTION CHANNELS IN THE BULGARIAN INSURANCE MARKET IN THE CONTEXT OF THE COVID-19 PANDEMIC

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ABSTRACT

The COVID-19 pandemic inevitably impacted the insurance business in part - rethinking marketing concepts related to distribution channels to sell insurance products. In the framework of this study, the aim is to examine the Bulgarian insurance market in the context of the trends towards a stronger role of banks in this process. In this regard, the authors' efforts are aimed at substantiating the plausibility of two hypotheses relating to 1) the form in which the distribution of insurance products is carried out by the prevailing number of commercial banks in Bulgaria and 2) the existence and implementation of "bancassurance" - as opposed to the official claims - the result of European institutional studies - that such does not exist in Bulgaria. As a result of the conducted research, causal links between the analysed processes and phenomena have been identified. At the same time, both working hypotheses have been confirmed, thus fulfilling the main research objective.

Keywords: *Insurance, Distribution channels, Insurance agents, Insurance brokers, Bancassurance, COVID-19, Banks*

THE NEW SOCIAL LEADERS AND THEIR INFLUENCE ON THE FORMATION OF THE NEW SOCIAL SYSTEMS

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ABSTRACT

In this publication we set an objectively complicated task to analyse the opportunities of strategic decision-making during crisis by attempting to make a partial analysis of the ongoing crisis caused by the COVID 19 pandemic and the emerged military conflict between the Russian Federation and Ukraine. Crisis circumstances require societies to quickly rethink and develop adequate strategies and respectively to formulate strategic goals and plan processes. In many cases preliminary analysis and assessment are practically impossible /especially when it comes to natural disasters or crises/ and this requires a different operational order of problem solving, which includes formulating new unconventional goals and then implementing planning not objectified by a particular and accurate analysis. All this puts whole systems and societies to

the test, and those who are empowered to manage the process – under high pressure from unforeseen circumstances and not always objective judgments. Which, in turn, creates a number of subsequent critical issues in the management process. The role of socially dominant leaders is of particular importance in societies, as well as in making various decisions. Their role in strategic decision-making is also examined.

Keywords: Strategic management, Global crisis, Strategies, Management process

INVESTORS' PERCEPTION OF SUSTAINABLE INVESTMENTS

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ABSTRACT

Sustainable investing (ESG) encourages companies to embrace sustainable principles that ensure long-term social and financial benefits. The implementation of triple bottom line means that companies should measure their social and environmental impacts in addition to focusing on financial performance and profit generation. Developing sustainable investment products has created an opportunity for investors—individuals, corporations, or institutional investors—to achieve financial benefits by making their investments more sustainable. Investors can invest in ESG stocks, ESG bonds, ESG index funds, or ESG ETFs. The focus of investors is on investment returns and increasing their wealth. Therefore, the main goal of this study, based on a sample of Croatian companies through a questionnaire, was to investigate participants' perceptions of: 1) sustainability, as one of the key elements of the business model and impact on the financial performance; 2) investments in sustainable financial products; 3) plans for the new green or sustainable financial instruments; 4) sustainable investments like short-term or long-term investments. The survey was a tool for investigating investor perception of sustainable investment. The main hypothesis that incorporating sustainability aspects into the company's business model enables the creation of a balanced business model that increases positive company performance measured by shareholders' wealth and ESG criteria is accepted. The main contribution of this paper is an empirical study of 105 respondents on practices and the perception of sustainable business and investments in Croatian companies. The capital market in Croatia is slowly adapting to global sustainable trends with the first sustainable bonds. More and more companies are incorporating ESG criteria into their business models and promoting sustainability.

Keywords: ESG business, ESG financial products, ESG investors, sustainable bonds, sustainable investments

THE INTERCONNECTION BETWEEN EDUCATION AND TAX REVENUE

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ABSTRACT

The aim of this paper is to show the importance of education, whose level varies in each country, and its significance to prosperity, as well as the contribution of tax revenue as a percentage of gross domestic product. Education has many benefits for society in general, giving young people the chance to start creating a more beneficial world for themselves. Most schools and educational institutions are public and in the hands of the government. This suggests that governments worldwide should strive to ensure public funds are spent on their citizens education, starting from a young age. Education is the basis of every human right in many areas. This research used descriptive and comparative research methodologies to examine levels of education worldwide and their correlation with state tax revenue levels.

Keywords: Education, worldwide, literacy rate, level of education, years, tax revenue, government, HDI

DIGITAL TRANSFORMATION: THE FUNDAMENTAL CONCEPT OF TRANSFORMATION OF BUSINESS ACTIVITIES

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ABSTRACT

The aim of this paper is to define the basic concept of the process of digital transformation of the organization. The transformation process begins with the digitization of individual business activities, and the final goal is the digital transformation of the entire business process. The process of digitization of business activities is a continuous process that harmonizes business processes in the organization with changes in the environment. Complete digital transformation implies digitization of business activities at all levels and in all forms. Digital transformation is always part of the managerial strategy, and all changes are exclusively the responsibility of the management of organizations. Once the level of digital transformation of the organization has been reached, it is the basis for further adjustments to changes in the environment. Digital transformation is based on digital optimization of business processes, and digital optimization is aimed at building competitive advantages of the organization.

Keywords: digitization, digitalisation, digital optimization, digital transformation, digital environment

COMPARATIVE EVALUATION OF MACHINE LEARNING TECHNIQUES FOR RISK ASSESSMENT IN FINANCIAL MARKETS

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ABSTRACT

The paper investigates the robustness of classical financial models, comparing these with machine learning models for market risk and volatility prediction. The performance of classical Sharpe-Markowitz portfolio optimization against k-means clustering is investigated. The study assesses VaR and GARCH(1,1) vice versus machine learning algorithms, including linear regression and artificial neural networks. At the same time, machine learning offers advanced analysis tools, and more investigations are needed to outperform traditional approaches conclusively. The research underlines the need for further exploration into hybrid models that blend machine learning's adaptability with the foundational strengths of portfolio theory.

Keywords: *Artificial Neural Networks, Clustering, Financial Risk Assessment, GARCH(1,1), Linear Regression, Machine Learning, Market Volatility, Portfolio Theory, Predictive Analytics*

EDUCATION FOR SUSTAINABLE DEVELOPMENT AND AVAILABILITY OF STUDY PROGRAMS AT CROATIAN UNIVERSITIES

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ABSTRACT

This article addresses the expanding field of education for sustainable development (ESD) and evaluates its presence and role in Croatian higher education institutions. Education for sustainable development (ESD) is a globally recognized concept that integrates the principles and practices that help individuals and communities to make choices and live lives that benefit

both, the environment and future generations. Recognizing the importance of this paradigm, Croatian universities have gradually incorporated ESD into their curricula. This research aims to answer two main questions: (1) How is ESD integrated into Croatian universities? (2) What specific study programs exist that emphasize or incorporate sustainable development principles? A comprehensive analysis revealed that while many Croatian universities recognize the importance of ESD, full integration is not yet complete. Many faculties and academic departments have initiated special courses, seminars and workshops. The example of the Faculty of Tourism and Hospitality Management, which implements study programs focused on sustainability at all levels of study, is highlighted. There are tangible efforts being made at the national level to embed ESD in Croatian higher education. Collaboration between universities, policy makers and the business sector has been observed, paving the way for a structured approach. In summary, Croatian universities are making progress towards education for sustainable development, but there is still much room for further progress. Continued collaboration and engagement from both educational and governmental bodies is crucial to ensure that future generations acquire knowledge, skills, and values that promote a sustainable future.

Keywords: Education, Sustainable development (ESD), High education institution (HEI), Courses, Croatia, University

STATE OWNERSHIP AND FIRM PERFORMANCE – EVIDENCE FROM LARGE CROATIAN ENTERPRISES

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ABSTRACT

Despite numerous privatization programs and efforts to reduce state ownership in enterprises, state-owned enterprises continue to play a significant role in various economies and contribute substantially to their gross national products. In different countries and at different times throughout history, the role and significance of state-owned enterprises have often changed influenced by four broad groups of reasons: historical, economic, political, and ideological. Consequently, various reasons justify state ownership in enterprises. However, they are most commonly found in the achievement of specific economic and social objectives, as well as in addressing market failures and information asymmetry. A key disadvantage of state-owned enterprises is their lower efficiency, theoretically grounded primarily through agency, property rights, and public choice theories. Each of the theories mentioned above focuses on the behaviour of politicians and managers of state-owned enterprises and the incentives that guide them in achieving the goals of state-owned enterprises and their personal goals. The inefficiency of state-owned enterprises has also been confirmed in numerous empirical studies, which have used varied methodologies and different efficiency measures. Despite significant efforts in privatization, state-owned enterprises continue to play an essential role in Croatian economy. This can be substantiated by data showing that in 2021, state-owned enterprises generated 51 billion HRK in revenue, managed assets worth 232 billion HRK (which represents 53% of the GDP), realized more than 7 billion HRK in investments (accounting for 23% of total investments) and employed over 47 thousand workers (comprising 5% of the total workforce). This paper evaluates the efficiency of state-owned enterprises compared to private ones using

a sample of large Croatian companies from 2018 to 2022. It analyzes return on assets and return on equity, confirming the hypothesis of the lower efficiency of state-owned enterprises.

Keywords: *Firm performance, Efficiency, Return on Assets, Return on Equity, State Owned Enterprises*

REGULATORY FRAMEWORK AND INVESTIGATION OF THE MONEY LAUNDERING

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ABSTRACT

There is a causal relationship between high levels of crime, corruption, money laundering, tax and other financial fraud, and growing economic and social inequalities in the world. The state of capitalism and the market economy in today's societies, as well as the gross violations of human rights, poverty and low standards of billions of people, make it necessary to examine the criminal and illegal economy, as objects of anti-money laundering measures, in the context of the effectiveness and expanding the scope of countermeasures. The purpose of the present research is to analyze the modern approaches to limiting latent (hidden) crime, the criminal, gray and black economy, through the methods of risk assessment, intelligence, evidence in the process of investigation and prevention, as well as to propose new ones for improvement of anti money laundering.

Keywords: *Money laundering, Criminal economy, Investigation*



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