



**Seventh International Scientific Conference  
on Recent Advances in Information Technology,  
Tourism, Economics, Management and Agriculture**

**ITEMA 2023**

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# BOOK OF ABSTRACTS

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## Preface

The purpose of the annual ITEMA conference is to support the power of scientific research and dissemination of the research results with the objective to enhance society by advancing knowledge; policy-making change, lives, and ultimately, the world. Our objective is to continue to be the foremost annual conference on cutting-edge theory and practice of information technology, tourism, economics, management, and agriculture, encouraging advancement via excellence, and interaction.

ITEMA conference aims to bring together the international academic community (experts, scientists, engineers, researchers, students, and others) and enable interactive discussions and other forms of interpersonal exchange of experiences and popularization of science and personal and collective affirmation.

The annual ITEMA conference is committed to the highest standards of publishing integrity and academic honesty as ensuring ethics in all its publications. Conformance to standards of ethical behavior is therefore expected of all parties involved: authors, editors, reviewers, and the publisher. The conference organizer follows the Committee on Publication Ethics (COPE) guidelines on how to deal with potential acts of misconduct.

All received full papers prior peer review process are subject to plagiarism check with iThenticate by Turnitin software. Any identified plagiarism automatically disqualifies a paper. Afterward, all full papers are double-blind peer-reviewed by the reviewers drawn from the editorial committee or external reviewers depending on the topic, title, and the subject matter of the paper. Peer reviewers provide a critical assessment of the paper and may recommend improvements. Although the author may choose not to take this advice, we highly recommend that the author address any issues, explaining why their research process or conclusions are correct.



The conference program of the 7<sup>th</sup> International Scientific Conference on Recent Advances in Information Technology, Tourism, Economics, Management, and Agriculture - ITEMA 2023 held on October 26, 2023, at the Faculty of Organization and Informatics Varaždin University of Zagreb, Croatia; combined presentations of the latest scientific developments in the field of the emerging trend of wine tourism in Albania and the impacts of the COVID-19 pandemic on the U.S. housing market and ICT use in marketing in Montenegro. The studies also cover corporate governance in the energy sector, the influence of crises on Southeast Asian capital markets, and the efficiency of Croatia's banking sector. Additionally, the papers discuss the role of project teams in sustainable economies, engagement incentives for IT professionals in Bulgaria, and consumer responses to sustainable consumption, with insights gained from eye-tracking experiments. Furthermore, the ITEMA 2023 conference covered the positive and negative effects of digital content consumption, the potential of cryptocurrencies in risk management, and the experiential dimensions driving local producers, the impact of digitalization on HR performance in Morocco, AI adoption in Slovenia, and large language models in text mining are explored, alongside the analysis of cryptocurrencies in tourism and corporate governance's influence on financial performance in the energy sector, etc.

ITEMA 2023 keynote speaker was Ilijana Petrovska, Program Leader of Digital Marketing MSc at Northumbria in Qatar and Full-Time Professor at University American College Skopje, North Macedonia with the topic *Customer Empowerment in Digital Age*.

Within publications from the ITEMA 2023 conference:

- 24 double peer-reviewed papers have been published in the **ITEMA 2023 Selected Papers**,
- 44 double peer-reviewed papers have been published in the **ITEMA 2023 Conference Proceedings**,
- 47 abstracts have been published in the **ITEMA 2023 Book of Abstracts**.

Altogether ITEMA 2023 publications have more than 700 pages. All full papers have DOI numbers and ORCID iD integration.

Participation in the conference took more than **200 researchers** representing **25 different countries** from different universities, eminent faculties, scientific institutes, colleges, various ministries, local governments, public and private enterprises, multinational companies, associations, etc.



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## Smart Government Services Based on Semantic Interoperability Governance and Dynamic Data Exchange Models

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**Abstract:** *Croatia lags behind other European Union countries in the interoperability of basic registers. Base registers function as information siloes that do not provide authentic data from authoritative sources, and government services do not implement once-only and privacy-by-design EIF and Tallin declaration concepts. Metaregister contains information about the data points of the public registers and their services that are not actively used in register service provision.*

*A semantic data model, based on EU Core Vocabularies and UN/CEFACT Core Components Library, could be a starting point for the definition of authoritative data sources.*

*Mapping of public register data points services to semantic data model would enable the creation of register services that would provide only authentic data and redundant data would be synchronized from authoritative data sources.*

*Semantically annotated register services would enable applications that use base register data to automatically generate aggregated data models, where data is combined from multiple government sources, as well as the data from linked open data cloud – and provide intelligent services based on such data.*

*Using information contained in Metaregister on authentic and personal or sensitive/protected data and allowed data exchange profiles, a data exchange schema that would ensure that the amount of exchanged data does not exceed privacy-by-design protection principles could be generated on-the-fly.*

*Registers integrated into government data exchange networks could enable proactive government services based on authentic and up-to-date data from authoritative data sources, ensuring a high level of user experience and adherence to the once-only principle.*

*The paper will present how the definition of the national semantic data model, semantic annotation of base register services, and automatic web services generation based on the register semantic data model could foster the creation of digital government services that adhere to once-only and privacy-by-design concepts.*

**Keywords:** *Metaregister, Semantic interoperability, Automatic web service generation*

## An Examination of Algo-Trading Strategies: Contrasting Trend-Following and Reversal Approaches

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**Abstract:** *Algorithmic trading has revolutionized modern financial markets, ushering in a new era of precision, speed, and automation. In this comprehensive exploration, we delve into the dynamic realm of algorithmic trading through the eyes of two distinct algobots, Tidy Little Robot (TLR) and Dirty Little Robot (DLR). These intelligent trading algorithms were meticulously crafted using Pine Script 5 on the TradingView platform and brought to life on the Pionex exchange, where they navigate the intricate BTC/USDT perpetual market with a keen focus on the 1-minute timeframe. While TLR excels in adeptly following market trends, DLR specializes in the art of spotting reversals. Our study scrutinizes their performance, methodology, implications, interpretations, limitations, and future research prospects, offering profound insights into the ever-evolving landscape of algorithmic trading.*

*Beyond mere exploration, this article serves as a comprehensive guide that immerses readers in various facets of algorithmic trading. We begin by demystifying fundamental concepts and thoroughly assessing the strengths and weaknesses inherent in this revolutionary approach. A pivotal section of our analysis involves a comparative examination between human trading and algorithmic trading, revealing how technology has transformed the financial playing field. Additionally, we explore the instrumental capabilities of Pionex, Pine Script 5, and TradingView in the development and rigorous backtesting of algorithmic trading strategies.*

*Transitioning from theory to practice, we unveil the critical tools and platforms that underpin algorithmic trading. Pionex, Pine Script 5, and TradingView assume central roles in our methodological framework, empowering traders and researchers alike to design, execute, and scrutinize algorithmic trading strategies with precision and efficiency. This foundational knowledge equips readers with a deeper understanding of the mechanics behind algorithmic trading's success. The article takes a deep dive into the methodological aspects, offering an intricate view of the development, implementation, and backtesting phases integral to algorithmic trading strategies. We facilitate discussions that illuminate the intricacies of interpretation and highlight the potential limitations and pitfalls that practitioners may encounter in real-world applications. As we embark on this captivating journey through the realm of algorithmic trading, we extend an invitation to readers, irrespective of their experience level, to explore the nuances, strategies, and boundless possibilities that this dynamic field has to offer.*

*In conclusion, whether you are a seasoned trader seeking to enhance your financial prowess or a newcomer eager to grasp the intricacies of algorithmic trading, this article is a beacon of knowledge. It imparts invaluable insights and fosters a deeper appreciation of the tools and techniques that drive success in the ever-evolving landscape of financial markets. Algorithmic trading, epitomized by TLR and DLR, continues to shape the future of finance, and this article serves as your compass to navigate this exciting frontier.*

**Keywords:** *Algorithmic trading, Cryptocurrency, Backtesting, Risk management, Trading strategies, Technical analysis*



## **Cryptocurrency: Transforming Tourism in the Digital Age**

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**Abstract:** *Cryptocurrency, a digital form of currency built on blockchain technology, has disrupted numerous industries since its inception. In the ever-evolving landscape of technology and finance, cryptocurrencies have emerged as a game-changer with far-reaching implications across various industries. One such industry that's undergoing a profound transformation thanks to cryptocurrencies is tourism. As the world becomes more digitized, the fusion of cryptocurrency and tourism is reshaping how people travel, make payments, and experience destinations. With the advent of blockchain technology and the increasing acceptance of cryptocurrencies as a means of payment, the tourism industry is transforming. Cryptocurrencies like Bitcoin, Ethereum, and others have the potential to revolutionize the way we travel, book accommodations, make payments, and even explore new destinations.*

*In this article, we'll explore the synergy between cryptocurrency and tourism, highlighting the advantages, challenges, and prospects of this exciting fusion. Also, we will explore how cryptocurrencies are revolutionizing the tourism sector, from booking accommodations to experiencing local cultures, and the benefits and challenges this presents to travelers and the industry as a whole.*

**Keywords:** *Cryptocurrencies, Tourism, Payments, Bitcoin, Ethereum, Travel*

## Tendencies in the Development of Tourism and Impact of COVID-19 on the Example of Selected EU Countries

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**Abstract:** *European tourism plays an important role in the modern economy. As it was reported tourism contributed more than 3.9% to the EU GDP in 2018, and 5.1% of the labor force, or about 11.9 million workers, were worked in the sector. According to the experts, the tourist industry and related industries can produce about 10.3% of the GDP and maintain 11.7% of all employment, or 27.3 million workers. Small and medium-sized enterprises (SMEs) are the main providers of tourist services in the regions of EU countries and their activities and financial state are significantly impacted by the tourist industry as a whole. SMEs are crucial to the tourist and hospitality industries in EU countries because their performance influences regional economics, sustainable development, and employment policy. The global economic crisis of 2008-2009 had a significant effect on economies all over the world, and the next essential crisis in the economy and tourism, particularly. The next crisis was related to COVID-19 and the pandemic, which was a reason for restrictions on mobility and services such as hospitality, catering, leisure activities, etc. In this work, the tendencies of the development of tourism sectors were considered in the example of Germany, Austria, Czech Republic, Slovakia, Poland and Hungary. The main purposes of the research were: to use the main indicators available in Eurostat to study the tendencies of the development of tourism during 2011-2022 in the mentioned six countries of Central and Eastern Europe, to apply the methods of descriptive statistics and time series for creation of the simple models and projections of the indicators over next 3 years, to build the multiple regression model with dummy variables to estimate the impact of the factors, including Covid-19, on the net occupancy rate bedplaces, and to create the complex of the recommendations how to recover the activities of SMEs in tourism and hospitality after the period of Covid-19. The results of the analysis demonstrated, that the differences in the values of the main indicators among the mentioned countries were observed and dramatic reduction of the values in 2019-2021, when the negative effect of Covid-19 had occurred on tourism in Europe and worldwide. As a consequence, many SMEs in tourism, hotel and restaurant business were closed or must work with significant limitations. Germany has a leading position in tourism, the values are the highest in comparison with other mentioned countries. The Czech Republic, Hungary and Slovakia have much smaller populations in comparison with Germany, which is why their positions in dynamics of the indicator Nights spent at tourist accommodation establishments by residents are similar and lower in comparison with Germany. A little bit of difference is observed for Poland, where number of population is much higher than in the Czech Republic, Hungary and Slovakia, but lower than in Germany. For all countries from this sample, the negative effect of Corona crisis is observed and evaluated between 2020 and 2021 based on an econometric model.*

**Keywords:** *Tourism, Crisis, COVID-19, Descriptive statistical analysis, Econometric model*

## Digitizing Sustainable Tourism of the Adriatic Ionian Region

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**Abstract:** *Tourism is a major contributor to the Adriatic-Ionian coastal region's economy, culture, and environment. The region's expanding tourist industry has raised questions about sustainability, environmental protection, and visitor experiences. The main idea of this work is that digital technologies and eco-friendly tourism practices may contribute to overcoming tourist industry challenges and realizing the full touristic potential of the Adriatic-Ionian coast. This paper examines the recently adopted notion of "Digitizing Tourism" and how it relates to the Adriatic-Ionian region, as well as on tools being used to increase the sustainability of coastal tourist destinations. Literature review, quantitative and qualitative analysis, comparisons, surveys and other research instruments will be used in this work. The results of this study provide insight into how digital transformation could boost the Adriatic-Ionian coastal region's sustainability and resilience in the face of mounting tourism pressures.*

**Keywords:** *Sustainable tourism, Digitizing, Adriatic Ionian coastal region*

## **Does the European Capital of Culture Initiative Affect Tourism and Local Economic Development? Evidence from Matera**

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**Abstract:** *Often the European Capital of Cultural (ECoC) initiative has contributed to an intensifying debate about cultural policies, that has focused on the justification for using such policies to achieve non-cultural ends such as economic development and tourism. Our work wants to be part of this debate and using Matera city try to analyze the economic impact generated by ECoC. We used a difference-in-differences approach to compare the Italian city, formally designated in 2014 and which hosted the event in 2019, with the other candidate cities. Our research finds that tourist flows, employment and added value increase in the post-treatment years when compared to the pre-treatment years. This leads to a rethinking of the concepts of cultural policies that could benefit from the development of specific guidelines on the effectiveness of public action. Establishing closer connections between the cultural and economic dimensions of the event, primarily addressing the economic sphere of cities, seems to be an appropriate change.*

**Keywords:** *Cultural policies, Economic impact, Tourism, Employment, Difference-in-differences*

## Nautical Tourism as an Incentive for Developing the Island of Šolta Into an Elite Destination

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**Abstract:** *The island of Šolta, situated in central Dalmatia near the towns of Split and Trogir, possesses outstanding natural resources, yet its tourism offerings remain inadequately developed, primarily consisting of non-commercial accommodations. At present, the destination's brand image is predominantly associated with the sun and sea. Given its geographical characteristics, Šolta harbors significant potential for nautical tourism and the development of specialized tourism products. Nautical tourism, with its capacity to elevate the destination's brand image to elite status, emerges as a promising avenue for developing the island as a small-scale economy. Through the application of benchmarking techniques involving comparisons with analogous destinations and monitoring trends in yachting, the optimal development strategy involves establishing mooring facilities for mega-yachts, complete with corresponding auxiliary amenities and services for vessel owners and users. In the establishment of these facilities, nautical tourism plays a pivotal role in positioning the island as an elite destination.*

**Keywords:** *Nautical tourism, Developing the island, Island, Elite destination*

## **Cultural Routes as Main Contributors of Cultural Tourism in Developing Sustainable Tourism Approaches in the Western Balkan Countries**

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**Abstract:** *Used for centuries for transport and goods, routes have certainly created an important 'linear assemble' of common cultural properties since the beginning of the 19th century, with the established of national borders, fragmenting territorial entities by breaking the socioeconomic relationships that allowed the function of the routes. Nevertheless, the development of the cultural routes within historical corridors can be a new approach for a new vision related to the cultural heritage in Albania and the Western Balkan territory as a common value, requiring and opting for transnational affords for its sustainable management. Following this, the cultural routes can be highly possibly defined as a 'common space' for dialogue, enhancing culture as the key role in developing future dialogue. Seen as new and modern concepts withing the framework of interconnecting cultural goods, cultural routes in this case can be suggested as a new mode of connecting these values to develop keen approaches for the Albanian territory and especially Western Balkan Countries. Moreover, the implementation of cultural routes has to be seen as an integration of the common territory through individual tangible and intangible cultural goods which can foster proper management, leading to a multilevel knowledge. Thus cultural routes aim to amplify the local identity by making more apparent its historical and geographical characteristics, creating an important effect on the coherence and cohesion of potential local societies.*

**Keywords:** *Cultural routes, Tourism, Cultural tourism, Sustainable tourism, Western Balkan*

## **Cultural and Historical Heritage as Potential for Tourism Development – Case Study - Museums and Monuments in Kosovo\***

**Dorentina Derguti**

**Abstract:** *This study aims to offer a review of the importance of the cultural and historical legacy of the regions of Prishtina and Prizren. The cultural legacy is important for the development of tourism by attracting tourists and visitors. Taking into consideration the development of the tourism sector throughout the whole world, the relevant matter shall be discussed for its impact, by concentrating on the importance of the cultural legacy. In this study, a measurement system consisting of 18 questions was used whereby 100 people were surveyed at 15 historical monuments. The quantity method has been used in the methodology of this study. The findings of this study have shown the existence of different reasons, which have motivated visitors to visit the museums and historical monuments. Most of the visitors stated, that they had come to familiarize themselves with the culture and history from the immediate vicinity, whereas a good majority of tourists came organized with their families and friends, the rest of the visitors came, because others recommended them or they had never been here before.*

**Keywords:** *Tourists, Culture, Historical monuments, Development of tourism*

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\* Under the UN Resolution 1244.

## Exploring the Future: Sustainable Agritourism and Emerging Technologies in Society 5.0

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**Abstract:** *As society continues to evolve, so does our relationship with the environment, technology, and the way we engage with our surroundings. The concept of Society 5.0 envisions a harmonious fusion of technology and human-centric solutions to address societal challenges. This paper explores the transformative role of emerging technologies in sustainable agritourism. This exploration highlights the symbiotic relationship between technological innovation and sustainable agritourism, presenting a forward-looking view of how these intertwined elements can shape the future fabric of Society 5.0. The study presents a comprehensive overview of the transformative potential of sustainable agritourism in the context of Society 5.0, offering insights into the future of responsible and technology-driven rural tourism. The convergence of sustainable agritourism and emerging technologies within the context of Society 5.0 represents a promising path toward a more sustainable and technologically enriched future.*

**Keywords:** *Society 5.0, Sustainable, Emerging technologies, Agritourism*



## A Cross-National Empirical Study on the Relevance of Economics of State Size Approach

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**Abstract:** *The theoretical foundations of the research at hand are extrapolated from the theory of economics of the state size, which stipulates the trade-off between the benefits of the size versus the costs of heterogeneity of population preferences. If we limit the extrapolation of this theory to the consequences for the public sector, the approach stipulates that per capita costs of several public goods and services should be lower for larger states, either because more taxpayers can pay for them, or they have important scale economies or simply because the indivisibility is not implicitly increasing them. In contrast, larger states might also experience some costs that come from the heterogeneity of the population, which means that different preferences should be followed, which increases the distributional costs. There have been numerous, mostly empirical studies performed to explore how the size of a state relates to the size of the government. The results obtained are often sensitive to using different datasets, time-frames, and sampling changes conclusions. To provide additional empirical evidence and, simultaneously, utilize the size of states as a variable in comparative institutional analysis, the paper proposal at hand aims to explore how the size of a state relates to the size of the government. This study takes the state size as an independent variable. The cross-sectional comparative empirical analysis, utilizing the ANOVA approach, is based on the data for 162 countries, which are split into four clusters, ranging from (officially) small to large states. The findings indicate that the scale economies effect can be observed only for governmental consumption spending, and, as such, the sampling itself does exhibit an effect on the outcomes of empirical research.*

**Keywords:** *Economics of state size, Government expenditures, ANOVA, Scale economies*

## Modeling Direct and Indirect International Trade under the Second Unbundling

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**Abstract:** *In most macroeconomic theories and studies, developed under the “first unbundling” (the term coined by Richard E. Baldwin), international trade has been historically perceived as a direct money-based (eventually barter-based) exchange between two countries and two goods (the so-called 2x2 model). However, the onset of the modern form of globalization (the so-called “second unbundling”) in the 1980s and the new trade policy trends (the prevailing trend for trade liberalization, more non-tariff protectionism, frequent economic sanctions, etc.) brought about a variety of new phenomena in trade operations such as intra-industry, intra-firm, and value-added trade (all of which received most of the attention in literature) as well as an increase in non-traditional ones such as re-exports, re-imports, new forms of transit, offshore trade, etc. (which remain outliers in trade-based research). This paper attempts to introduce an accommodating the “second unbundling” conceptual and formal “general” theory of international trade, introducing the 3x2, 2x4, and 3x4 models within the Ricardian, Heckscher-Ohlin, and gravity frameworks, both in comparative static and econometric terms. The paper also discusses the recent developments in econometric methodology, namely spatial econometrics, and its potential to estimate the described relationships. The paper is predominantly a theoretical contribution, which offers a most needed update for macroeconomic theory, which, up till now, has yet to reflect the topic. Since, paraphrasing Baldwin’s quote on statistics, modern economics lacks proper models for the “second unbundling” as the existing ones were designed for its predecessor.*

**Keywords:** *Direct trade, Indirect trade, Ricardian model, Heckscher-Ohlin model, Gravity model*

## **Bilateral Trade Performance and Untapped Trade Potentials between North Macedonia and Croatia**

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**Abstract:** *The main aim of the paper is to empirically investigate the bilateral trade performance between North Macedonia and Croatia and to identify the untapped trade opportunities and potentials between both countries. The research methodology applied to explore the bilateral trade performance is based on growth sources analysis of bilateral trade at the product level, while the identification of the untapped bilateral trade potentials is based on the methodology developed by the International Trade Center (ITC). This methodology estimates the Export Potential Indicator (EPI) at the product level between both countries. The results of the empirical analysis of bilateral trade between both countries indicate that the average growth rate of Macedonian export to Croatia in the last five years is 6.8%, while the Croatia growth rate of export in North Macedonia in the analyzed period is 4.1%. The bilateral trade between both countries is highly concentrated and it is based on the small number of products. The Macedonian export structure to Croatia is dominantly based on food products, wine, metal tubes, flat-rolled products of iron and not-alloy steel and other metal products, while the Croatian export structure to North Macedonia is based on medicaments and cosmetic products, chemical products, food products, fluting paper, electrical parts and others. More importantly, the preliminary results of the empirical analysis based on the ITC methodology indicate significant untapped trade potentials between North Macedonia and Croatia. Hence, the policymakers in both countries should create a better economic, trade, and business environment for utilizing these trade potentials.*

**Keywords:** *Bilateral trade performance and untapped potentials, North Macedonia, Croatia, Export Potential Indicator (EPI)*

## Modeling Foreign Value Added in the Consumer's and Producer's Equilibrium under the Second Unbundling

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**Abstract:** *The emergence of a new form of supply networks, the global value chains (GVCs), in the 1980s, caused by what Richard E. Baldwin described as the “second unbundling”, has intensified trade in intermediate goods, services, and tasks, leading to the presence of foreign value added in at least a part of goods and services traded in an open economy. Therefore, consumers and producers are now more and more choosing between final/intermediate goods and services of mixed origin rather than between purely domestic and imported ones as before the “second unbundling”. This new reality begs the question of whether there is such a thing as an equilibrium share of foreign value added in an economy at the microeconomic level and how it can be derived in mainstream comparative static methodology from the consumer's and producer's equilibrium. This paper proposes such a method of disaggregation (matching Baldwin's logic of “unbundling”), preserving the assumptions of each respective equilibrium theory. For the consumer's equilibrium, the solution is inspired by Lancaster's theory of attributes, accommodating mainstream economics' relevant criticism of the approach. In both cases, the end result is a three-dimensional consumer's and producer's equilibrium model formed by replicating the equilibrium methodology along the newly constructed subdimensions, accompanied by arguments explaining its appropriateness. The paper also discusses the possibility of deriving macroeconomic models from the suggested microeconomic foundation and statistical ways/data for calculating/estimating the share of foreign value added in an economy from national accounts. The paper is predominantly a theoretical contribution, which offers a most needed update for microeconomic theory, which, up till now, has not reflected the topic. Since, paraphrasing Baldwin's quote on statistics, modern economics lacks proper models for the “second unbundling” as the existing models were designed to match the “first unbundling”.*

**Keywords:** *Foreign value added, Characteristics demand theory, Consumer's equilibrium, Producer's equilibrium*

## An Alternative or New Economic Model Is BRICS

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**Abstract:** *In a report by Goldman Sachs, one of the oldest investment banks in the world, founded in 1869 in the United States, since 2009, and looking at opportunities for economic development and growth in Brazil, Russia, India and China, for the first time BRIC appears, as an acronym of the first letters of these countries. In 2010, they were joined by South Africa and BRICS was obtained. This union, group, or bloc represents over 40% of the world's population and over 25% of the world's economy. About a month ago, BRICS took a new course of development, accepting as new members Saudi Arabia, UAE, Iran, Egypt, Argentina and Ethiopia, thus forming a solid and powerful economic grouping that could soon oppose the G-7 and there is a serious request to regroup the world economy. Goldman Sachs predicts that by 2032 the total growth of the BRICS economy may exceed the growth of the richest countries in the world from the G-7, and according to some Russian analysts, the contribution of the BRICS to the total world economic growth already exceeds 50% and is the largest consumer market with a population of about 2.8 billion people. The BRICS group has moved to use local currencies in global trade to reduce its dependence on the US dollar, thereby supporting its economies. In particular, the Chinese yuan and the Indian rupee were accepted for cross-border transactions, reducing dependence on the US dollar. This also calls into question the security of the dollar, which with further expansion of BRICS is likely to lead to serious losses for the US currency, as well as a decrease in its influence on a global scale, which already seriously worries the US and threatens its economic and global dominance.*

**Keywords:** *Economy, Economic bloc, Currency, Development and trade*

## **Economic Impact of COVID-19 and the War in Ukraine on the European Union**

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**Abstract:** *The objective of this paper was to explore the economic effects of the COVID-19 pandemic and the war in Ukraine on the twenty-seven European Union (EU) member states, known as the EU-27. A vector autoregression (VAR) of quarterly data for the period 2020–2022 was employed to study the impact of the coronavirus and the Russian invasion of Ukraine on growth, unemployment, and inflation in the EU-27. The results from the empirical analysis indicated that the war in Ukraine lowered growth and raised inflation and unemployment, while the COVID-19 pandemic did not affect growth, increased unemployment and decreased inflation in the EU-27. It may be concluded that the war in Ukraine shifted the EU aggregate supply curve to the left, whereas the coronavirus pandemic resulted in inflation-unemployment trade-off in the EU.*

**Keywords:** *European Union, COVID-19, War in Ukraine, Economic effects*

## **Assessing the Interaction between Financial Stability, Economic Development and COVID-19 Response: A Macroeconomic Analysis of European Countries**

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**Abstract:** *The COVID-19 pandemic was considered an exogenous shock, as no economist anticipated that it would occur at the start of 2020. Now, nearly three years after the spread of the coronavirus, numerous researchers are seeking answers not only to the question of how this occurred but also, more importantly, to the question of what the financial repercussions of the coronavirus pandemic are. Every country within the European Union has responded in various ways to prevent the spread of the virus and even if the pandemic can be considered to be over, the economic uncertainties make the work of policy-makers increasingly challenging.*

*The correlation between financial stability and economic development has been well-acknowledged in the field of economics. The existence of a resilient financial system is vital in facilitating the distribution of funds to stimulate economic growth. At the same time, the establishment of a solid economic development plan serves as the basic foundation for ensuring financial stability. The current research aims to address two primary inquiries: (1) to what extent may economic development and financial stability be regarded as crucial characteristics in the mitigation of adverse consequences resulting from the pandemic across various nations? and (2) what is the current situation in developed and emerging economies precisely three years after the onset of the pandemic?.*

*The study focused on the European Union members and the empirical analysis was conducted on monthly frequency data. In order to study the relationship between financial stability, economic development and the response to the COVID-19 pandemic, a panel data econometric model was implemented to analyze both cross-sectional and time-series variations across investigated countries.*

*This study outlines the complex decision-making process undertaken by policymakers as they handled the fragile equilibrium between maintaining economic stability and resolving health concerns. The findings emphasize the significance of financial stability and economic development as crucial factors in risk mitigation. Moreover, the pre-pandemic period served as a significant indicator of the nation's ability to withstand challenges and adapt to adverse circumstances.*

**Keywords:** *COVID-19 pandemic, European Union, Financial stability, Economic development*

## Correlation among ECB Interest Rates, Inflation and GDP in Eurozone

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**Abstract:** *The Eurozone, like other regions, faced inflationary pressures and slow economic growth. This is due to several factors, mainly supply chain disruptions as a consequence of the COVID-19 pandemic, geopolitical tensions and rising energy prices. The ECB has taken forceful action in response to the unprecedented surge in euro area inflation, as well as measures to promote economic growth.*

*This paper investigates the intricate relationship among the European Central Bank interest rates, inflation and Gross Domestic Product growth within the Eurozone. This trinity of economic variables lies at the heart of monetary policy decision-making in the Eurozone.*

*The analysis begins by exploring the mechanisms through which changes in ECB interest rates impact the broader economy. Lower interest rates, by reducing the cost of borrowing, stimulate consumer spending and business investments, potentially fostering inflationary pressures. Conversely, higher interest rates can curtail borrowing and investment, potentially dampening inflationary trends. In addition, stable and moderate inflation can be conducive to economic growth by promoting consumption, however, excessive inflation can erode purchasing power and disrupt economic stability.*

*Empirical analysis in this paper provides quantitative insights into the complex interactions between these variables, examining the strength, direction, and duration of their effects.*

*The findings from this paper offer a comprehensive understanding of how ECB interest rates impact inflation and GDP growth in the Eurozone, taking into account the multifaceted nature of these relationships. Results obtained from the analysis may help economic policymakers to ensure a balance between price stability and sustainable economic growth.*

**Keywords:** *ECB interest rates, Inflation, GDP growth, Eurozone*



## The Philips Curve in Bulgaria: Is the Trade-Off between Inflation and Unemployment Possible?

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**Abstract:** *The objective of this paper was to estimate the inflation-unemployment nexus and the opportunities for inflation-unemployment trade-off in Bulgaria. An ordinary least squares (OLS) regression of annual time series data for the period 2003-2022 was employed to test the Philips curve hypothesis for Bulgaria. The results from the empirical analysis showed that: (i) a negative relationship (both linear and non-linear) exists between inflation and unemployment in Bulgaria; (ii) Bulgarian policymakers can decrease inflation by three percent at the cost of a one percent increase in unemployment by implementing restrictive macroeconomic policies.*

**Keywords:** *Bulgaria, Inflation, Unemployment, Philips curve*

## The Features of the Development of the Main Indicators in Industry on the Example of Germany, Austria and Slovakia

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**Abstract:** *Industry is a major force in growth and Europe, employs some 32 million people, and another 30 million work in industries associated with it. The European economy focuses on the new challenges for industrial development and its long-term competitiveness. In this study, three countries of the EU (Germany, Austria and Slovakia) were selected for the analysis of the development of industry. These countries were chosen due to the important role of industrial sectors in the formation of GDP and employment. In addition, Germany and Austria, and Austria and Slovakia have joint borders, which is important for the analysis of spatial effects and diffusion of the investments and technologies from the west to east, and migration of labor force in opposite direction. The main objectives of this study are: based on the main indicators from Eurostat to characterize the role and long-term tendencies of the development of industry in the mentioned three countries; to reveal the features of the development of the industry in these countries using the calculation of growth rates and ratios for the main indicators; to define the regimes of the industrial development using cluster analysis and to apply the integral index for the evaluation of the industrial development in these countries for the comparative analysis and projections. The main indicators of the development of the industry were analyzed in the long-term period, from 2000-2020 years, and the basic models for the time series were built, the projections for the main indicators are made for the next 5 years. Based on the cluster analysis the similar groups of the states of the main indicators were revealed and defined as the certain regimes of the development of industry in the given countries. To take into account the set of the main indicators of the industry in these countries and to provide a comparative analysis of the complex situation the integral indices were calculated and the features of the development of the industry were characterized. Nevertheless, qualitative indicators should be introduced for the description of the states or regimes of the development of industry. The other models such as VAR or spatial econometrics models have the reasons to be tested and the complicated time or spatial effects should be revealed. Similar studies of industrial development should be carried out for other countries of the EU and the impact of the industry on the formation of GDP and employment policy should be analyzed. The necessity for reindustrialization and the variations in the industrial base development among Member States should be considered in the industrial policy. Therefore, it should provide tools that are suited to the requirements of the relevant industries and regions, enhancing the competitiveness of the entire Union. It must support the digital transformation of industrial production techniques through a financing program for their digital transformation and with a focus on a skilled labor force, which gives it a competitive edge over other regions of the world economy.*

**Keywords:** *Industry, Development, Employment, Cluster analysis, Integral index*

## The Infrastructure-an Indicator of Sustainable Development and Consumption in Integrated Plans of Bulgarian Cities

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**Abstract:** *This paper focuses on urban infrastructure as an indicator of sustainable consumption at the city level. To achieve the objective of the study, three cities in Bulgaria were selected - the capital city - Sofia, a large regional city - Varna and a small university city - Svishtov. The aim is to establish the presence or absence of regional differences by comparing the municipalities' integrated development plans for 2021-2027\*. Energy efficiency programs and their implementation are analyzed. The results of the study can serve as a guide for future comparative analysis of sustainable urban development strategies within the EU and an examination of the impact of these strategies on the achievement of its various objectives.*

**Keywords:** *Sustainable urban development, Sustainable consumption, Urban infrastructure, Integrated municipal development plan, Energy efficiency*

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\* The plans under consideration are part of the strategy of the Ministry of Regional Development and Public Works of Bulgaria, synchronized with EU policies to achieve sustainable development goals.

## The Impact of the Dynamics of Public Revenues on the Movement of Public Debt in the Republic of Serbia

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**Abstract:** *General fiscal developments in 2023 do not go in the direction of balancing public finances in the Republic of Serbia, as they indicate a noticeable decline in economic activity resulting in slower tax revenue collection, keeping in mind that the positive impact of the inflation on the tax collection has already almost fully drained out. Namely, in the same year when tax revenues are increasingly difficult to collect an interannual real decrease of 2.7% is recorded. As a result of both negative movement of the economic activity and lower tax collection, an increase in the public debt is visible already in the first quarter of 2023. On the other hand, due to the high inflation rate, all public expenditures except pensions are experiencing a strong year-on-year real decline. In brief, both nominal and real decreases in public revenues are present and deepening due to a downturn in economic activity. The same behavior is visible in public expenditures, primarily caused by high inflation. The growth of public debt in 2023 was significantly higher than the fiscal deficit of the first quarter, predominantly due to government policy oriented towards borrowing for future public expenditures together with the provisions needed as guarantees. Planned discretionary measures by the state, such as financial aid for parents with children under the age of 16, additional increases in salaries, pensions and agricultural subsidies threaten to further burden public expenditures by approximately 500 million euros this year only. Eventually, the public debt of the Republic of Serbia has increased by 11.3 billion euros over the past three years. Furthermore, the deteriorating country's borrowing conditions indicate a negative trend in the upcoming years. Therefore, it is necessary to pursue a low deficit policy as it is one way of curbing inflation.*

**Keywords:** *Public revenues, Public debt, Inflation, Fiscal movements, Fiscal deficit*

## Impact of the R&D Tax Credit on the Portuguese Manufacturing Sector

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**Abstract:** *This research explores the impact of R&D tax credits on the distribution of full-time equivalent staff in 2980 Portuguese manufacturing firms that performed R&D at least once from 1995 to 2017. In contrast to aggregate or sectoral approaches, the analysis relies on comprehensive firm-level data. Utilizing the official business R&D survey database, variables such as the full-time equivalent staff, PhD holders, and R&D expenditure are examined. Employing a Difference-in-Differences with an event study and a staggered design for temporal analysis, the impact of introducing a tax incentive scheme for corporate R&D in the manufacturing sector is evaluated. Results reveal a positive effect of the tax credit, with varying average impacts based on the duration of exposure per firm. These findings mirror similar positive outcomes observed in France in 2004 and 2005, where firms benefiting from the Jeune Entreprise Innovante scheme exhibited higher annual employment growth. The study contributes to understanding the effectiveness of R&D tax credits in shaping the distribution of the full-time equivalent staff in manufacturing firms and provides insights into potential policy implications.*

**Keywords:** *R&D, Tax incentives, FTE staff, Firms*

## Financial Management and Financial Operative in the Mineral Economy

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**Abstract:** *The modern business conditions of the mineral sector and the production of various metallic, non-metallic and energy mineral raw materials are additionally more complex, unfavorable and financially complex in crisis conditions. Apart from the problems in material support and logistics for mineral production, the managerial and economically complex financial conditions of business operations of mineral sector enterprises are particularly burdensome. Complete material, economic and financial flows are at a certain operative level of consideration of the manifestation of action of the legality of the mineral economy at the macroeconomic level of the country. The complexity of the structure of the mineral-raw material base, the variety of available geological, economic, exploitation and industrial mineral reserves and the varying degree of operative readiness of production and processing capacities directly affect the realization of the economic and financial results of business operations of mineral sector enterprises. Considering the aggravating strategic conditions due to the Russian-Ukrainian military conflict, the lateral consequences of the European and American sanctions imposed on Russia, as well as the growing inflationary trends, the issue of financial management and financial operative within the mineral economy is of prime importance in current economic analyses. The financial management function, on the one hand, includes activity in the enterprise of the mineral sector to secure the necessary financial resources for carrying out mineral production in the process of production reproduction. On the other hand, financial operatives also include specific services in mineral sector enterprises, whose jurisdiction is the performance of financial affairs as part of the financial management function. In accordance with management principles, the organization of financial function activities includes: (a) preparation; (b) execution; and (c) control. The preparation primarily includes the preparation and provision of funding sources, which are reduced and less available in crisis conditions with mandatory smaller or larger reductions. The execution includes the supply of the necessary financial resources to all services in mineral sector enterprise, which need them for the performance of work and tasks as part of the cycle of mineral reproduction. If the necessary sources have been provided through preparation, the supply itself is accompanied by minor problems, as a consequence of the periodic arrival of the necessary financial resources. The control refers primarily to the expediency of the distribution of financial resources to individual services and the control of the expediency of their use in their business operations. In the current crisis conditions, the control of expediency is particularly intensified to reduce or abolish non-purposeful and non-productive spending of financial resources. In the business operations of the enterprise, the financial function must provide the basic economic principles of mineral reproduction and mineral economy, which affect both the enterprise as a collective and individuals as direct executors, who perform the direct process of work in mineral production. The financial business operations of mineral sector enterprises represent the financial expression of the subject mineral production and mineral reproduction, through which management and financial functions in the enterprise are connected organizationally and managerially, through the appropriate services and employed individuals engaged in the execution of mineral production. In the subject analysis, a special part of attention should be paid to the economic analysis of the business operations in the part with the analysis of key influential factors, in order to achieve the principles of reproduction in financing and fully satisfy the principle of liquidity, regardless of the degree of action of disruption and crisis factors, with the ultimate goal of provision of successful business operations of the enterprise of mineral sector.*

**Keywords:** *Financial management, Financial operative, Mineral economy, Mineral market, Mineral production*

## Risk Management of Anthropogenic Disasters in Modern Conditions of Material Production

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**Abstract:** *Modern challenges of the market and competition in the material production of various products require special forms of responsibility in the performance of work and tasks in the company, especially in the part of dealing with different types of risks. Preventive as well as management activities require special risk assessments, their monitoring and especially management, in order to prevent catastrophic consequences for people, and material resources, but also consequences for the company's business operations. In such conditions, among other management functions in companies, risk management of anthropogenic disasters appears as particularly relevant. Successful risk management should, according to the basic and operative principles of management, ensure the implementation of the appropriate business policy of the company aimed at targeted and modern risk management. As such, to take immediate action it is necessary to identify risks, measure the frequency and impact of risks, monitor risks, reduce risks and diversify risks in order to ensure a reliable business environment for carrying out material production and business processes. All employees of the company, as a basic economic entity, have an important role in the risk management process, whereby the primary obligation and responsibility is of the management team of the company, considering their main and guiding management role. With appropriate changes in the business process and business model, according to the requirements of production, market and competition, there may be a change in the field of action of the risk management model. Risk management of business processes appears as part of a comprehensive management approach to business operations, which through successful risk management provides the opportunity to react to changes in the environment, increase the probability of achieving strategic business goals and achieve an acceptable level of risk. Risk management, according to the standards for risk management, includes a set of components that provide the basic and organizational arrangements for planning, implementation, monitoring, surveillance and continuous improvement of risk management in the entire company as a production organization. Risk management involves maximizing the probability and impact of positive events and minimizing the probability and impact of negative events on the fulfillment of the company's business goals. Risk management is a central part of a company's management activities and treats all types of risks in the company's business operations in the past, present and future. For risk management, the manager must observe risk from the scientific and practical side, and calculate and measure risk. A generally accepted way to calculate risk is the representation of functions of impact and probabilities. The manager should be able to decide on the basis of numerical data in which cases the potential benefit outweighs the measured potential losses and make a decision that allows the company to achieve positive results. Top management sets risk limits based on risk assessment and capacity, while lower levels of management identify, assess and manage risk, audit risk and monitor the emergence of new risks, and develop procedures and policies for risk management. Risk management allows management to achieve business performance and business profitability, reduce the loss of resources, enable the effective execution of professional obligations and increase the probability of achieving strategic goals.*

**Keywords:** Risk management, Security, Anthropogenic disasters, Material production, Company business operations

## Enhancing Stock Market Prediction with Advanced Sentiment Analysis of News

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**Abstract:** *This article explores the constantly changing world of stock market forecasts, which is influenced by global dynamics and technology breakthroughs. The authors examine the revolutionary effects of cutting-edge sentiment analysis methods on forecasting accuracy. Cutting-edge techniques, including hybrid word representation, machine learning, and deep learning address sentiment analysis's most pressing problems. The authors aim to explain the revolutionary potential of comprehensive sentiment analysis algorithms and provide financial professionals and investors with information. In today's complicated financial environment, these models enable better-informed judgments by increasing transparency and understandability in financial sentiment analysis. The authors also emphasize the growing importance of news data and cutting-edge algorithms for better prediction accuracy. The analysis uses various technologies, such as natural language processing, sophisticated neural networks, and hybrid word representation models. These speak to racial disparity and the difficulty of understanding financial jargon. Data-driven strategies and integrating new language models were also discussed to improve accuracy.*

**Keywords:** *Sentiment analysis, Prediction, News*



## **Non-financial Information Indicators on Esg Aspects (Environmental, Social and Corporate Governance). A Study Applied to the Entities of the Third Sector of Social Action (ETSAS) of the Basque Country in Spain**

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**Abstract:** *In recent years, companies are increasingly required to provide information on their economic performance, but also on their sustainability, i.e. their environmental, social and corporate governance performance and risks. In the specific field of Non-Profit Organizations (NPOs), the economic decisions of stakeholders that can be considered as the most important are mainly directed toward the choice of the entity to which to donate resources. All of this is for this entity to carry out a certain public service activity that benefits the community and the individual people who receive it so that the information reported by the entity is key in terms of the entity's signal and legitimacy about its activity in a stakeholder approach. Research on NPO accountability has received much attention in recent years. However, it is still a complex and often fragmented body of research (Pilon & Brouard, 2022). The authors propose a broad conception of accountability, centered on stewardship theories, democracy theory, and stakeholder theory, which can be viewed as a strategic process ("how") to provide information based on felt responsibility ("why") to downstream stakeholders ("to whom") (Pilon & Brouard, 2022). The aim of this work is, firstly, to select the main indicators for Third Sector Social Action Entities (TSAS) to be able to report on the impact of their activity, both in social and environmental terms, as well as in terms of good governance. To this end, a survey has been carried out among the ETSAS of the Autonomous Community of the Basque Country to gather their opinion on which indicators are most appropriate for this sector. Secondly, we want to contrast which organizational factors are, and to what extent they influence the choice of these indicators in the different environmental, social and corporate governance areas. Based on a review of the literature and the recommendations of different organizations, we have made a pre-selection of indicators to survey the managers of the ETSAS in order to consider the suitability of reporting information on the indicators (Table 1). Subsequently, the indicators were grouped into blocks, according to their content, to facilitate statistical treatment. The results were obtained through a survey of 115 organizations in the Third Sector of Social Action. Thus, 4,715 observations of opinion on the possible indicators were used. The measurement of the indicators studied for each of the entities analyzed has a specific Likert scale weighting from 1 to 5, being 1: not at all in agreement and 5: totally in agreement.*

*The ETSAS will be able to report information on the results of their actions in a more verifiable and comparable way and will highlight their contribution to the sustainable development of the entity and its environment, as well as to the achievement of the SDGs. This will make it easier to measure and monitor the actions they are taking and identify the priorities they need to take on, real change, linking risk management and new business models; inform stakeholders about their contribution and impact on sustainability.*

**Keywords:** *Third-social Sector, Sustainability, Indicators, Determinants, NPOs*

## **Application of Digital Tools Assessing Information Risk in the Control Activity**

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**Abstract:** *This paper discusses digitizing the leading information flows in control activities. The focus is on applying technology and its integration in implementing forms of control. The aim is to argue for practical approaches to minimise information risk in pre-, ongoing and post-control to ensure the accuracy and veracity of financial and non-financial information. Evaluating the effectiveness of data ensures integrity, consistency, validity, completeness and timeliness - applying digital risk assessment tools to control activities. To prove the hypotheses, the cross-tabulation method is applied, focusing on the relationship between the use of verification, inspection, audit, revision and supervision, and the digital tools applied in the control institutions implementing financial control in the public sector of the Republic of Bulgaria.*

**Keywords:** *Control process, Risk assessment, Digital tools*

## Sustainable Development of External Audit in Montenegro

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**Abstract:** *The strategic assessment of audit firms' operations has progressed and contributes to continuing with more scopes and operations of the application of ISA as well as other reporting in daily work, as a goal of sustainable development of organizations in auditing.*

*Having carefully considered various options, it is believed that changes in the environment, build businesses that will redefine the future of our professions, create new opportunities and create greater long-term value for people, clients and the state.*

*The next steps include continuing to work with partners to provide them with the necessary information before giving an opinion.*

*The audit is changing and must be adapted to the new security requirements through the application of certain accounting and auditing standards that will be presented in this work.*

*In this way, we would continue to progress and realize our full potential by responding to the needs of all audit users.*

*All stakeholders - including clients and their investors, audit committee members and regulators - are encouraged to continue to collaborate on the strategy, as well as on all issues covered by the audit firm's sustainable development report.*

**Keywords:** *Audit, ISA, Sustainable development, EU*

## Schengen as an Example of the Totally Failed EU Common Policy

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**Abstract:** *The EU has never been short of grandiose strategies and common policies like the Euro & Eurozone, CAP, GDPR, and all sooner or later failed. To this category momentarily belongs also Schengen as a system for the protection of external borders of the EU and guaranteeing free movements within the EU internal market. But since the first massive inflow of illegal migration into the EU in 2015 and especially now the Schengen has become a complete antithesis and total failure of its original intentions and objectives as illegal migration has opened “doors” to the EU violating any elementary requirements of Schengen like necessity having a valid passport, visa obtained in advance before entering the EU, enough money for the entire staying, medical certificates if coming from infected countries, etc. The FRONEX as a specialized EU agency for protecting external mainly sea borders of the EU has instead of its protecting function has been “saving” boats with illegal migrants and bringing them to the shores of the EU together with their smugglers. But there is no confiscation of those boats as instruments of smuggling and no jailing of smugglers as required by international laws for fighting against organized international criminality. On the other hand, given this alarming situation with the never-ending enormous inflows of illegal migrants (mostly young men), the EU member states are closing their borders for any free movements within the Internal market of the EU. Hence, in practice, the Schengen has been functioning and applied only against EU citizens traveling outside the EU or returning to the EU. The most cynical violation of any elementary principles of the Schengen is the case of children. While EU citizens need to obtain notary certification that confirms parental consent for their children to be taken out of the Schengen area by relatives or other individuals, thousands of children are brought into the EU without any documentation. These children are often smuggled in by traffickers to receive more lenient treatment from border guards and asylum officers. In the paper, it will be presented in more detail this shameful situation with this EU common policy, being by the way enshrined directly in the EU Amsterdam Treaty that has been representing one of the integral parts of the primary i.e. constitutional legislation of the EU. Hence, the EU that so much underlines the necessity to respect laws and all kinds of legislation by its members and partners, not only in this case has not been able to respect even its primary constitutional legislation.*

**Keywords:** *Schengen, Amsterdam Treaty, Smuggling, Organized crime*

## Some Considerations Regarding Expropriation for the Purpose of Public Utility

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**Abstract:** *According to the legal provisions, the amount of compensation granted to the owner of the expropriated land must be fair, and equitable, corresponding to the real value of the property subject to expropriation. In judicial practice, it has been shown that expropriation, being, in reality, a forced sale, in which the seller's consent is not required by law, considering the generally beneficial effects of the public utility that will be affected by the property, it is right that the compensation for the expropriated property to include not only the price equivalent to the price at which the good would normally have been sold, in the case of an ordinary sale, consented to by both parties, but also the possible damage caused to the owner/seller, represented by the possible benefit that he was deprived of as a result of an untimely expropriation, in relation to the works carried out and which were supposed to bring a certain and predictable benefit.*

**Keywords:** *Expropriation, Compensation, Damage, Benefit*

## The Impact of Conflict Between Russia and Ukraine in Western Balkans

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**Abstract:** *The Russian invasion of Ukraine is having major geopolitical consequences in the Balkans, further emphasizing the political divisions between the political forces operating in this region. Russia's 2022 invasion of Ukraine has put the Western Balkans on the spot again, pushing their governments to take a clear stance towards their historical ally, while the EU has tried to give new impetus to the enlargement process and has reinforced its presence in the region. The countries of the Balkan region, excluding Serbia, mainly have an opinion against Russian military intervention, defining it as unfair and not legal. Regardless of this attitude, it must be said that Russia, due to religious, cultural, and economic ties, has a great influence in other countries as well, such as Montenegro, and North Macedonia, and less so in Bosnia and Herzegovina. Serbia has not joined the Western sanctions against Russia, although it emphasizes the intention to join the European Union. In this context of developments, the countries of the European Union must be stable and coherent for the full and faster integration of the Western Balkans countries in the European Gulf, to avoid Russian influence in this region. Such actions would support pro-European politicians in the region and further peacekeeping and reconciliation missions.*

**Keywords:** *Western Balkan, Geopolitical, Conflict, Influence, Impact*

## Organisations Management in the Digital Era

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**Abstract:** *As it moves beyond the tech department and into the boardrooms of leaders across businesses, sectors, and countries, digital transformation is no longer a specialized concern. The current digital era is merely a stage in the evolution of a society made possible by the rapid adoption of technology at the place of labor. The digital age is evolving at such a rapid rate that it is fundamentally altering how businesses, whether in the public or private sector, conduct their operations and forcing them to think differently about service delivery, which has an impact on how operational models are created. Because of this, the HR departments in these firms have experienced significant changes in their roles and in developing fresh methods for managing people. It's vital to establish certain organizational implications of the digital economy before delving into the consequences for HR functions: Responsibilities are moving closer to the places where decisions are most useful: Organizations are becoming leaner and flatter. Outcomes have always been a priority for leaders. The digital transition has brought about technological advancements that make it simple and quick to gauge and assess a decision's validity. In the digital economy, employees must be mobile and flexible to be relevant. Because of this, internal and international migrations are more enticing to both businesses and people and competencies are transferable. However, the conflict in HR is no longer just between value addition and cost reduction. Instead, the organization's changing nature, employees' increasing reliance on technology, and the following disruptive themes will soon be the focus of HR: the massively popular digital trends of cyber, data, cloud, social, and mobile, among others; a workforce that spans several generations, including Millennials or first-generation digital natives; combining business and personal life with personnel who are always connected; the emergence of a new group of personnel with digital skills; digital change is stressing business models; the idea that an employee is the company's first consumer of its brand. As it plays a significant role in defining the organization's digital identity, HR needs to be more proactive concerning digital transformation. The ability to integrate the proper people into a dynamic organizational context and support current employees and executives in acquiring new digital competencies in order to be able to drive change are all challenges and areas of genuine complexity in the digital economy.*

**Keywords:** *Digital transformation, Technology, Business models, HR department role, Digital competencies, Value addition*

## **Employee Engagement in Republic of North Macedonia in the Post-covid 19 Era: Some Empirical Evidence**

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**Abstract:** *The paper aims to research employee engagement in the Republic of North Macedonia. To achieve this goal, the instrument for measuring organizational and job engagement developed by Saks (2006) has been used on a sample of 104 respondents. The results from the regression analysis indicate that perceived organizational support and job characteristics, as well as gender, are statistically significant predictors of organizational engagement, while job engagement can be predicted only with job characteristics. Furthermore, the results indicate that organizational engagement is statistically significantly and positively related to organizational commitment, job satisfaction, and organizational citizenship behavior, while job satisfaction is positively and statistically significantly related to organizational commitment and organizational citizenship behavior. Intentions to quit can be predicted only with organizational engagement, and as expected this relation is negative.*

**Keywords:** *Organizational engagement, Job engagement, Engagement management, HRM practices*



## **Emotional Labor: Prevalence and Analysis of Its Contextual Factors**

**Mahir Jibril Ahmed**

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**Abstract:** *The transition of the world economy from manufacturing to service has added further layers of complexity to present workplace dynamics. Following this transformation, emotion turned out to be a key driver of well-being, and many other organizational behavior cause factors. The role of emotion as part of organizational behavior is an overlooked phenomenon in the realm of empirical research and mainstream organization behavior theories. Understanding and bringing emotion as an explicit and conscious experience is not only a tough job but requires too transcending the conventional research tradition. In doing so, positivist and neo-Marxist paradigms were fused in this research to perform reflexive analysis. The research attempted to explore the prevalence of emotional behavior and its implications for the well-being of workers. Hospitality sector employees who work at international and local hotels operating in Ethiopia were the target of the investigation. Survey, phenomenology, and interview methods served as data collection instruments. An in-depth interview was conducted to run a thematic analysis, and survey data was collected from 411 questionnaire respondents. It was proved that front-of-fice workers were burdened with the highest level of emotional pressure than those working in administrative positions. As part of the major finding, female workers are associated with higher levels of emotional labor than their male counterparts. As part of the core Ethiopian culture, the social conformity tendency was found to have a strong bearing in reinforcing the display surface acting in workplaces. In the broader context, modern-day workplaces are turning, not much visibly though, into a dystopic setting where exploitation form has changed from physical-to-soul.*

**Keywords:** *Emotional labor, Exploitation, Wellbeing, Work alienation*

## **Digital Social Contacts on the Balkans: A Review of Major Results from Round 10 of the European Social Survey (2021)**

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**Abstract:** *The paper suggests selected empirical results about a variety of issues related to the expanded practices of digital social contacts during the years of Covid pandemic. It utilizes nationally representative sample data from Round 10 (2021) of the European Social Survey conducted in over 30 countries, including a selection of Balkan states. Particular interest is put on the way communications between individuals have been maintained via information technology channels compared to those before the coronavirus pandemic. The major differences between Balkan countries are outlined and discussed accordingly.*

**Keywords:** *Digital social contacts, European Social Survey, Balkan countries*

## Consumer Preferences and Reactions to Brand Expansion

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**Abstract:** *Consumer behavior is determined by various factors, and one of the most important influences is the consumer's purchasing power. Consumer preferences have an impact on choice and purchase decisions. Perceived value for the customer is his overall impression related to the quality of the product and the price the customer is willing to pay for a particular product. The customer's perceived value represents the consumer's opinion about how much the product is actually worth. Consumers according to the available information at their disposal about a certain product and their previous experience, form their opinion when deciding whether to buy a certain product or not. The perception of consumers towards different product brands is different depending on the market position, the category they belong to, and the image that accompanies them. The perceived value of premium brands for the majority of consumers is high; therefore, they most often consider premium brands worth buying. Perceived value influences the acceptance of new brands or the acceptance of brand product line extensions. Horizontal expansion of the brand is introduced in completely new categories, and products or by expanding existing production lines by introducing new products within the same line. In vertical expansion, expansion refers to the expansion of a brand within the same product category, with the product having a different price-quality ratio compared to the base brand. Intending to meet the needs and wishes of consumers, companies often decide on vertical expansion of products to higher or lower levels. Vertical expansion to a higher or lower level is preceded by a change in the price and achieved quality of a certain product in relation to the base product. The product manufacturers aim to increase their range of products on the market and achieve a competitive advantage. The paper aims to determine the typicality of the vertical expansion of the premium product brand, the impact of a possible increase in the price of the product, and consumer reactions to the vertical expansion of the premium brand.*

**Keywords:** *Premium brand, Positioning, Vertical expansion of the premium brand, Consumer preferences, Customer response to premium brand vertical extension*

## Consumers' Approaching the Alternative Dispute E-resolution for Financial Services in Romania

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**Abstract:** *The paper focuses on the problematics of establishing the salient traits of consumers' approaching the alternative dispute e-resolution mechanisms available through online conciliatory settings, in the field of financial and banking services, based on the Alternative Banking Dispute Resolution Centre reports issued for the 1st semester of 2023 and, comparatively, for the two semesters of 2022. Consumers' preferences towards the online conciliatory mechanisms were assessed, regarding the e-resolution procedures concluded with the proposing of a non-mandatory solution (the e-conciliation procedure), in hypotheses where the procedure finalized after the parties to the business-to-consumer contracts have accepted the resolution proposed by the conciliator through the e-solving mechanisms. Parties' withdrawal from the e-conciliation procedure remains an available option during the e-solving procedure, while the deadline for the parties to accept/deny the e-conciliatory solution is 15 days following the receiving of the conciliation proposal. Most e-resolution B2C solicitations (45% of the applications processed during the first semester of 2023) concerned the interest-rate recalculation, interest-rate reduction/instalment, fee reimbursement, interest-rate repayment, while subsequential elements, such as the loan conversion issues, and loan restaging-out requests were also mentioned in the online-processed conciliation procedures. Most consumers (67%) uploaded their solicitation and documentation using the IT application available directly on the website of the conciliatory authorized bodies, while other categories of consumers resorted to emailing the application for the e-resolution in the field of B2C financial services. Before selecting the e-version of the B2C dispute resolution, the parties are informed on: (a) the non-binding nature of the solution pronounced by the conciliators in the e-resolution procedure, which does not count as a jurisdictionally enforceable title; (b) parties' opting possibilities in terms of selecting whether or not to accept the solution pronounced by the conciliators; (c) the fact that either the consumer or the professional services provider can subsequently withdraw from the e-conciliation procedure, which after its initiation can be abandoned by the parties; (d) the fact that involvement in the procedure does not exclude the possibility of seeking compensation through a judicial procedure; (e) the fact that the proposed solution may substantially differ from the solving results established by a court applying the legal provisions in force; (f) the consequences of accepting the solution proposed by the conciliators in the final round of the e-resolutive procedure. Similarly, the parties are informed on the enforceability of the e-resolutive solution issued by the conciliators, in cases where the parties gave their informed consent to the binding nature of the e-dispute settlement. Compared to the results of the e-arbitral procedure, it can be noted that the consumer and the trader' option to subsequently accept the solution proposed by the conciliators, in matters of e-resolution is carried out based on a valid e-arbitration agreement, the parties to the dispute expressly agreeing to comply with the requirements of the conciliator's decision issued in the online dispute-solving procedure, taking the form of a non-judicial enforceable title.*

**Keywords:** *Consumer, E-resolution, Alternative dispute-solving, Financial services, E-conciliatory resolutions*

## **Assessing the Implementation of the EU “From Farm to Fork” Strategy in the Albanian Food Chain: Opportunities and Challenges**

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**Abstract:** *The purpose of this paper is to investigate the implementation of the European Union’s “From Farm to Fork” strategy in Albania, focusing on the perspectives of individual actors within the country’s food chain. This study aims to identify the strengths and weaknesses of the strategy’s implementation in Albania, as well as the factors and opportunities that contribute to its success. This study examines the implementation of the EU “From Farm to Fork” strategy in Albania, focusing on internal and external factors affecting the use of new technologies, innovative marketing approaches, and increasing awareness and demand for sustainable and healthy food. The research aims to map out these factors, propose support tools and solutions, and highlight examples of good practices to help build a sustainable food system in Albania that reflects the ambitions of the European Green Agreement. The study uses a mixed-methods approach, combining qualitative data from semi-structured interviews and quantitative data from surveys. The results highlight the challenges and opportunities faced by stakeholders in implementing the strategy, emphasizing the importance of stakeholder collaboration, policy coherence, and innovative business models.*

**Keywords:** *Consumer buying, Farm, Products, Consumer behaviour*

## **Exploring Consumer Behavior for Farm Products in Albania: An Analysis of Consumer Profiles Based on Personality, Psychology, and Demographics**

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**Abstract:** *This study examines the consumer behavior of Albanian consumers in relation to farm products, focusing on personality and psychological traits. Farm products are essential to the Albanian economy and diet, making it crucial to understand consumer preferences in this area. Using a mixed-methods approach, this study analyzes data collected from a sample of Albanian consumers to create profiles based on personality characteristics, preferences, and socio-demographic factors. Results show that consumers in Albania have different mindsets and reactions to various aspects of farm products. This study's contribution lies in its unique approach to understanding the psychological and personality traits of Albanian consumers, providing valuable insights into the country's consumer behavior and demographic factors. These findings have important implications for the development of marketing strategies aimed at promoting farm products in Albania.*

**Keywords:** *Consumer behaviour, Farm products, Albanian markets, Personality, Psychological traits*

## Is Customer-Targeted Counterproductive Work Behaviour Damaging for Organisational Performance? Evidence from the Hospitality Business

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**Abstract:** *As high-contact service industries in general, and the hospitality industry in particular, rely heavily on their employees to create high-quality service experiences, it has been commonly acknowledged that the dyadic exchange between customers and employees is at the core of the success or failure of service encounters. Consequently, it plays a critical role in enhancing hospitality business performance. This is why growing scholarly attention has been paid to service providers' behaviour, in particular that deviating from organisational rules of customer service.*

*The purpose of the paper is to examine the linkages among forms of customer-targeted counterproductive work behaviour and the competitive performance of an employing organisation in hospitality settings. The study adopted a quantitative approach. Using a sample of 144 food service employees in Poland who completed an online questionnaire, hierarchical multiple regression analyses were performed to test the proposed hypotheses.*

*The results provided evidence that task-focused and person-focused customer-targeted counterproductive work behaviours lead to a deterioration in the competitive performance of a food service establishment and these links are observed in organisations, whose employees recognise service process quality as a primary factor in achieving market success. Furthermore, task-focused acts produced stronger effects on performance than person-focused acts, which may suggest that investigated categories of customer-targeted workplace deviance shape perceptions of service quality in a somewhat different way.*

*The present research adds to the ongoing debate about the effects of counterproductive work behaviour on the performance of service organisations by offering a nuanced view of manifestations of such behaviour. From a managerial perspective, the identified relationships emphasize the importance of actions to be taken by employers to actively address deviant employee behaviour targeted at customers and prevent its damaging consequences for organisational performance.*

**Keywords:** *Service encounter, Customer-targeted counterproductive work behaviour, Competitive performance, Hospitality business*

## Development of Organic Agriculture in the Context of Food Security/Insecurity

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**Abstract:** *The global food problem has existed since the dawn of humanity - until now there have always been starving people, but never on such a large scale. It is characterized by a wide territorial scope, affects millions of people, and has many dimensions and different manifestations in different parts of the world. To define adequate solutions to the problem, it is necessary to clarify its essence and reveal the reasons that give rise to it. The problem is rooted in many and different aspects - climate changes, socio-economic factors such as the growing population, problems in the economy of some countries, military conflicts, etc. Feeding the population is a process directly related to agriculture. The development of agriculture on a global scale has undergone many changes, and above all the transition to a new type of agriculture - sustainable. Solving these issues is the key to progress in other areas of world development - employment, education, environment, healthcare and others. Investments in agriculture are also needed, which would make crops more resilient to the negative consequences of climate change, as well as economic and political upheavals. The basis of solving this problem and increasing the quality of life is the implementation of the so-called sustainable agriculture. It is not by chance that it is called sustainable, since the development of this type of agriculture is based on the requirements for ecological stability, meeting current and future human needs for food and obtaining economic benefits from the production process itself.*

**Keywords:** *Organic agriculture, Food security, Hunger, Sustainability, Demographics*



## The Analysis of the AP Vojvodina Agricultural Enterprises' Growth and Development

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**Abstract:** *This research aims to analyze the current state and development trends of the AP Vojvodina agricultural sector. This research problem is relevant to provincial and national policymakers having in mind the significance of the agricultural sector for economic growth, external balance and employment. Analyzing the data of the Statistical Office of the Republic of Serbia, Ministry of Agriculture, Forestry and Water Management and Provincial Secretariat for Regional Development, Inter-Regional Cooperation and Local Self-Government for the period 2018-2021, using the descriptive method, the authors provide conclusions about the research problem. The data indicate that AP Vojvodina province has a significantly larger share of arable land and gardens compared to the national level, but the problem is that, as at the national level, there is an unfavorable structure in terms of the size of agricultural land with the dominant participation of smaller farms up to 10 hectares (72% in 2018). Smaller farms have the problem of surviving in a competitive market, achieving business growth and entering foreign markets. Therefore, the emphasis of provincial support to agricultural holdings should be focused on cooperation and merger with the aim of more competitive business and market development. The obstacle to the fast growth of small agricultural enterprises is also a lack of financing sources and proven innovative practices so the provincial support in these areas is a necessity. A special challenge to the survival of agricultural enterprises is the rise in input prices and business costs due to inflationary trends at the regional and global levels. Price stability is the focus of monetary policy with a range of measures to ensure achieving monetary targets during 2024.*

**Note:** *This research is part of a project financed by the Provincial Secretariat for Higher Education and Scientific Research of AP Vojvodina named "Analysis of growth determinants of agricultural enterprises from the territory of AP Vojvodina" number 142-451-2202/2023-02/1. The authors are members of the project research team.*

**Keywords:** *Agricultural enterprises, Growth and development, AP Vojvodina*

## Content of Heavy Metals, Micro and Macro Elements in Bulgarian Polyfloral Honey and Risk Assessment

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**Abstract:** *Honey is a valuable product due to its nutritional value and medicinal properties. Contamination of air, water, and soil with toxic metals leads to their accumulation in plants (primarily leaves and flowers) and their transfer to nectar, honeydew, pollen, and plant resins. Honey bees collect and process these products, with the contaminants accumulating in honey, pollen, and propolis.*

*This study aimed to determine the content of heavy metals and micro and macroelements in polyfloral honey collected from different regions in Bulgaria. A total of 60 honey samples purchased from apiaries and hypermarkets were tested. Honey samples were prepared for analysis by digestion with nitric acid in a microwave system and analyzed with ICP-OES. The mercury content of the honey was determined without sample digestion with a mercury analyzer. The health risk assessment in the consumers due to ingestion of toxic metals via consumption of honey was estimated by calculating the hazard quotient (HQ), total hazard quotient (THQ), and cancer risk (CR).*

*The content of elements varies among the honey samples. The range of K predominant in all types of honey (209.9-1911.9 mg/kg), followed by Ca (69.1-192.5 mg/kg), P (31.5-149.8 mg/kg), Mg (28.1-146.7 mg/kg), Na (23.1-130.8 mg/kg) and Al (0.5- 2.99 mg/kg). In terms of microelements, the content of Mn (0.54-28.1 mg/kg) and Fe (3.1-13.0 mg/kg) was the highest, followed by B (1.6 - 9.0 mg/kg), Zn (0.53-2.88 mg/kg) and Cu (0.34-1.15 mg/kg). The content of the toxic metals ranges from 0.02 to 3.2 mg/kg for Pb, 0.01 to 0.10 mg/kg for Cd, 0.21 to 0.78 mg/kg for As, and 0.10 to 10.9 ng/g for Hg. The composition of the studied honey samples depends mainly on the geographical and geochemical origin. The heavy metal content tested in honey was found to be low, except for the Pb content in 10 honey samples, due to anthropogenic contamination sources around the hives.*

*The Health risk assessment showed that consumers of polyfloral honey in most regions of Bulgaria are at a safe range.*

**Keywords:** *Honey, Trace elements, Mineral content, Health risk assessment*

## Soil Applications of Zeolites against Climate Change

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**Abstract:** *Climate change and soil management have an important influence on the phenological phases and maturation of the vine. Due to global warming, in many areas there has been an unbalanced ripening, with difficult harvests. On the one hand, high temperatures deplete the quantity of anthocyanins in the must, on the other, serious water deficits do not allow the grapes to develop correctly, stopping their growth processes. This experiment was created to suggest to winemakers soil management oriented towards optimizing the water resource and enhancing the quality of the grapes through the application of zeolite to the soil. Four treatments were carried out on a young Sangiovese vineyard: A (zeolite + irrigation), B (irrigation), C (zeolite) and D (no treatment). During the two seasons, measurements of gas exchange and midday water potential of leaves, as well as chlorophyll fluorescence were carried out. Furthermore, the parameters of technological maturity, phenolic and biochemical analyzes on leaf and berry were analyzed. D showed more negative water potential, significant accumulation of proline in leaves, reduced photosynthesis, and higher leaf temperature. Furthermore, it showed higher levels of quercetin and slowed berry development in the hottest and driest years. The benefit of zeolite was highlighted by the improvement in water efficiency and the correct and balanced ripening of the berry in both years. Finally, this experimentation aims to promote a "green approach" in the distribution and application of sustainable products that minimize the negative impact on the environment.*

**Keywords:** *Agriculture, Soil management, Zeolite, Climate change*

## **Omissions by Design in a Survey: Is This a Good Choice when using Structural Equation Models?**

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**Abstract:** *Missing observations can arise due to the effort required to answer many questions in long surveys and the cost required to obtain some responses. A planned missing design allows for a decrease in the number of questions in a survey that each participant must answer and/or reduce the cost of implementing a survey. The three-form and the two-method design are two different types of planned missing designs.*

*An important consideration when designing a study with omissions by design is to know how it will affect statistical results. In this work, it is discussed how the usual fit measures, root mean square error of approximation (RMSEA), root mean square residual (SRMR), comparative fit index (CFI), and Tucker-Lewis index (TLI) perform in the adjustment of a Structural Equation Model.*

*The results revealed that the CFI, TLI, and SRMR indices exhibit sensitivity to omissions with small samples, low factor loadings and large models.*

**Keywords:** *Omissions by design, Structural Equation Model, Survey*

## Property Rights of Spouses in Context of Albanian Company Law: Necessities for Alignment with Acquis Communautaire

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**Abstract:** *Harmonization and alignment of domestic legislation with the Acquis Communautaire is one of the most prominent and unprecedented topics nowadays in Albanian legal circles. As it is a tool for legal adjustments in different fields of law, to fully strengthen the path towards the EU integration of Albania, it is necessary to highlight and find the relevant framework where the alignment and regulation are acquired. The topic of the property rights of spouses in the context of company law provisions is a coherent and continuous issue for debate among lawyers and jurists in Albania. The courts of different levels have contributed in different ways of interpretations in this regard; however, the Rule of Law must profit in a good sense from the legal context of the EU.*

*This paper examines the topic of property rights of spouses in the Albanian Company legal framework and the necessity for harmonization with the Acquis Communautaire. The property rights of spouses in the Albanian legal context have traditionally been governed by the Family Code of Albania, which does not provide clear guidelines for the division of property in the context of quotas, shares, company assets, and investments. This lack of clarity can create legal uncertainties and potential conflicts, particularly in cases of divorce or dissolution of a company and the estate of spouses regardless of their marital property regime.*

*The research methodology includes a comprehensive review of the Albanian family and company legal framework, court cases focused on the company's property rights of the spouses, and an examination of relevant EU directives, regulations, and case law related to the property rights of spouses. The Acquis Communautaire, the body of European Union laws and regulations, includes comprehensive provisions regarding the property rights of spouses in the context of company law. These provisions aim to ensure fairness, transparency, and legal certainty in cases involving shared property in the event of divorce, company dissolution, and the overall business environment in Albania.*

*The anticipated findings of this research paper will contribute to understanding the gaps and discrepancies between Albanian legislation and the Acquis Communautaire. The proposed recommendations for alignment will aid legislators, policymakers, and legal professionals in shaping future legal reforms. Ultimately, ensuring compliance with the Acquis Communautaire in the context of property rights of spouses in the context of company law will strengthen Albania's path towards EU integration and enhance legal protections mostly for individuals within the family and business spheres.*

**Keywords:** *Harmonization, Legislation, Albanian company law, Spouses, Rights, Acquis Communautaire*





