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# HYBRID MCDM SOLUTIONS FOR EVALUATION OF THE LOGISTICS PERFORMANCE INDEX OF THE WESTERN BALKAN COUNTRIES

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## ABSTRACT

The Logistics Performance Index (LPI) performed by the World Bank is an indicator of the logistics environment quality of a country in which logistics operators act. The LPI is an interactive tool designed to help countries identify challenges, innovative solutions, and opportunities they face in their work in the field of trade and logistics. The aim of this paper is to conduct a comparative analysis and ranking of the LPI of the countries in the Western Balkans (Bosnia and Herzegovina, North Macedonia, Albania, Serbia and Montenegro), calculated by the World Bank for 2018, using an integrated Criteria Importance Through Intercriteria Correlation (CRITIC)-Measurement Alternatives and Ranking according to Compromise Solution (MARCOS) model and thus show the real picture of the logistics environment. In order to determine the performance of countries and show the overall logistics performance, six key dimensions are used: customs, infrastructure, international transport, logistics capability, tracking and tracing of goods and shipment delivery within scheduled or expected times. Using the CRITIC method, the weight values of the previously mentioned six criteria were calculated, whereby the criterion related to shipment delivery within scheduled times was singled out as the most significant criterion. Then, by applying the MARCOS method, the countries of the Western Balkans were ranked on the basis of the six defined criteria. Based on the results obtained, the best-ranked country is Serbia. The analysis of the sensitivity of the results to changes in the significance of the criteria does not show significant changes in the ranking.

### Keywords:

*Logistics Performance Index (LPI), MCDM model, CRITIC, MARCOS.*

**JEL: C52, N7, O18, P17**

# DOES IT MATTER FOR CBDC DESIGN? PRIVACY-ANONYMITY PREFERENCES FROM THE SIDE OF HIERARCHIES AND EGALITARIAN CULTURAL PATTERNS

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## ABSTRACT

Evolution of digital money demonstrates that CBDC (Central Bank Digital Currency means a digital form of traditional fiat currencies) design is really challenging. While technically possible CBDC solutions are visible, much of institutional aspects are rest to be unsolved. One of the issues is a degree of privacy and anonymity. All historical forms of money had intrinsic property of non-traceability of transactions and only now this feature of non-digital money is recognized as strong institutional advance. At the same time, privacy and anonymity preferences could relate to cultural attitudes. However, money may distort expected logical relations between such patterns like “less hierarchies more privacy-anonymity” or “more egalitarianism less privacy-anonymity”. This potentially means that money may posit extra propensity to privacy-anonymity that is going beyond the cultural attitudes. Basing on the survey, we demonstrate some contradictions in how respondents perceive the preference of functional usability over anonymity of transactions. The same is relevant when cultural patterns are taken into account. It is more likely to find cultural closeness across respondents from different regions than strong determinacy of privacy-anonymity preferences by propensity to hierarchies or egalitarianism. Additionally, we checked hierarchies or egalitarianism attitudes by additional questions and found some mixed results. Also, we found some conformism culture (meaning unstable preferences) and rely it with lack of trust in public institutions. When centralized money are less trusted people faster agree to sacrifice anonymity in the benefits of functionality. The main take away is that it is unlikely to expect the unity of optimal CBDC design across countries. Aside of behavioural distortions, culture still matter and it is likely to expect future variety of digital money from functional usability privacy-anonymity trade-off.

### Keywords:

*CBDC design, digital money, cultural attitudes, privacy, anonymity.*

**JEL: E41, E42, E51, E58, G20**

# RECOVERY OF SLOVENIAN TOURISM AFTER COVID-19 AND UKRAINE CRISIS

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## ABSTRACT

The profound impact of the COVID-19 pandemic and the Ukraine crisis 2022 on tourism has rendered forecasts of tourism demand obsolete. Accordingly, scholars have begun to look for the best methods to predict the recovery of tourism. In this study, econometric and judgmental methods were combined in order to forecast the possible ways to tourism recovery in Slovenia. The goals of this paper are to show and assess the current offerings and potential for the development of tourism in Slovenia, and to point out the advantages and challenges in the development of tourism in this type of destination. Statistical methods were used for benchmark analysis, while Box and Jenkins approach and ARIMA modeling were used for forecasting Slovenian tourism until 2030. The datasets are analyzed using Tableau 2022.1. Our findings show that Slovenian tourism will be slower on the uptake and is not likely to fully recover until 2026, due to COVID-19 related uncertainty. A steep jump in daily COVID-19 infections in China and the Ukraine crisis which is affecting political and economic stability in the world is also slowing down the speed of recovery. In 2019, Chinese, Russian and Ukrainian tourists generated 5% of all tourist arrivals and overnight stays. In particular Russian tourists were well-known for their high consumer expenditure and thus desirable to the destination places. To mitigate the drop in tourist arrivals, Slovenia should do two things, namely concentrate on traditional markets, i.e. Austria, Italy, and Germany, which altogether represent 1/3 of all tourist arrivals and overnight stays, and secondly, it should target new markets, bringing new, innovative products, services, and experiences.

### Keywords:

*Slovenia, Ukraine crisis, COVID-19, Tourism demand, Crisis management, Delphi method, Forecasting scenarios.*

**JEL: L83, Sports • Gambling • Restaurants • Recreation • Tourism**

# IMPACT OF COVID-19 PANDEMIC ON FINANCIAL INNOVATION, CASHLESS SOCIETY, AND CYBER RISK

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## ABSTRACT

The global pandemic, as an unprecedented event in the recent past, has significantly changed the modern world. Numerous companies and individuals have faced various challenges that are still present. The aim of this paper is to review the impact of pandemic on financial innovation, fintech companies, cryptocurrencies, the development of a cashless society, and cyber risk. It tests two already confirmed hypotheses: H1: COVID-19 pandemic has affected the development of financial innovations and cashless society; and H2: COVID-19 pandemic has led to increased cyber risk. The method applied is desk research, i.e. a review of the existing studies and their unification. The paper shows that fintech companies proved to have been resilient during the crisis since they have managed to change their business model and offer new products and services (financial innovations). It also indicates that it is obvious that the number of cashless transactions have increased due to the pandemic, but that it is still not reasonable to expect a completely cashless society in the near future. The paper highlights that cyber risks are on the rise owing to the growth of cashless transactions and digitalisation of businesses driven by the global pandemic.

### **Keywords:**

*Cashless Society, COVID 19, Financial Innovation, Cyber risk.*

**JEL: E44, G2, L1**



# FORECASTING THE BEHAVIOR OF TARGET SEGMENTS TO ACTIVATE ADVERTISING TOOLS: CASE OF MOBILE OPERATOR VODAFONE UKRAINE

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## ABSTRACT

Today, the use of machine learning technology in combination with the use of big data are topics that are actively discussed in business around the world. This topic has long gone beyond the information sphere, as it now applies to almost every sphere of life: economic, telecommunications, education, medicine, administration, and especially defense. Predicting customer behavior based on scoring models is in its infancy in Ukrainian companies, the main ones being the introduction of artificial intelligence technologies and machine learning, which will be the leading catalyst that will facilitate decision-making in business in the nearest future. The aim of the study is to develop a scoring model that predicts the behavior of target segments, namely, updating their activity to activate advertising tools. To achieve the goal of the work a set of research methods was used: dialectical – to reveal the theoretical foundations of models and types of forecasting models; analytical – in the study of the functioning of the environment SAS, Anaconda; optimization methods – to choose the best model and generate features. Scientific novelty and theoretical significance lie in the development of a scoring model for predicting the activity of subscribers of the telecommunications company “VF Ukraine”, on the basis of which marketing campaigns are conducted. With the help of the built-in scoring model, the company “VF Ukraine” can target its campaigns to retain subscribers. The marketing directorate of the enterprise can choose the TOP-20 or TOP-30 of the most prone subscribers to non-resumption of activity, i.e., tend to switch to other mobile operators, and hold promotions for them – providing additional gifts and bonuses, money to mobile account.

### Keywords:

*market segment, telecommunication sector, target, advertising, scoring models, big data.*

**JEL: D22, D47, M21, M31, M37**

# HOW CAN BLOCKCHAIN CONTRIBUTE TO DEVELOPING COUNTRY ECONOMIES? A LITERATURE REVIEW ON APPLICATION AREAS

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## ABSTRACT

Blockchain technology originally finding applications in Fintech and supply chain management is rapidly expanding applications to other industries as well as the public sector. "Blockchain has been compared to the invention of the internet and its comprehensive impact on almost every industry." R. Beck and B. Markey-Towler (2017) A recent study by PWC (2020) found that, "Blockchain technology has the potential to boost global gross domestic product by \$1.76 trillion USD over this decade." It has been argued that the digital revolution has favored more developed nations and that has helped create a "digital divide" with less developed nations. Business and governmental infrastructure in developing nations have lagged that of more developed nations. Some of these challenges faced by developing nations include the registration of property ownership, financial systems, modern efficient supply chains often accompanied by a lack of trust and the ability to verify and audit organizational processes rapidly and economically. Blockchain technology has the promise to address many of the critical needs of developing countries internally and in external trade relationships to help enable them to be more competitive. This paper will review the literature and examine the impact of Blockchain technology on how its adoption may ameliorate many of these critical challenges for developing nations helping to improve governance and economic benefits that are shared more equitably. Potential for both positive and negative impacts will be discussed along with policy implications for public policy makers and private enterprises.

### Keywords:

*Blockchain, Macro Economics, Competitiveness, Innovation, Developing Countries, Corruption, Financial Inclusion, Property Rights, Supply Chain, NFT.*

**JEL: A10, D73, G20, L80, O33**

# IDENTIFICATION AND LEVELLING OF CRISIS PHENOMENA IN THE WORLD GRAIN MARKET IN THE 2022/23 MARKETING YEAR

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## ABSTRACT

The aim of this paper is the detection crisis phenomena in the world grain market in the 2022/23 marketing year (MY), which worsened during the Russia-Ukraine invasion on February 24, 2022. Some countries and international organizations have recently expressed concern that the reduction of grain supply on the world market and the rapid rise in its price. Whether the impact of the destabilizing situation on the world grain market on the exacerbation of hunger is an open question. In order to fill the research gap, the paper tries analysis the global market into grain types between 2008/09 MY to 2021/22 MY and identify on it the shares of Ukraine and Russia. Two methods are used to conduct a comprehensive study of the grain market - fundamental and technical analysis. The analysis of the state and dynamics of the main indicators of the world grain market was carried out with the help of fundamental analysis. The results show that the volume of grain production in the world and the two warring countries are growing. Both countries supply about a quarter of all products in the overall structure of world grain exports. Finally, the result also shows that Ukraine and Russia are key exporters of barley, rye, wheat, and corn to low-income and least developed countries. Grain price forecasting through technical analysis was carried out. Based on the results obtained during the fundamental and technical analysis, three scenarios for the development of the grain market and its impact on the problem of hunger were proposed and given recommendations for levelling of crisis phenomena.

### **Keywords:**

*world grain market, population growth, Russian military invasion in Ukraine, hunger and undernourishment.*

**JEL: F17, F51, L91, J11, Q13, R4**

# THE IMPACT OF THE COVID 19 CRISIS ON THE FISCAL STABILITY OF REPUBLIC OF SRPSKA

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## ABSTRACT

The consequences of the COVID-19 crisis have had a negative impact on the fiscal stability of Republic of Srpska. Although the crisis is not officially over yet, a large number of countries needed to implement fiscal consolidation.

Republic of Srpska is one of the small and open economies that are exposed to various negative market distortions. COVID-19 crisis of the most important foreign trade partners of the Republic Srpska has had a negative impact on the economy of Republic Srpska.

The basic idea of the paper is based on the need to analyze the impact of the COVID-19 crisis on the fiscal stability and public finances of Republic of Srpska. The subject of the research is the analysis of the implementation of the fiscal consolidation procedure in Republic of Srpska and the impact on its economic growth. For the implementation of fiscal consolidation, the choice of methods and instruments on which the process of implementing fiscal consolidation is based is very important.

Fiscal consolidation is necessary due to the consequences caused by the COVID-19 crisis and the enormous growth of the deficit. The analysis proves that the measures applied to rehabilitate the crisis have resulted in improved fiscal stability, which ultimately had a positive impact on economic growth. Fiscal consolidation will be successful and expansive if it is carried out by a combined method of increasing revenues and reducing expenditures and if the increase in revenues is caused by the growth of economic activity and not by the tax burden.

### Keywords:

GDP, deficit, Fiscal consolidation, Fiscal stability.

JEL: E62, H62, F42, H70, H72, H74

# EMERGING CHANGE: EXPLORING THE NEW ECONOMY PARADIGM

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## ABSTRACT

This paper examines and ascertains the dominant and latent characteristics of the new economy post COVID-19. It acknowledges the far-reaching repercussions and long-term societal and economic impacts caused by COVID-19. The study administered online questionnaires to professionals globally and conducted online semi-structured interviews of economists, entrepreneurs, and organizational leaders across ten countries. The study tested the hypothesis with the non-parametric Chi-square test. The interview transcripts were subjected to thematic and content analysis. The research findings have indicated the emerging changes in the economy and way of life leading to a new normal. Projections have been reported to increase digitalization and implementation in business, deglobalization, geopolitical developments, fluctuations in macroeconomic variables, and climate change. The study further revealed that hybrid work strategies would be embraced, requiring the labor market to upskill and reskill to stay competitive. Digitalization of businesses will become essential to gain a competitive advantage in domestic and international markets. The paper predicts the anticipation of changes in human behavior regarding health, personal care, and consumption patterns. The study noted the variations in the new economic trends, possibilities, challenges, and coping strategies to survive and thrive in the new economic paradigm. Therefore, these research findings provide valuable and insightful economic releases which will have profound implications in the post COVID-19 world.

### Keywords:

*new normal; paradigm; post COVID-19; digitalization; structural changes; hybrid-work; economy.*

**JEL: B22, E32, E44, E66, F18, F43**

# TOURIST SERVICES OF THE WESTERN REGION OF UKRAINE: RATING AND ANALYSIS

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## ABSTRACT

Today, together with the recognition of the tourism industry as one of the priorities in the economy of Ukraine, quite active and effective activities have been launched to build a structure of prerequisites for achieving the most effective level of its functioning. At the same time, we understand that to achieve the most successful functioning of the market of tourist services, it is necessary to initiate efforts to overcome the economic crisis and stop military events in Ukraine. We can witness that the market of needs services is becoming increasingly important as a mandatory component in the languages of modern market relations. The tourism industry is a leading field of activity in many countries worldwide. Its development allows you to actively use the most popular and valuable natural resources, ensure job creation, significantly improve the economic, environmental, and social situation, and expand investment space. In Ukraine, the sphere of tourist services has not yet taken its rightful place in services and the economy in general. Therefore, there is a need to substantiate various processes implemented in tourism services at the scientific level, with due regard for national and regional market realities, both in the market and its economic and social situation. An important aspect is also the socio-economic development of the state's regions, which reflects the continuity and stability of regional tourism markets. Among the many problems facing the balanced development of regional tourism, markets ensure the appropriate level of their competitiveness, both between each other and internationally. In our country, tourism began to gain its development at the whole level not so long ago because it did not have a total base for its formation. At the same time, forming a significant share of state, regional, and local budgets and being a necessary "plane" of market circulation, problems in regulating tourism in the regions are the focus of research while forming further and important competing principles. Therefore, today, we need to implement our study by rating the indicators of infrastructural development of the Western regional market of tourist services in Ukraine.

### Keywords:

*market infrastructure, rating, western region, tourist market, tourist service.*

**JEL: C52, N7, O18, P17**

# THE IMPACT OF INNOVATION ON THE MANAGEMENT OF MISAPPLICATION OF CHANGE IN THE PRODUCTION SYSTEM IN THE AUTOMOTIVE INDUSTRY

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## ABSTRACT

Changes in the production system are always good information, because when there are changes, then there are production and processes. Errors or incorrect implementation of the change may occur with the implementation of these changes. Eliminating errors is one of the top priorities of any company that wants to achieve its quality goals.

This paper describes the process by which a change request was implemented incorrectly and its consequences. the aim is to avoid the incorrect implementation of changes. The paper also presents how to suppress the implementation process and the steps followed to discover errors. Researching the methodology shows that there are frequent errors in the process of implementing changes to easily products or services, but there are also many ways to solve them. Advanced technology helps to discover them and remove them in the best possible way.

In conclusion, the paper, decided that it is important that the changes brought in the process are carefully monitored and that there is a traceability of the information that is related to the change.

### Keywords:

*Production system, Internal Coordination, Local Coordination, regularly meetings, Human Errors, Change description, Engineering Change Request.*

**JEL: L23**

# A MULTI-CRITERIA APPROACH TO THE COMPARATIVE ANALYSIS OF THE GLOBAL INNOVATION INDEX ON THE EXAMPLE OF THE WESTERN BALKAN COUNTRIES

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## ABSTRACT

Innovation is crucial for the competitiveness of countries in the global market. Countries oriented to progress must invest in innovative activities. Using the example of the Western Balkan countries, this study investigated their innovative competitiveness. The indicators of the Global Innovation Index (GII) were used for the years 2019, 2020, and 2021. A multi-criteria approach was based on the innovative SMART approach. The weights of the criteria were determined using the CRITIC (criteria importance through intercriteria correlation) method, while the CRADIS (compromise ranking of alternatives from distance to ideal solution) method ranked the Western Balkan countries according to their innovative characteristics. The results showed that Montenegro had the best innovation indicators, followed by Serbia, while Albania had the worst indicators. This research showed an innovative approach of using four normalizations, and the advantages of these normalizations were used to contribute to stabilization in multi-criteria decision-making.

### Keywords:

*informal labour, informal work, shadow economy, labour, macroeconomics, developing economies, globalisation.*

**JEL: O32, Q55, C54**



# IMPACT OF ENERGY INNOVATIONS ON THE UKRAINE'S ECONOMY: STRATEGIC DIRECTION AND MANAGERIAL PRACTICES

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## ABSTRACT

Diversification of energy sources and innovative development of the energy sector are one of the main directions for ensuring sustainable development and decarbonization of the economy. The aim of the article is to identify connections and interactions between the parameters of energy innovation development and economic growth. Factor analysis was used for this purpose. The results and conclusions determine the most influential factors among the 5 components identified in accordance with the functional areas of innovative development of the national economy in energetics. The analysis allowed to identify the main trends in the development of factors, which allowed to identify positive and negative changes. The regularities of the influence of certain factors on energy innovations have been determined, which has allowed to provide recommendations for their further development and regulation.

### **Keywords:**

*energy innovations, multi-factor analysis, decarbonization of the economy.*

**JEL: C01, Q20, Q40**

# SUPPLY CHAIN DYNAMICS AFTER THE COVID-19 PANDEMIC AND STOCK MARKET PERFORMANCE: EVIDENCE FROM THE US

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## ABSTRACT

Supply chain risk is a strategic issue for managing multinational companies, and Covid-19 has shown the relevance of this type of risk for the firm's survival probability. The market may perceive the choice of replacing some of the main customers or suppliers as an increase or a decrease of the risk based on the features of the new supply chain members, and markets tend to penalize companies that increase their exposure to unaffordable events. During the pandemic, many supply chains suffered from glitches and companies were obliged to redefine their network by selecting their new strategic customers and/or suppliers.

The paper evaluates the supply chain composition strategies of a set of multinational companies based in the US during the last decade. It highlights the differences in supply chain management behavior before and during the pandemic. Data collected allow testing the impact on the stock market performance of modifying the supply chain network by adding new members that may have a different level of risk. Results show that the market reaction to supply chain updates changed after the Covid-19, and nowadays there is greater attention on the credit risk of the new companies entering the supply chain.

### **Keywords:**

*Supply chain, Pandemic, Stock performance.*

**JEL: G11, M11**

# DIGITAL WORKPLACE TRANSFORMATION: INNOVATIVE APPROACH AFTER COVID-19 PANDEMIC

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## ABSTRACT

COVID-19 had undoubtedly speeded up adoption of digital technologies. Most of the theoreticians agree that changes that happened in the pandemic period would not happen in the next several years or even decades. There is almost no business operation that has not been affected by the pandemic, from customer relation and sales to supply chain. It influenced different business sectors leaving permanent change and making a significant proportion of organizations working in at least hybrid mode: combining digital and traditional pre-pandemic ways of working. COVID-19 had significantly changed the workplace and way of working. Workplace has shifted to digital or at least hybrid and employees and companies have adopted new ways of working, including usage of digital technologies but also accepting more agile and flexible procedures and rules. The research community has followed this phenomenon and tried to provide best possible recommendation to it accordance to recognized research methods.

The paper provides a systematic literature review of the most significant scientific and industry publication in the years after the pandemic start. It is based on Kitchenham methodology of the systematic review with selected publication from recognized bibliographic databases. First part provides general effects of the pandemic to digital transformation of businesses all over the globe, mostly connected to analysis of the employees' workplace preference. The second part is focused on digital workplace transformation and presents key theoretical and professional findings in the post-pandemic workplace. This part is consisted of the preview of benefits of the digital workplace transformation, identification of critical success factors and the most significant challenges of the process.

### **Keywords:**

*digital transformation, digital workplace, COVID-19, change management, human resources.*

### **JEL:**

# CHANGES IN THE INTERNATIONAL WINE TRADE AND POLICIES FOR THE PROMOTION OF MOLDOVAN WINES

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## ABSTRACT

From an economic perspective, the COVID-19 crisis has been an exogenous shock to most local and international markets. Due to the COVID-19 pandemic, physical separation (or social distancing) to prevent the spread of the virus has led to feelings of isolation and loneliness, increasing the prevalence of depression, anxiety, post-traumatic stress disorders, and insomnia in the population. However, during the lockdown, technological devices have provided a way for people to maintain social connections with friends, family, their social networks, and/or the wider community. This article analyzes the changes on the international wine market and estimates the exports of Moldovan wine, especially in the neighboring region, which includes Romania, Ukraine and Bulgaria to Nigeria, considered a new market and characterized by the lack of traditions in wine consumption.

### **Keywords:**

*international wine trade, Moldovan wines, policies for the promotion.*

**JEL: R11, F00, F53, L66, O24, H57**

# NEW APPROACH TO ESTIMATING MACROECONOMIC DETERMINANTS OF INFORMAL EMPLOYMENT

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## ABSTRACT

Informal employment is a less favourable type of employment whose levels policy makers usually want to decrease and move these workers in the formal part of the labour market. It is more commonly found in LDCs and in developing economies, than in developed ones. This paper uses a cross-section multiple regression analysis to check the effects of multiple macroeconomic variables on the size of the informal labour market. The sample is made out of economies for which ILO has published data about the share of employment outside the formal sector, excluding the economies that receive aid from IDA, using 2017, 2018 and 2019 data from the International Labour Organization and other international organizations. Results show that macroeconomic variables do not have significant explanatory power, except for unemployment rate, exports and GDP growth rate.

### **Keywords:**

*informal labour, informal work, shadow economy, labour, macroeconomics, developing economies, globalisation.*

**JEL: E26, F66, J00**

# CUSTOMER CHURN PREDICTION MODEL: A CASE OF THE TELECOMMUNICATION MARKET

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## ABSTRACT

The telecommunications market is well developed but is characterized by oversaturation and high levels of competition. Based on this, the urgent problem is to retain customers and predict the outflow of customer base by switching subscribers to the services of competitors. Data Science technologies and data mining methodology create significant opportunities for companies that implement data analysis and modeling for development of customer churn prediction models. The research goals are to compare different approaches and methods for customer churn prediction and construct different Data Science models to classify customers according to the probability of their churn from the company's client base and predict potential customers who could stop to use the company's services. On the example of one of the leading Ukrainian telecommunication companies, the article presents the results of different classification models, such as C5.0, KNN, Neural Net, Ensemble, Random Tree, Neural Net Ensemble, etc. All models are prepared in IBM SPSS Modeler and have a high level of quality (the overall accuracy and AUC ROC are more than 90%). So, the research proves the possibility and feasibility of using models in the further classification of customers to predict customer loyalty to the company and minimize consumer's churn. The key factors influencing the customer churn are identified and form a basis for future prediction of customer outflow and optimization of company's services. Implementation of customer churn prediction models will help to maintain customer loyalty, reduce customer outflow and increase business results.

### Keywords:

*marketing, classify customers, telecommunications market, machine learning, prediction, Data Science models.*

**JEL: C59, D11, M31**

# NEW APPROACH TO ESTIMATING MACROECONOMIC DETERMINANTS OF INFORMAL EMPLOYMENT

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## ABSTRACT

The COVID-19 virus pandemic has influenced tourism policy makers to change their decisions and management methods due to the new challenging situation. The inability to establish normal tourism business, due to difficult mobility of tourists and unfavorable epidemiological situation, has led to finding various innovative solutions that could help improve results in tourism. In addition to improve the current situation, the innovations introduced during the pandemic were aimed at bringing certain changes in the coming period, when the tourism industry is not burdened by the pandemic, which will accelerate the growth of the tourism economy. The main goal of this paper is to point out certain models of implementation of innovative solutions, which could affect the more dynamic development of tourism in Montenegro. The subject of research in this paper are innovations in tourism and their application with special reference to Montenegro. Montenegro has not yet fully recognized the importance of introducing innovations in tourism, so the next period should be dedicated to their implementation. The tourist offer of Montenegro should be enriched by the introduction of new specific forms of tourism, in order to adequately meet the demands of the main emitting markets. In addition to the innovative tourist offer, solutions should be sought in the integration of digital and virtual technologies into marketing functions, because the modern tourist business is increasingly relying on these technologies. Research has shown that it is necessary to work on creating new strategies and plans that will more studiously deal with this issue.

### **Keywords:**

*innovation, pandemic, tourism, Montenegro, trends.*

**JEL: L83, Z32, O3**

# ANALYSIS OF THE IMPACT OF MACROECONOMIC FACTORS ON REAL ESTATE PRICES IN BOSNIA AND HERZEGOVINA

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## ABSTRACT

Economic theory and practice are not acquainted with any unique set of macroeconomic factors that affect real estate prices. The very complexity of this phenomenon relativizes any attempt to establish an unchanged list of macroeconomic factors in BiH. The aim of the research in this paper is to analyze the impact of selected macroeconomic indicators on real estate prices in BiH, in the period from 2007 to 2019. Out of numerous macroeconomic factors that affect real estate prices (real estate prices are viewed as: the value of construction works done and as the value of new dwellings - new construction), 12 macroeconomic factors were singled out: nominal gross domestic product, real GDP growth rate, industrial production growth rate, GDP per capita, average net wages, imports and exports, household deposits in commercial banks, interest rate (housing loans, annual, %), loans to households, household final consumption expenditure, gross fixed capital formation and government final consumption expenditure. Starting from the hypothesis that macroeconomic factors affect real estate prices, it has been concluded that the selected factors significantly determine real estate prices and that most of the predictor variables defined in the model are significant, in terms of impact on the movement of GDP and real estate prices in Bosnia and Herzegovina in the period analyzed. The greatest impact on real estate prices is by household final consumption expenditure, GDP per capita, nominal GDP, interest rate, household deposits and real GDP growth rate. The research used factor analysis (reduction of macroeconomic factors to the optimal number of factors that explain the analyzed phenomenon and its impact on real estate prices) and an extended multiple linear regression model with a statistical software program SPSS, version 21. Modeling the impact of macroeconomic factors on real estate prices has macroeconomic effects and benefits for the country and contributes to the growth and well-being of operators in the real estate market.

### Keywords:

*Real estate prices, GDP, Principal Component Analysis, Enter method, regression model.*

**JEL: C59, D11, M31**



# FACTORS OF INVESTMENT IN RENEWABLE ENERGY AND ENERGY EFFICIENCY IN ALGERIA

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## ABSTRACT

Our paper aims to identify the most important factors determining companies' decision to invest in the energy transition in Algeria. Energy transition has been many governments' main topic of interest over the last decades, climate change has led many of them to establish long-term plans for a successful energy transition; these plans aim to reduce greenhouse gas emissions following the guidelines of the COP21. Through a quantitative approach, we have addressed a questionnaire to different companies operating in Algeria and have obtained a total of 117 responses. The results show that financial, technical and regulatory factors have minimal impact on companies' decision to invest in renewable energy and energy efficiency in Algeria. Further studies should explore other investment factors to help accurately determine those that significantly impact companies' decisions to invest in Algeria's renewable energy and energy efficiency. Furthermore, targetting one sector at a time and exploring the alternatives of foreign direct investment in renewable energy can result in higher efficiency.

### **Keywords:**

*Investment, renewable energy, energy efficiency, energy transition, Algeria.*

**JEL: O1, O14, Q2**

# EXAMINING THE ORGANISATIONAL TRANSFORMATION OF SUPPLY AND DEMAND DURING THE COVID- 19 PANDEMIC. A CASE STUDY OF FOOD AND BEVERAGES IN THE HOSPITALITY INDUSTRY

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## ABSTRACT

In the global era, the hospitality industry has been striving for success, especially during this stiff competitive market. Like any other determined service competitors, hotel restaurants have connected with customers and established business presence which had led to the increase in their visibility, sales, and sustainability. However, in an unstoppable trend, Covid-19 has hastened the hotel businesses to re-examine and re-adjust their supply chain operations. This study focuses on selected hotel restaurants, in particular the food and beverages industry in Cyprus and Greece due to their heavy reliance on international tourists. Using a qualitative data collection method, semi-structured interviews were carried out with 20 managers from respective departments across 3-5 stars hotel categories to grasp the impact of the pandemic on the business. The findings indicate that Covid-19 led to unexpected challenges, and this forced the hotel managers to reconsider and review their supply chain operations with a view to maintaining their business economic growth. Issues including supplier choices, quality of products, adjustments to the menu prices, customer expectations, and perks were paramount. In addition, the demand and the supply of products were considered as important factors in regulating the various prices; stock levels were prioritised, leading to the reduction of the purchase of less consumed items, were deemed to be of low economic demand. In view of Covid-19 and its business challenges, the hotel restaurants resorted to coping strategies which resulted in transforming demand in the supply chain. Therefore, a growth in their portfolio with more suppliers was confirmed, including the reduction of the quality of products, hiring stock controllers, increase of importing goods, and using technologies to aid their business ventures.

### **Keywords:**

*transformation, food and beverages, supply chain, demand, hospitality, Covid-19*

**JEL: L83**