Institute of National Economy, Romanian Academy

SMART SUSTAINABLE DEVELOPMENT AND DIGITAL TRANSFORMATION

BOOK OF ABSTRACTS

2023 edition of

The International Conference

"*Resilience and competitiveness of the national economies - under the sign of creativity, crisis and conflicts*" - RESILNAT-3C

Edited by
Valentina VASILE
Raluca MAZILESCU
Marius-Răzvan SURUGIU

15-16 June 2023, Bucharest, Romania

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PROGRAM

June, 15, 2023, 9:15- 9:30 – Înregistrarea participanților / Participants' registration

9:30-14:00 – **Sesiune plenară /PLENARRY SESSION**

9:30-11:00 - Moment aniversar, Institutul de Economie Naţională – 70 de ani

Anniversary moment, Institute of National Economy - 70 years of activity

9:30- 9:40– Institutul de Economie Naţională - Şapte decenii de activitate de cercetare stiintifică / The Institute of National Economy - Seven decades of scientific research activity - - Prof.univ.dr. Valentina VASILE, Director

9:40-11:00– Alocuţiuni şi mesaje / Allocutions and messages

(TBC) - Academician Mircea Dumitru – vicepresedinte Academia Română / vice-president of The Romanian Academy

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11:00-14:00– Prezentare lucrări în plenul conferinței / Keynote speakers

11:00-11:30

Eco-Innovation: Dynamic Capabilities, Cooperation and Strategic Orientation

Jun Li, *University of Huddersfield, Queensgate, UK*

11:30-12:00

The Impact of Economic Complexity Or International Tourism And Environment

Daniel Balsalobre Lorente, *University of Castilla-La Mancha, Spain*

12:00-12:30

Exploiting the Powers of the Cultural and Creative Industries to Enhance Cultural Accessibility for Audiences with Auditory, Visual, Mobility and Intellectual Impairments

Dorothea Papathanasiou-Zuhrt, *Open University of Cyprus, Nicosia, Cyprus*

12:30-13:00

A New Mathematical Tool for Investigating Economic Models Involving Time Fractal via Abu-Shady—Kaabar Fractional Calculus

Mohammed K. A. Kaabar, ***University Malaya, Kuala Lumpur, Malaysia***

13:30-14:00

Teaching Economic Development through Projects: Catching Up With European Qualification Framework and Sustainable Development Goals

Eglantina Hysa, ***Epoka University, Tirana, Albania***

14:00-14:30

Entrepreneurship in Emerging Markets. The Shift of Financing Paradigm in the Context of Increasing Post-Crisis Resilience

Gabriela Prelipcean, ***Ștefan cel Mare University of Suceava, Romania***
Mircea Boscoianu, ***Transilvania University of Brașov, Romania***

14:30-15:00

Building resilience of the national economy in the context of overlapping crises - the main challenge for economic growth. A comparative analysis of the EU member states.

Valentina Vasile, Marius-Razvan Surugiu, Raluca Mazilescu, ***The Institute of National Economy, Bucharest, Romania***

June, 16, 2023, 9:15- 9:30 – Înregistrarea participanților / Participants' registration

9:30-16:00 – **SESIUNI PARALELE /PARALLEL SESSIONS**

9:30-15:30 Papers' presentation

Session 1. GREEN ECONOMY AND THE ENERGY CRISIS
Session 2. DIGITAL INCLUSION- FACTORS, LIMITS AND IMPACT
Session 3. LABOR MARKET, SKILLS AND THE DIGITAL TRANSFORMATION EFFECTIVENESS
Session 4. SUSTAINABLE LOCAL DEVELOPMENT: TOURISM AND HERITAGE CAPITALIZATION
Session 5. FINANCE, INVESTMENTS AND GLOBAL CAPITAL MARKETS
Session 6. ACCOUNTING, LAW AND SUSTAINABLE BUSINESS MODELS

15:30-16:00 Sesiune plenară – Concluzii / Plenary session – Concluding remarks

SESSIONS' CHAIRS

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Co-chair: Marius-Răzvan Surugiu

June, 16, 2023

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Chair: Daniela Antonescu
Co-chair: Andreea Constantinescu

Session 5. FINANCE, INVESTMENTS AND GLOBAL CAPITAL MARKETS
Chair: Valentina Vasile
Co-chair: Mirela Panait,

Session 6. ACCOUNTING, LAW AND SUSTAINABLE BUSINESS MODELS
Chair: Marius-Răzvan Surugiu
Co-chair: Elena Bunduchi

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PLENARRY SESSION: KEYNOTE SPEAKERS

ECO-INNOVATION: DYNAMIC CAPABILITIES, COOPERATION AND STRATEGIC ORIENTATION

Jun Li
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Abstract
This keynote speech is to present the findings of two recent studies that investigate the determinants of eco-innovation, using data from the Spanish Technological Innovation Panel from 2012 and 2015. We build on OECD research to conceptualise eco-innovation as the capacity with which firms modify, redesign, and create products, processes, procedures, and organisations in order to reduce environmental impact. In these studies, we demonstrate that eco-innovation possesses two properties of innovative capabilities, namely, persistence over time and interrelation with other innovations. We thus shed new light on the mechanism through which firms engage in eco-innovation. We show that both eco-innovation and cooperation, once set in motion, could reinforce each other, suggesting that the relationship between cooperation and eco-innovation is complementary and sequential. We also argue that the strength of strategic orientations, particularly corporate environmentalism, will spur firms to integrate and adapt capabilities to undertake more cooperative innovation in order to deliver outcomes in tandem with their strategic objectives.

THE IMPACT OF ECONOMIC COMPLEXITY ON INTERNATIONAL TOURISM AND ENVIRONMENT

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Abstract
This study examines the impact of economic complexity and air transport on carbon emission in the five most tourist destinations (China, France, Italy, Spain and the United States). This research provides new empirical evidence about the relevance of economic complexity and air transport on carbon emissions reduction through the FMOLS econometric analysis. The results confirm a U-inverted connection between economic complexity and carbon emissions and air transport and carbon emissions. Trade openness and renewable energy consumption reduced carbon emissions for the selected countries from 1992 to 2019. The central evidence of this study is the analysis of the interaction between air transport and carbon emissions, which confirms a moderating effect on carbon emissions. The economic significance of the empirical results demonstrates the importance of ascending complexity and the development of the air transport industry to reduce environmental pressure, where the promotion of renewable energy sources and the globalisation processes contribute to this objective.

EXPLOITING THE POWERS OF THE CULTURAL AND CREATIVE INDUSTRIES TO ENHANCE CULTURAL ACCESSIBILITY FOR AUDIENCES WITH AUDITORY, VISUAL, MOBILITY AND INTELLECTUAL IMPAIRMENTS. AN ADHOC EXPERIMENT

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Abstract
The culture sector has seen its digitization accelerated by the COVID-19 pandemic. In 2020, income from royalties and digital channels reached US$2.7 billion globally: 1/4 of all sector revenues. This evolution has largely been driven by VoD & streaming. During the pandemic digital culture, from broadcasting archival material online to producing live digital events, succeeded to maintain the audience. Many museums and sites remodel their approach to present artefacts, co-curating digital exhibitions with other institutions, diversifying online content and channels, and delivering services such as education through digital platforms. This approach though remains imprisoned in the attitude of ableism and results in discrimination. Indicative is the lack of data for cultural services for the disabled at EU level since 2011. The heritage sector has not yet developed feasible value propositions adapting new skills to rising demands of experience delivery in digital culture and therefore do not match skills supply and audience needs. The 2019/1/MK01KA203060269/ADHOC project is an experiment to test the use of the digital culture to support the experience of audiences with disabilities at places with significant cultural values, both as an in situ and ex situ resource. ***Objective****: outline the topic addressed in a general context and underline the study's objective. A disability is defined as a "long-term physical, mental, intellectual, or sensory impairment" and affects 20% of the EU population. The main objective is to formulate remedies for the quality of the CCI-driven product for the disability audiences and define a new paradigm of research to employ and replicate a market-shared reference code to meet the demand as per the UN Convention on the Rights of Persons with Disabilities, the EU CHARTER OF FUNDAMENTAL RIGHTS and the EU PILLAR OF SOCIAL RIGHTS reaching out audiences with disabilities (visual, auditory, mobility and intellectual impairments).* ***Method****: The main objective is to present the cultural history of the island of Chios to audiences with visual, auditory, mobility and intellectual impairments. To serve this purpose ten (10) places of cultural significance have been assigned one learning objective for each resource. A typology has been developed as per: 1) the Unesco Designations [Nea Moni of Chios]; 2) the Medieval Fortifications [Anavatos and Avgonima]; 3) The Genoese rule and the Maona Company [Seaward Castle of Chios; Medieval Mastic Villages]; 4) Cultivation of the Mastic listed in the Unesco Intangible Heritage List for the unique cultivation practices of pistacea lentiscus var. chiae [PIOP Mastic Museum]; 5) The Biocultural Ecosystem of Citrus Groves: [The designated area of Kampos]; 6) The Enlightenment [Historic Public Library "A. Korais"]; 7) the Greek War of Independence [PIOP Mastic Museum]. The guiding principles derive from the Cognitive Load Theory and are concerned the restrictions of human WM and the mechanisms of acquiring and retaining information adapted to audiences with special needs, but also attracting educators and family members these communities rely on and the UNESCO criteria for the significance of cultural resources. Content design has faced two main challenges: a) how to facilitate monument significance without imposing extraneous loads on working memory, while enabling special audiences retain information causing an emotional impact; b) how-to present critical issues e.g., the Massacre of Chios by the Ottomans in 1822. The vital consideration for the design of storytelling is how humans acquire and retain information, how human memory processes data, considering the particularities of the selected target groups (visual, hearing, mobility, and cognitive impairments), and accordingly create interactions between the audience and the cultural resources. The technical aspects need to be tailored to visual, auditory, mobility and intellectual impairments and ensure educators and family members who might support the whole process an enjoyable experience.* ***Results****: The outcome of this process is a framework of contents, which is made up by: (a) a central message, which describes "the essence" of the heritage site, work of art, intangible values, landscapes or even signage dealing with the management of cognitive loads by facilitating information retention, (b) a storyline that holds the audience's attention, chunking information according to the needs of special audiences; c) simplified text versions for cognitive disabilities; d) voice over for visual disabilities; e) sign language videos for auditory disabilities. The overall result achieved supported by advanced graphic design and navigation options is the unity of all interactive elements into a cohesive multimedia narrative through a design and a navigation mode capable of feeding the idea.* ***Originality****: The use of culture as a permanent education source is*

a constant value in special education and not only because it uses the vast treasure of stories that makes Europe. Communicating culture is, however, a very complex activity that integrates many different disciplines and many talents. It goes beyond the "find and show", means to interpret and provide elements that, while emotional, retain a clear trace of a rational path precisely. When a historian presents facts, s/he generally does so by demonstrating the evidence like archives, collections, manuscripts, artworks, newspapers, pictures, reports and so on in support of the thesis itself. This is a typical structure of a lesson. The ADHOC experiment is a set of relationships between digital documents, which are the bridges between one event and another, between a letter and a picture, a statue and a manuscript, a painting and a voice; a video and a sort part, the combinations are limitless; it is about argumentative connections between the elements of the story, which in the audiovisual language, become transitions between shots, and the very dynamics of the passage of time in the audiovisual format. In this way a new visual expression emerges that exploits the infinite possibilities of digital systems for production, reproduction and distribution tailored to the needs of disability audiences. ***Funding**: This work was supported by the 2019/1/MK01KA203060269/ADHOC «Accessible and Digitalized Cultural Heritage for persons with disabilities» funded by Erasmus+ Programme 2014-2020, Key Action 2: Cooperation Partnerships, Action Strategic Partnership for Higher Education (15.12.2019 -14.12.2022)*

A NEW MATHEMATICAL TOOL FOR INVESTIGATING ECONOMIC MODELS INVOLVING TIME FRACTAL VIA ABU-SHADY—KAABAR FRACTIONAL CALCULUS

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Abstract
Fractional calculus has been recently considered as one of the most interesting research topics in modeling scenarios in various subjects of study such as engineering, science, and economics. Various formulations and methods in fractional calculus have been recently proposed to model phenomena. ***Objective**: In this study, various economic models involving time fractal have been formulated using a newly proposed fractional derivative, known as Abu-Shady—Kaabar fractional derivative.* ***Method**: The fractal Laplace transform in the sense of Abu-Shady—Kaabar fractional derivative is proposed to obtain analytical solutions of our economic models.* ***Results**: The studied models coincide with the previously studied models using Caputo fractional derivative. Therefore, our models generalized the standard models which are important for experts in economics to implement them using data in future studies.* ***Originality**: This study is novel, and it has never been studied before in the sense of Abu-Shady—Kaabar fractional derivative.*
***Keywords**: Fractional Calculus, Fractal Calculus, Abu-Shady—Kaabar Fractional Derivative, Generalized Laplace Transform.*

TEACHING ECONOMIC DEVELOPMENT THROUGH PROJECTS: CATCHING UP WITH EUROPEAN QUALIFICATION FRAMEWORK AND SUSTAINABLE DEVELOPMENT GOALS

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Abstract
Development economics is a field of study exploring the reason for the economic success and failures of different countries or regions worldwide. It deals with important issues and gaps of the 21st Century, such as poverty, inequality, education, health, demographic changes, migration, trade, and globalization. All the aspects mentioned above of development economics are the main motivation of this chapter. Furthermore, this study tries to analyze, synthesize and recapitulate the integration of teaching and learning in graduate studies. This is the case study of the applied side of the titled "Development and Growth," offered at the graduate level in the Faculty of Economic and Administrative Sciences at Epoka University in Albania. This study aims to address the following analyses: (1) discussion of the syllabus content for two consecutive semesters; (2) exploration of the structural framework of course management concerning the sustainable development goals and European qualification

framework; (3) mapping the focus of the applied projects during this course; (4) and presents an example from the applied projects. The chapter will serve as a good starting point for understanding key issues of sustainable development and integrating them with the applied projects conducted by students' involvements that, in most cases, form a fundamental cooperation ground among universities-industry-government-civil society. Furthermore, it can serve as a pilot study to explore how the European qualification framework can be applied in practice.

***Keywords**: teaching methodology, entrepreneurial skills and innovation, learning outcomes, development and growth course, European Qualification Framework, Bologna System*

ENTREPRENEURSHIP IN EMERGING MARKETS. THE SHIFT OF FINANCING PARADIGM IN THE CONTEXT OF INCREASING POST-CRISIS RESILIENCE

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Abstract
The issue of financing entrepreneurial businesses in emerging markets must be analysed starting from the current context of a paradigm shift towards capital markets and the use of hybrid solutions based on the development stages of firms and the macroeconomic context. The new orientation of the literature starts from the analysis of the complementarities and of the alternative uses of the various financing instruments. On this basis, new financing patterns are identified and a new understanding of country characteristics results. For emerging markets, this is particularly interesting and suggests a better understanding of the significant country effects and industry-specific factors on the use of various SME financing solutions. In emerging markets, the context is different and special efforts must be made to understand viable financing solutions and strategies. The ingenuity of entrepreneurs must be correlated once again with financial innovation by offering specific solutions and strategies. Venture capital funds (VCFs) / private equity funds (PEFs) that have demonstrated viability in developed markets need to be rethought and readjusted for emerging markets through the link of alternative strategies that add flexibility, ensure better navigation through the legislative system and critical liquidity. Hence the idea of using hedge funds (HFs) in new architectures better adapted to the situation of emerging markets (other innovations - use of retail through which the middle area of investors is fructified and building a critical mass; the activation of public-private partnerships - PPP). By integrating these innovations at SME financing solutions and strategies, both the creation of organizational structures and of portfolio management solutions are achieved, much better adapted to the emerging markets requirements. HF portfolios could be managed starting from a central subportfolio (VCF/PEF oriented) and satellite subportfolios (liquidity oriented).The COVID-19 crisis, which immediately became a multiple crisis and negatively affected especially entrepreneurship, negatively impacts entrepreneurship and entrepreneurial finance in a context in which entrepreneurs need to reinvent themselves and look for new solutions to reconfigure their business in an unprecedented dynamism. However, the financing solutions remained behind and they perform in emerging markets only on bond issues through private placement followed by listing on a regulated, but illiquid market. The general purpose of this research is to develop an innovative framework for designing and implementing specific SME financing strategies in emerging markets, based on synergies between the three alternatives (instruments-strategies-architectures) adapted to post-crisis situations. Through the methodology and the selection of original and innovative models, this new framework is well adapted to solve concrete SME financing problems in emerging markets also in the post-crisis context. The modular and scalable design offers an optimal implementation capacity. The contributions also result from the understanding of the transformation of financing mechanisms of the entrepreneurial business but also from the unique way of integrating concepts such as latent and emergent entrepreneurship, real option analysis, dynamic capabilities, resilience engineering, and fractal dynamics. This will open new perspectives and future research directions in the field. This complex framework is very useful for Romania, but also for other emerging

countries because of their limited entrepreneurial capacity and capabilities. Another contribution is the design procedure for new efficient innovative models/instruments adapted to an emerging market.

***Keywords**: entrepreneurship, economic models, emerging markets, SME financing paradigm, post-crisis resilience, alternative investments*

BUILDING RESILIENCE OF THE NATIONAL ECONOMY IN THE CONTEXT OF OVERLAPPING CRISES - THE MAIN CHALLENGE FOR ECONOMIC GROWTH. A COMPARATIVE ANALYSIS OF THE EU MEMBER STATES

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Abstract

***Objective:** Resilience has many definitions and increasing number of components. The main focus is on the ability of an economy as a whole to cope, recover from and reconstruct after a shock and to minimize aggregate consumption losses. The financial crisis of 2008-09 and the COVID-19 pandemic affected various economic sectors, and the effects were delayed, amplified and prolonged. The research is focused on checking the evolution of various macroeconomic indicators, identifying the recovery period (the period in which the value of the indicators (after the crisis) reaches the value before the crisis), and checking the relationship between them. **Method**: Statistical analysis is used to identify the shock (size/intensity and duration/period of reduction/fall) and the recovery period (the number of years to reach the pre-crisis level). Also, the analysis of the cointegration between the variables was checked, to identify the long-term relationships between variables. **Results**: The analysis of the considered indicators shows the different impact of both crises by countries. There are countries with the fastest, fast, and a long recovery and countries with no recovery from the crises. The results emphasize the need for preventive measures to build the economic resilience. **Originality**: The development of the analysis by old, new member states and candidate countries is considered. This approach allows various methods for developing regression models.*

***Keywords:** resilience, overlapping crises, economic growth, EU member states, cointegration analysis*

PARALLEL SESSIONS: KEYNOTE SPEAKERS

GREEN ECONOMIC GROWTH IN CHINA

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Abstract
Green development answers to the common needs and demands of all humanity, especially the emerging economies like China. Based on the newly constructed Metafrontier-Global-SBM super-efficiency DEA (Data Envelopment Analysis) model, this study measures the green economic growth levels of 286 prefecture-level cities in China from 2003 to 2018 and examines their spatiotemporal evolution characteristics and internal influencing mechanisms. The empirical findings highlight that China achieved favorable green economic growth with the most significant improvement in the northeast and eastern coastal cities. In terms of regional distribution, green economic growth in Shanghai, Guangdong, Heilongjiang, Gansu, and Ningxia was at a higher level, while the Chongqing and Qinghai regions were lagging. Based on the decomposition results of the green economic growth rate; the study argues that "innovation effect" was the primary factor driving growth and "technology-leader-transfer effect" showed a contrary inhibiting effect. This study adds empirical evidence to the facts of green development in Chinese cities and the influencing mechanisms behind it, and has important policy implications for further harmonizing the relationship between resource conservation, environmental protection and economic development, and further promoting green development in China and globally.

RURAL AREA DEVELOPMENT ASSESSMENT BASED ON THE EUROPEAN INDEX OF DIGITAL ENTREPRENEURSHIP SYSTEMS IN THE REPUBLIC OF MOLDOVA

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Abstract
Objective:*1) Analyse an approach based on the European Index of Digital Enterprise Systems (EIDES) as an analytical tool that provides a measure of the physical and digital environment for scaling entrepreneurial activity in Moldova's rural development regions. 2) Explore the possibilities of introducing methods and data sources for the calculation of EIDES indicators at the regional and local levels in the Republic of Moldova in the context of the implementation of the National Strategy for the Development of Agriculture and Rural Areas for 2023-2030. 3) Justify the need to organise specialised trainings for statisticians and civil servants on the adaptation and application of the EIDES methodology at the regional and local levels, including a general introduction to the structure and purpose of the index, based on an in-depth analysis of the existing methodology and definitions consistent with best practice in data collection. 4) Recommend to the regional councils and development agencies to initiate analytical studies on the adaptation of EIDES within the framework of smart specialisation priorities, coordinated by experts from the JRC EU Commission and innovative university centres, with the aim of*

successfully developing rural areas within the framework of the candidate country status for EU membership of the Republic of Moldova. 5) Argue the need to organise information and analytical events with representatives of authorities - pilot regions, districts (experimental local initiative groups), as well as farms and representatives of small and medium-sized businesses, on topics related to the planning and implementation of Sectoral Operational Plans and national strategies, in particular, "European village" in the regions of development, involving the disclosure of the entrepreneurial potential of settlements based on EIDES and the tools of the "Digital Economy". 6) Formation of innovative public-private partnerships, consisting of groups of competent innovation managers responsible for data collection, who will be able to prepare the necessary scientific and technological information and the EIDES data collection and presentation capacity questionnaire, consisting of four groups: data collection and analysis, data quality, resources, reporting. ***Method****: bibliographic research, European benchmarking, statistical observation.* ***Results****: 1) The "systemic" EIDES measurement framework has been identified, related to resource conditions in the regions of development and rural areas of the Republic of Moldova, which have a direct impact on the dynamics of the development of digital entrepreneurship. 2) To initiate innovative public-private partnerships within the framework of innovative programs and projects, according to the methodology of the EIDES, Digital Economy Society Index (DESI), Digital Economy Rural Society Index (DERSI) indices, the following is recommended: - To prepare baseline data by analysing the key sources of information at the national and EU levels, as well as the main national and regional activities planned under the digital market harmonisation programs, the EU4Digital program and the regional statistical program for the EaP region Statistics through Eastern Partnership (STEP); - To organise specialised trainings for statisticians and civil servants on adaptation and application of the EIDES/DERSI methodology at the regional level. Such trainings may include the following topics: a general introduction to DESI and its purpose; in-depth analysis of the existing methodology, definitions (definitions); methodology that is in line with best practice in data collection; creation and use of tools (e.g. questionnaires) for data collection; - Develop and implement models of an innovative management system based on ArcGIS (ESRI), developed by the consortium IT4BA Innovation Incubator of the Moldovan Academy of Economics, Trimetrica SRL and NGO Infoera in the preparation of geospatial statistics at various stages of regional projects; - When planning activities to solve the problems of lack of statistical data in the field of "Digital Entrepreneurship" and others, attract internal and external investments in the development of the skills and potential of enterprises, the development of methodologies, and measures for collecting statistical data on R&D and innovation. 3) Developing the capacity of the statistical office in the regions and districts will require a long-term investment in skills, procedures, practices and know-how in relation to capacity building and practices in the collection, analysis, storage and disclosure of government statistics.* ***Originality****: Combination of the best practices of the EU countries that evaluate the effectiveness of the digital economy based on EIDES, with the academic expertise of university staff, research groups of the Republic of Moldova for the effective development of the digital economy, justifying the attraction of long-term investments to adapt EIDES and improve the practice of collecting, analysing, storing and disclosing state statistics Digital economy.*

Keywords*: EIDES; European Village, DESI, digital entrepreneurship, digital business ecosystem*

LABOUR MARKET DYNAMICS AND INFLATION SPILLOVERS: THE CASE OF ALBANIA

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Abstract

Objective*: The Albanian labor market has been continuously affected by demographic changes, which were further amplified with the Covid-19 pandemic and subsequent Ukraine war causing significant disruptions in labor demand, supply, and the overall workforce. This paper aims at gauging demographic dynamics implications in the Albanian labour market and evaluating the spillovers between labour market and inflation.* ***Method****: Utilising a multivariate filtering technique, we estimate the unemployment gap, which is then incorporated into a*

wage Phillips Curve. Additionally, we analyse the domestic supply prices in relation to Unit Labor Costs (ULC), establishing a feedback loop between the labor market and inflation. This comprehensive approach enables a subtle analysis of labor market dynamics, integrating short-term fluctuations with long-term trends. By delving beyond simple causation, we examine the reciprocal influence between these crucial economic components. ***Results****: Our findings highlight tight labor market conditions, with the actual Non-Accelerating Inflation Rate of Unemployment (NAIRU) below the actual unemployment rate. Following the Covid-19 outbreak, the nominal wage has become approximately 40.0 per cent more sensitive to inflation, affirming the presence of a wage-inflation feedback loop.* ***Originality****: Our estimates reveal that a continuous decline in population by 5.0 percent over 10 years leads to an average 20.0 percent increase in ULC and 1.6 percentage points higher inflationary pressures relative to the baseline scenario. Although, an increase in the retirement age accompanying the population decline can partially mitigate labor market tightness, reducing wage pressure and, consequently, inflationary pressures, albeit to some extent.*
Keywords*: labour market, demographics, inflation, wage, feedback-loop*

METHODOLOGICAL APPROACHES FOR MEASURING REGIONAL ECONOMIC RESILIENCE: A SYSTEMATIC BIBLIOMETRIC ANALYSIS

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Abstract
Objective*: In this paper, we review the different methodological approaches of measuring regional economic resilience focusing on Nuts II and Nuts III regions, conducting a systematic bibliometric analysis. Recently, the concept of resilience has become a "popular" term in various multidisciplinary fields. In the case of economics, resilience is "interpreted" as the ability of an economy to return in equilibrium conditions, those that prevailed before the occurrence of the disturbance. As regards regional science, the resilience of a region is described as its ability to successfully recover from a shock strike on its economy that either "throws it off its growth path or has the potential to throw it off its growth path". According to another interpretation of regional resilience, it reflects the ability of a regional economy to anticipate, prepare, respond to, and ultimately recover from a disturbance or disruption.* ***Method****: The methodological approaches to measure resilience range from use of descriptive, interpretative, or simple regression models to sophisticated statically econometric models. Each of these approaches has its own characteristics, advantages, and disadvantages. Moreover, our focus in this paper is on economic shocks, which are characterised as sudden, unexpected and 'out-of-the-ordinary' events (such as national recessions and financial crises). Given these premises, the present paper, via a systematic bibliometric analysis, provides insights of the regional and spatial economics literature in relation to resilience measurement and estimation methods applied and proposed so far, enrich the knowledge of the measurement methodological context and applications from several different sources, including other reviews or bibliometric analyses of resilience measurements. Our research focuses on economically derived disturbances or shocks (such as recessions) and the resistance capacity or ability of a regional economy to respond to these shocks at a Nuts II or/and Nuts III level according to Eurostat NUTS classification, which is a hierarchical system for dividing up the economic territory of the EU and the UK. For non-EU member states, we consider the classic approach-definition of a region/county area.* ***Results****: The results of this paper are summed up in one main inference, that the methodological context for measuring regional economic resilience at Nuts II or/and Nuts III level is undefined and basically empirically developed using either resilience indices or statistically based econometric models to assess resilience of a region. This somehow happens because regional resilience has not yet been clearly defined conceptually, to conclude to a globally accepted concept and definition. Until then, fussiness and multi directional*

approaching methods will prevail in the field of regional and spatial economics. ***Originality****: Study's approach originates from the need of exploring the context of measuring regional economic resilience pertaining to Nuts II and II regions and the absence of a systematic bibliometric analysis conducted or published until today. This "study gap" becomes more evident in the case of regional science and regional analysis, and particularly in the areas of interest, such as Nuts II and III regions. In addition to this, in case of Greece where regional disparities are strong and important as relate to other EU countries on the one hand, and due to the 10-year economic crisis and fiscal adjustment of Hellenic economy on the other hand, the clarification of the aforementioned framework contributes manifold to scientific knowledge, as well to practical experience and implementation.*
Keywords*: measuring context, regional economic resilience, systematic bibliometric analysis, Nuts II&III regions, economic disturbances*

THE FINANCIAL INDICATORS OF THE POPULATION, THE BASIC PILLAR OF SOCIETAL SUSTAINABILITY AT THE NATIONAL LEVEL

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Abstract
Objective*: According to European regulations, as well as according to the methodology for the allocation of European funds at the regional level, the financial indicators of the population of the member states are reference indicators regarding the sizing of the amounts related to the funds included in the Multiannual Financial Framework and with the direct objective of defining "investments for the employment of work and economic growth". The essential objective of the study and perspective consists in establishing the basic pillars of the concentrated picture of the financial indicators of the population, in terms of the achieved values of the primary indicators, based on which five relevant relative indicators were calculated that characterise the financial condition of the population, which influence in directly the potential and performance of the national economy.* ***Method****: The research methodology in the work is based on conceptual definitions, as well as calculation formulas of the primary indicators, respectively of the derived indicators, calculated for the period 2007-2022.* ***Results****: In the paper we will present the results of the study, namely the calculation of the primary indicators for a series of 2007-2022 data, and the novelty element of this paper is given by the definition and calculation of some derived indicators that reflect the current financial state of the population at national level, basic pillar of societal sustainability. The general conclusion in this study is that the year 2021 had an effect on the financial state of the population, the uncertainty regarding the state of health, the workplace, inflation or resources causing households to be cautious in their consumption or saving behaviour. In this sense, first of all, average incomes have increased compared to 2020, also average expenses have increased in turn (except for investment expenses intended for the purchase or construction of housing, the purchase of land and equipment necessary for household production, the purchase of shares etc. have a small share in the total expenses of the population's households). Although the year 2022 is notable for the tense economic context, with war on the border, energy crisis, inflation of over 16% and interest on deposits at half, the number of Romanians with bank deposits of more than 100,000 euros has increased significantly, possible influences in this meaning given the high profits and high salaries obtained in some economic sectors, such as the banking sector, the energy sector, oil & gas, while at the opposite pole for many Romanians the increase in ROBOR and the explosion of electricity and natural gas prices led to a reduction in available income/ money. It is worth noting that Romania currently has approximately 91,500 millionaires in dollars, with fortunes that exceed the threshold of 1 million dollars. Of these, only 2% are considered very rich, with assets of over 30 million dollars each. In the region, Romania has 1,828 "super-rich" people, more than in Poland, the Czech Republic (600), and Hungary (235). At the global level, the very rich individuals (ultra-high net-worth individuals - UHNWIs, have assets of more than 30 million dollars) are in the USA (210,000), China (99,000) and Japan (31,000), France or Germany.* ***Originality****: The creation of a graphically and descriptively represented image, with multi-year coverage (2007-2022), of the evolution of the financial indicators of the population lead us to the conclusions of the established theme. The results of the study demonstrate the importance of the human factor in fueling the economic growth process but also in supporting sustainable development. The public authorities must implement complex measures that enhance the human factor and that must be involved in the promotion of sustainable development on different levels, as a consumer, investor, etc.*
Keywords*: finance, population, investment, sustainability*

FACTORS CRITICAL TO A SUCCESSFUL ERP IMPLEMENTATION: EVIDENCE FROM AN EMERGING ECONOMY

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Abstract
Objective*: The research aims to assess factors critical to successful implementation of enterprise resource planning (ERP) systems in emerging economies.* ***Method****: An exploratory case study design using semi-structured interviews as a data collection technique was employed.* ***Results****: This study offers valuable findings for the Albanian ERP market using a qualitative research design. ERP initiatives receive significant investment to improve the overall company's performance. Implementing ERP systems has the potential to provide benefits such as: reduced inventory costs, improved data sharing process among departmental units, and real-time data reporting in a single source of information. Therefore, it is critical to assess past, present, and future performance to determine whether these investments are beneficial or not for the company. Despite the benefits of ERP system implementation, organisations may experience serious challenges during the process, and the risk of project partial failure is high.* ***Originality****: This research has implications as it provides a set of critical success factors (CSFs) that are applicable in Albania to companies wishing to implement ERP, but at the same time also for traders and consultants. Recognizing these factors will result in a more seamless implementation path.*
Keywords*: ERP systems, CSF, construction industry, emerging economies*

SESSION 1: GREEN ECONOMY AND THE ENERGY CRISIS

A ROADMAP TO ENERGY SUSTAINABILITY: LEVERAGING THE GREEN ECONOMY AS A SUSTAINABLE SOLUTION TO THE ENERGY CRISIS IN MALAYSIA

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Abstract
Objective*: In recent years, the global energy crisis has become a paramount concern for the economies. Therefore it is imperative to ascertain the factors that facilitate or impede the energy crisis. For this purpose, this study addresses the topic of energy sustainability and the contribution of the green economy to control the full-blown energy crisis in Malaysia. The primary objective of the study is to evaluate the influence of the green economy, energy price volatility, natural resource depletion, and economic growth on the energy crisis. Based on these, we are going to provide a better roadmap for the decision-making, resource allocation, and implementation of policies needed to facilitate the transition toward a green economy and sustainable energy practices.* ***Method****: Unlike previous scholarly work on the energy crisis, this study employed the Quantile Autoregressive Distributed Lag (QARDL) model as an innovative approach to analysing the asymmetric influence of the green economy, energy price volatility, natural resource depletion, and economic growth on energy intensity (proxy of energy crisis) from 1990 to 2021. The QARDL approach has several advantages over traditional regression methods. Such as it provides insights into the nonlinear and asymmetric association across different quantiles to accommodate heterogeneity among the variables. Besides this, the long-run and short-run estimates by this approach offer a novel perspective on the interaction between energy intensity and its key drivers for the better incorporation of sustainable solutions to the energy crisis in Malaysia.* ***Results****: According to the QARDL estimates, there is a positive and significant association between energy price volatility, economic growth, natural resources depletion, and energy intensity, while the green economy has a significantly negative impact on energy intensity in Malaysia in the long run, across all quantiles (Q0.05- Q0.95). It implies that being an oil-exporting country, Malaysia hinders sustainable energy planning and investment decisions; therefore, the increase in energy price volatility leads to an increase in energy intensity. Similarly, the high economic growth in Malaysia requires more energy consumption to support economic activities. Likewise, natural resource depletion is associated with higher energy intensity to fulfil the demand; alternative energy sources require more energy-intensive extraction of fossil fuels. In contrast, a stronger green economy, characterised by increased investment in energy efficiency measures and renewable energy production would reduce energy intensity. For the short-run estimates, the QARDL model revealed the same direction of the association as the long-run; however, the significance level varies from quantile to quantile. Economic growth has an insignificant positive value of coefficients in the high quantiles (Q0.70 - Q0.95), showing that economic growth in the high energy crisis does not impact energy intensity in the short run. On the other hand, the green economy has a negative but insignificant association with energy intensity in the low quantiles (Q0.05- Q0.30) which implies that in a low energy crisis, the energy prices are relatively stable or low; therefore, the cost-effectiveness of green solutions may be less compelling hence less effective for the reduction of energy intensity in the short run.* ***Originality****: Malaysia has a unique context with challenges and opportunities in achieving energy sustainability due to its crucial geographical position in the ASEAN region. The existing empirical studies on the energy crisis have primarily focused on the individual aspects of its association with renewable energy consumption, energy prices volatility, an abundance of natural resources and economic growth, while none of the research has investigated the impact of a green economy and natural resources depletion on the energy crisis in Malaysia. There is a gap in the literature regarding a comprehensive analysis that integrates green economy, energy price volatility, natural resource depletion, and economic growth and evaluates their combined role in reducing energy intensity as a*

measure of the energy crisis. This study has taken the first initiative to fill the gap by employing the QARDL approach. By selecting Malaysia as a study sample and exploring the insights into the effectiveness of the green economy as a sustainable solution to the energy crisis, the study also adds value to the literature.
***Keywords**: green economy, energy price volatility, natural resource depletion, economic growth, energy intensity, energy crisis, Malaysia, and QARDL approach.*

COST ANALYSIS OF THE RECYCLING IN THE LOOP MODEL SELECTED FOR THE ECONOMY OF THE REPUBLIC OF MOLDOVA

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Abstract

***Objective**: In the last few years, the transition strategies to circular economy models have moved from waste disposal to recycling and valorization, considering waste as a potential new resource, together with the reduction of resource consumption, energy, emissions and leakages, which ultimately consist of reducing the negative impact on the environment. In some studies the costs of circular economy models are proposed to be estimated by the indicator, which reflects the potential environmental savings and is based on the estimated environmental impact values obtained through life cycle assessment (LCA) practices, the environmental impact in what concerns resource consumption, being determined using the Cumulative Exergy Extraction from the Natural Environment method. In studies of waste recycling, especially plastic waste, environmental impact assessment focuses largely on emissions and to a lesser extent on resources, the latter using abiotic depletion potential as an indicator. However, a good analysis focusing on the entire natural resource asset in combination with resource efficiency indicators is still lacking. In this sense, the impact analysis methodology that takes into account the consumption of resources can be used - cumulative exergy extraction from the natural environment or CEENE, which is based on the concept of exergy, which allows the accounting of the quantity and quality of a wide range of natural resources. However, it is only applicable when recycled materials are used to replace identical materials as in the original product. The concept of exergy acts as a measure and a characteristic of an ideal economic process or model. **Method**: Taking into account that all business models from the point of view of technological efficiency are reduced to the rationalisation of the use of energy resources, on the one hand, and the increase of production volume, on the other hand, in the study we followed the changes in the energy consumption indicator by improving energy management and the use of secondary energy resources. In such a perspective, we considered it necessary to determine the factors whose influence on the energy system is substantial, as well as to develop, based on the study, the energy model with reduced energy consumption and increased energy efficiency. Otherwise, the modelling of an energy system was preceded by a study of the impact factors and the establishment of the character and dependencies of these influences. The need to identify the forecasting factors of energy efficiency in the food industry with the modelling of the multifactorial model was determined by the very broad and extensive subject, which is the theme of the development of energy efficiency. The study included the analysis of 5 cases of production from the Moldovian food industry in the following fields: • cases A, with a closed loop: the processing and preservation of fruits and vegetables, the manufacture of vegetable and animal oils and fats; • cases B, with open loop: manufacturing of dairy products, manufacturing of cocoa products, chocolate and sugar products. **Results**: The results of the study show that the energy recovery benefit from closed-loop (cases A) and open-loop (cases B) industrial processes, with the exception of enterprise no. 5 in the dairy sector, represents approximately 10% savings in the total consumption of technological energy resources. **Originality**: Based on our study, energy efficiency measures of production processes were proposed.*
***Keywords**: closed loop; open loop; energy efficiency; food industry; circular economy.*

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FINANCIAL INSTRUMENTS AND POLICIES USED TO PROMOTE THE CIRCULAR ECONOMY IN THE EUROPEAN UNION

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Abstract
*The transition to the circular economy is one of the strategic directions for sustainable economic development and green growth, promoted by the European Green Deal and, implicitly, by the current cohesion policies of the European Union. Public finances aimed at stimulating regional economies, creating jobs, developing infrastructure and protecting the environment could also be used to support the circular economy. Ideally, this is done through appropriate financial instruments, which are designed taking into account CE requirements, so that all important barriers and challenges to circular economy projects are addressed through the design of the instrument. Environmental taxes and economic environmental instruments can play an important role if designed from a circular economy perspective. **Objective**: The main objective of this research is to identify and analyse which kind of financial policies and instruments may and will promote implementation and development of a circular economy in the European Union countries. **Method**: The methodology used for this paper is based on literature review followed by the study and critical analysis of the main EU policies and programmes targeting the transition to the circular economy (CE) and of the financial/fiscal instruments envisaged or used in the European Union member states (with examples and good practices from the Community, national, local level). The approach is meant for emphasising and analysing the economic, financial or fiscal mechanisms and features of these circular economy policies. **Results**: The European Union has different policies and programmes with directions of action for transition to the circular economy (cohesion policy, circular economy action plan, EU taxonomy regulation, green and circular public procurement) which have been briefly analysed to highlight the main features from the CE perspective. Further, research has specifically analysed the European Union financial instruments for the transition to the circular economy. They are innovative and based on four principles: value conservation/creation; proportionality (with the level of externality); progressive dematerialization; sensitivity (elasticity) to innovation. Several examples of financial instruments expected or used for promoting the circular economy in the EU, adapted and applied at different levels of the product life-cycle or of the governance, have been described and analysed, leading to some specific conclusions and recommendations. **Originality**: The present paper aims to create an original contribution to the research regarding conceptual analysis towards the influence of financial policies and instruments on the implementation of circular economy in EU countries. This analysis may contribute to the development and grounding of the National Circular Economy Strategy and Action Plan in Romania, as well as to increase the synergies of economic growth and environment policies for developing the green economy.*

***Keywords**: circular economy, financial policy, economic instruments, mechanisms, principles*
***Funding**: This work was supported by the Institute of National Economy, as part of the 2022 annual research theme ”Economic-Social Development Policies from The Circular Economy Perspective, Financial-monetary policies” carried out by the Economic Development Department research team.*

THE CONTRIBUTION POTENTIAL OF ECOLOGICAL AGRICULTURE IN THE REPUBLIC OF MOLDOVA IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

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Abstract
The sustainable development of the agri-food sector, which has strategic socio-economic importance for the Republic of Moldova, is affected by a multitude of interrelated factors and risks that require the implementation of an integrated set of measures in multiple areas: development of an effective institutional and regulatory system based on the EU experience; mitigation, adaption and increase of the resilience of agricultural producers and the rural population to climate change; promotion of beneficial practices for the climate and the environment, including conservation of natural resources; strengthening competitiveness and developing sectors with high added value, facilitation of the market access and encouraging cooperation within the food supply chain etc. ***Objective:*** *The purpose of this paper is to analyse the development potential and contribution of organic agriculture in the Republic of Moldova in the context of sustainable development, as well as the trends and challenges for this sector.* ***Method:*** *The research presents the results of some theoretical investigations of the concept of ecological agriculture, as a basic element of sustainable development. Results of the analyses are applied for the examination of development of organic agriculture in the Republic of Moldova and options for integration within sustainable development models and projects. The study is based on data provided by the Ministry of Agriculture and Food Industry (MAFI) and the Agency for Interventions and Payments in Agriculture (AIPA). Analysis, synthesis and comparison were used as research methods.* ***Results:*** *Organic agriculture provides a basis for the implementation of an integrated and balanced approach contributing to the achievement of these priorities. In this regard, the National Strategy for Agricultural and Rural Development of Moldova 2023-2030 recognizes organic agriculture as an area of intervention that provides a high degree of complementarity and multiplying effect. The development of organic agriculture is a priority in the context of strengthening the political and legislative alignment to the Common Agricultural Policy of the European Union and the European Green Deal. Difficulties related to the establishment of a supportive regulatory system, policies and measures conducted to underdevelopment of organic agriculture in the Republic of Moldova. This affects the efficiency and sustainability of organic value chains, but most important is correlated with a poor expansion of production practices beneficial for the environment and conservation of the natural resources and knowledge about them.* ***Originality:*** *In this article, the authors propose to analyse the potential contribution of organic agriculture in the Republic of Moldova in the context of sustainable development, but also the trends and challenges that exist in this sector by identifying existing good practices.*
Keywords*: agriculture, sustainable development, organic farming.*
Funding*: This study was developed within the State Program 20.80009.0807.22 "Development of the mechanism for formation of the circular economy in the Republic of Moldova" funded from the state budget through the National Agency for Research and Development of the Republic of Moldova.*

IN THE WAKE OF THE ENERGY CRISIS. IS EUROPE READY FOR THE GREEN TRANSITION? THE EMERGING EVIDENCE

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Abstract
Following the outbreak of the war in Ukraine, the European Union's energy sector was subjected to a systemic shock with consequences felt across the continent and across the world. The sudden and abrupt rise of energy prices called into question Europe's ability to ever achieve its much-touted goal of transitioning away from fossil fuels. The average European citizen felt the full impact of the crisis and saw the cost of energy bills become a true burden for the common household. Small and medium sized businesses faced an uncertain future as the cost of energy shot up. Europe's desire to quickly abandon its long standing energy dependence on the Russian Federation led to a global race for resources and a worldwide spike in energy prices. And while the energy crisis took the continent by surprise, it also acted as a catalyst, with the European Union forced into action, and seemingly more determined than ever before to make good on its promise to accelerate investments in renewable energy and kick the transition towards renewable energy sources into high gear. ***Objective****: The present paper aims to identify the consequences of the energy crisis on the European energy sector, both from the perspective of the decarbonization process and of ensuring energy security. The paper also aims to analyse the public perception of the crisis and the sudden and abrupt rise in energy prices for the household consumer.* ***Method****: The methods used are the case study and comparative analysis.* ***Results****: The results of the paper highlight the fact that the feared return to fossil fuels, regarded by many as the only solution to ensure the energy security of the European Union, did not take place, the investments in renewable energy sources made in recent years representing a real "lifeline" for Europe in the current context. And while at the peak of the crisis, European countries and the EU as a whole went on a global "shopping spree" for gas, oil and coal, in a knee jerk reaction to the ongoing conflict in Ukraine, the panic has mostly subsided and the Union is increasingly starting to regard clean energy as a sustainable long term solution. The energy transition is by no means going to be a quick and easily achievable goal. It faces numerous technical, economic and social challenges. And while the desire to make the switch is perhaps bigger than ever before, fossil fuels might have to pave the way to renewable energy sources for the European Union.* ***Originality****: The study aims to dispel some of the myths surrounding Europe's energy sector and its ability to transition away from hydrocarbons and achieve a sustainable transition towards clean energy sources as well as to highlight some of the risks and challenges it faces along the way.*
Keywords*: energy, resilience, green transition, climate change, clean energy, fossil fuels*

MACHINE LEARNING: A CATALYST FOR GREEN ECONOMY TRANSFORMATION, WITH IMPLICATIONS FOR THE REPUBLIC OF MOLDOVA

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Abstract
Objective*: The modern world is witnessing a remarkable surge in the adoption of machine learning (ML) techniques, driven by advancements in computational power and data availability. This exponential growth presents unprecedented opportunities to address pressing global challenges, including the urgent need for a green economy. The Republic of Moldova, a country that faced a severe energy crisis in 2022, stands to benefit greatly from harnessing the power of ML to build a sustainable future. The objective of this article consists of examining the utility of ML in the pursuit of a green economy by outlining the possible ML algorithms and models that can be used in the following areas: energy efficiency, renewable energy, sustainable agriculture, waste management,*

and smart transportation. By analysing the potential application of ML in these domains, we aim to provide actionable insights and recommendations for Moldova's implementation strategies, aligning with the objectives presented in the National Development Strategy of Moldova 2030 and the Energy Strategy 2030. Our research will explore the practicality, feasibility, and potential impact of ML-based solutions in Moldova's green economy journey, emphasising the need for tailored approaches to address the country's unique challenges and opportunities. ***Method****: The techniques employed in this article include: logical-deductive reasoning, observation, analogy, comparative analysis, graphical and tabular methods, historical analysis and synthesis.* ***Results****: The main result of the research relies in identifying the opportunities where ML algorithms and models can be used in ensuring a green economy in the Republic of Moldova and how they can contribute to achieving the objectives related to this subject which are outlined in the national development strategies and the other areas related to the green economy, such as: energy, agriculture, waste and transportation.* ***Originality****: Given the fact that no similar studies were carried out prior to writing this article, our study presents an original approach by integrating machine learning techniques into the context of Moldova's green economy. While the application of machine learning in green economy initiatives has been explored in various contexts, our research focuses on its potential and relevance specifically in the Republic of Moldova. By leveraging machine learning algorithms, we aim to address the achievement of objectives related to ensuring a green economy, stated in the national development strategies, while identifying how to optimise energy consumption, enhance renewable energy integration, provide sustainable agriculture, contribute to waste management and allow smart transportation. Furthermore, our study investigates the utilisation of machine learning for sustainable resource management, ecological monitoring, and conservation strategies in Moldova. This original approach contributes to the growing field of green economy research by providing insights and practical implications tailored to the unique challenges and opportunities in the Moldovan context.*
Keywords*: green economy, machine learning, energy efficiency, renewable energy, sustainable agriculture, waste management, smart transportation, regression models, decision trees, neural networks, support vector machines, clustering algorithms.*

ENERGY CONSUMPTION IN THE BALKANS – MAIN DRIVERS AND THE CURRENT CRISIS

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Abstract
Objective: *The purpose of this study is to investigate the main macroeconomic, financial, political, and innovation-related factors which drive the energy consumption across some randomly selected Balkan countries. The war between Ukraine and Russia brought about significant volatility in energy prices, a slower growth rate at a global scale, ever-increasing uncertainty, and inflationary pressures causing a very impactful energy crisis. Energy transition and crisis aversion became the main concern in Europe and beyond. Even the most developed economies were unprepared for what happened. The number one goal for policymakers in the global arena became effective crisis management which could consequently minimise further spillover effects on the economic reality and global stability. Energy certainly turned into the centre of many high-level discussions, both in the political arena in the developed world and the so-called economies in transition, which are considerably more vulnerable to such external shocks and periods of increased volatility.* ***Method:*** *With little access to cutting edge technology, limited resources, poor infrastructure, and high rates of dependency on import of energy, these countries' stability and development could be easily jeopardised due to such a serious supply shock. That said, it becomes important to understand the whole dynamics of this energy matter in the Balkan region, focusing especially on a demand perspective. The empirical analysis within this research paper employs secondary, annual data, and it covers the period between 2015 and 2022. The multiple regression equation builds on an unbalanced panel dataset which allows to account for cross-entity heterogeneity. Using FEM, REM and GMM estimation methods the study brings to light the main statistically significant determinants steering energy consumption across Balkan region, by examining the case of Albania, Serbia, Bulgaria, Republic of North Macedonia, and Bosnia & Herzegovina. A total of seven explanatory variables were used to understand the relationships, size, and direction of impact on energy consumption per capita and change in energy consumption. The independent variables which served to answer the research question are: corruption index, financial development, GDP,*

global innovation index, population growth, political stability index, and trade openness. ***Results****: The final remarks provided from the comprehensive analysis, covering the current dynamics on the matter, underline some important takeaways that serve a great deal of information to policymakers, energy companies and other pertinent stakeholders both in the industry and academia.* ***Originality****: The study adds value to the domestic literature and tends to address an existing literature gap on this matter.*
Keywords*: energy demand, innovation, financial depth, panel data regression, energy crisis, Balkans.*

CIRCULAR ECONOMY AS A DIRECTION OF INDUSTRIAL MODERNIZATION: INTERNATIONAL EXPERIENCE

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Abstract
Globalisation and technological progress require more efficient supply chains, with economic, social and environmental factors becoming increasingly important. It is possible to solve problems, in particular of an environmental nature, which arose during the industrial revolution, and with the existing model of economic development, thanks to the application of the principles and approaches of recycling logistics. Realising the extent of the negative consequences of the existing model of economic development, it is necessary to transition to a new, modern, ecologically oriented model of a circular economy. ***Objective:*** *The objective of the article is to analyse the state of resource management, particularly waste, in the EU, to show the advantages of the transition of world economies to the circular model and to provide recommendations on the transition from a traditional (linear) economy to circular one in Ukraine.* ***Method:*** *The methodological basis of the study was the concept of sustainable development, which considers socio-economic development as social changes, occurring within the limits determined by the ability of ecosystems to recover and absorb pollution and support the livelihood of current and future generations. Specific research methods were: the abstraction method; functional analysis; comparative statistics.* ***Results:*** *The central topic of the study was the question of a significant increase in the efficiency of the use of resources in the EU, which involves the transition to a circular economy and means the ease of processing, reuse, dismantling and restoration of products and should replace the traditional linear model that dominated the economy until now. It is shown that in order to preserve resources in the EU, it is necessary to switch to a model of regenerative growth. This means not using more than the planet provides in real time, reducing resource consumption and doubling the reuse of materials in the next decade. The circular economy creates new opportunities for creating wealth and well-being, development of industry, and is also the main engine for achieving the goals of sustainable development society. The topic of introducing a circular economy in Ukraine remains open. Despite the fact that the first important steps towards the implementation of the circular economy are made, based on experience of Europe, there are still many issues that require detailed research both at the state and at the business level. Therefore, the path to an ecological future remains relevant and open in aspects of the development of Ukraine. It is proved that the results of the implementation of the circular economy are the increased recycling and reuse, reduction of carbon emissions, modernization of the economy structure, changes in business models from a linear structure to a circular structure. Sustainable development of the national economy requires disruptive changes and radical innovation, and the ability to ensure this in connection with adaptation to the conditions of the circular economy becomes relevant for innovative cooperation. The integration of sustainable development and business development is necessary. It is impossible to expand the scale of the circular economy without a systemic comprehensive restructuring, starting from legislative regulation, the introduction of technologies, financing and forms of conducting business, to the formation of the readiness of society in general to change its habits in the direction of widespread use of circular products and the creation of new platforms and schemes of interaction manufacturers and consumers of circular goods. Prospects for further research Ukrainian business, adopting the experience of managing circular business models in the EU, must transit to sustainable development, namely to rational production and responsible consumption. Therefore, the concept of circular economy should serve as a basis to rethink the role of waste as resources, to contribute to the improvement of the ecological situation.* ***Originality:*** *The new policy of the EU in the sphere of circular economy is analysed. It was established that, in general, the policy of Ukraine in the sphere of circular economy should be formed and implemented comprehensively in the context of European trends.*
Keywords: *circular economy, resources, waste, implementation, the EU countries.*

THE GREEN ECONOMY IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT. COMPARATIVE ANALYSIS AT THE EUROPEAN UNION LEVEL

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Abstract
The term „Green economy" in the context of sustainable development was used for the first time in 1989, there is no internationally agreed definition for it. In the last decades, in a relatively short period it has become an issue with major importance worldwide, the society realising that its actions have direct effects on the environment, its life and where we carry out our work. ***Objective****: This paper examines the EU countries progress toward green economy, identifies the relationship with financial and economic indicators and analyses the role of eco-innovation performance and innovative capacity toward green transition to meet the European Green Deal objectives. Complex theoretical, methodological and empirical research methodology was adopted by using specific methods of investigation: critical analysis of the literature, complex quantitative and qualitative analysis, identification, construction and the appropriate processing of existing databases.* ***Method****: In order to see to what extent the EU economy can become sustainable and competitive, the financial indicators have been analysed in the light of the way in which they are transposed into the national accounts system. In this regard, the indicators that make up the Environmental Protection Expenditure Account (EPEA) have been selected for other environmental degradation. The most important indicators are the National expenditures for environmental protection by institutional sector, The production of environmental protection services of the public administration according to economic characteristics; Environmental grants and similar transfers from general government, by environmental activity, beneficiary sector and ESA transfer category; Environmental protection investments of corporations as specialist and secondary producers through the activity of environmental protection; General public administration expenses. The selection of these indicators was made because they cover the entire national economy, as defined in the National Accounts according to ESA 2010. The numerical results were obtained by the SPSS software package.* **Results***: The calculated Spearman coefficient ρ indicates a strong positive relationship with the eco innovation performance and moderate positive relationship with innovative capacity of European countries. Thus investment in eco-innovation is more beneficial for the achievement of the Green Deal Goals. The Spearman correlation highlights the monotonic relationship between the considered variables. The Spearman coefficient was calculated for the GFI and GNI as a measure of economic growth. The obtained value indicates that developed economies are less affected by the green transition. Low positive relationship was obtained by calculating Pearson coefficient thus it is not a linear relationship. Also exists a strong correlation between Tax revenue, Air pollution and General government expenditure, GDP in current prices, Gross value added and revenue by industry breakdowns and GFI (Green Future Index).* ***Originality****: The paper's outcome identifies barriers and success factors in the implementation of the EU's main new growth strategy, highlights that the green transformation process of the economy needs large investments in innovation and eco-innovation and needs the green finance to be covered also by the public and private sector on national and EU level and from the EU budget as well.*
Keywords*: Green economy, European Green Deal, national accounts, decarbonisation, sustainable development, eco-innovation, innovation*

INSTITUTE OF NATIONAL ECONOMY

CONSUMER'S ENGAGEMENT IN EXTENDING PRODUCT LIFE TO BUILD A CIRCULAR ECONOMY

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Abstract

Given the growing importance of transitioning to a circular economy, there is a need to explore the potential changes in value creation and innovative business models that can embody this new economic paradigm. The role of consumers, who are now seen as integral players in the value chain, becomes crucial in extending the lifespan of products and conserving resources. Consumer behaviour plays a significant role in shaping environmental impacts, making the adoption of circular economy practise an essential tool for a successful transition. ***Objective****: This paper aims to examine the behavioural aspects of consumers in the Republic of Moldova concerning consumer products throughout their lifecycle. The objective is to identify the barriers and compromises consumers face when deciding whether to engage in circular economy practices, and to determine the economic, social, and psychological factors that influence consumption behaviour.* ***Method****: To achieve this, a questionnaire was developed to assess consumer involvement in extending the life of consumer products.* ***Results****: The analysis and evaluation of the questionnaire responses revealed an interesting trend: while there is a tendency among consumers to use products for a longer duration, there is significant scepticism and reluctance towards other circular economy practices such as leasing, second-hand purchasing, and reuse. This finding suggests that there are barriers preventing consumers from fully embracing the circular economy concept. These barriers may include a lack of awareness about the benefits of circular practices, concerns about product quality and reliability in the second-hand market, and limited access to appropriate infrastructure for product repair and refurbishment. Additionally, the study highlights the importance of economic factors, such as the affordability and availability of circular options, as well as social and psychological factors that shape consumer behaviour. To effectively promote consumer engagement in extending product life and transitioning to a circular economy, it is crucial to address these barriers and provide appropriate support mechanisms. This may involve awareness campaigns to educate consumers about the environmental and economic benefits of circular practices, improving the quality and reputation of second-hand products, and establishing infrastructure and services for repair and refurbishment. By addressing these challenges and facilitating consumer engagement, the Republic of Moldova can progress towards a more sustainable and circular economy. This transition will not only contribute to environmental preservation and resource conservation but also foster economic growth and social well-being. Further research and initiatives are needed to develop tailored strategies that encourage consumer participation in extending product life and promote the principles of the circular economy.* ***Originality****: This study contributes to the original body of knowledge by providing empirical evidence and identifying specific challenges related to consumer engagement in extending product life within the context of the Republic of Moldova. The findings can inform the development of targeted policies and interventions aimed at fostering a more sustainable and circular economy in the country, while also offering valuable insights for researchers and practitioners interested in the field of circular economy and consumer behaviour.*

Keywords*: circular economy, consumers' behaviour, increasing product usage, sustainable development, product-life extension*

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EXPLORING GREEN ENERGY IN ECONOMICS: CONCEPTUAL EVOLUTION. A LITERATURE REVIEW BASED ON TEXT MINING AND SENTIMENT ANALYSIS

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Abstract
Green energy has become one of the most recurrent topics of the last decade, with a clear ascending trend in terms of popularity and strategic relevance. Although the term has been a fundamental element in the energy, environmental science, or engineering domains, nowadays, we can observe the frequent linkages with the highly dynamic and versatile economic context. ***Objective:*** *Having the above in mind, the main objective of the paper will be to present the related literature approaches that integrated green energy in the economics area, while also identifying the evolutionary differences of perspectives and frameworks. Multiple points of view will be illustrated, from theoretical to applicative, in a literature review of the most cited Scopus and Web of Science-indexed papers.* ***Method:*** *The methodology will start by showcasing the clear evolution of the concept, with statistical overviews that confirm its increasing frequency. Afterward, we will limit the review to the papers that integrated green energy in the title, in an endeavour to illustrate the main connections and synergies found within the economic and business area. A selection of 50 papers will be made, 25 being published in the 2010-2019 period and 25 starting in 2020, based on the total number of citations. Consequently, a classification framework will be constructed that will allocate each paper based on the general subject and the main methodology used. After profiling the periods and extracting valuable comparisons, the papers will be curated through the computation of different text-mining techniques, resulting in insightful statistics on the most common words, complementary concepts, and general sentiment.* ***Results:*** *In terms of results, the assumption of a growing popularity of the subject was clearly confirmed, since the number of papers published in 2010-2019 compared to the previous decade had multiplied 6 or even 9 times, depending on the database. At the same time, in terms of regional evolution, we can see that China and India have now become the countries that generate the most studies, compared with the United States and Canada in the 2000s. Regarding the classification framework, we can state that besides the growing popularity, the diversity of the subject also increases as we speak, with multiple experts introducing new terms such as green growth or sustainability revolution. On this note, a frequently explored issue would be the bidirectional relation between CO2 emissions and socio-economic aspects, with a direct link to the climate crisis. In terms of the main methodology, advanced methods have taken the lead, at the expense of the theoretical class. Explanatory papers, or the ones based on social studies have reduced in occurrence and interest, with only a few articles being classified as such. Panel data models can be considered the most common method, together with other complex econometrics, forecasting, or decision theory algorithms. All of these will be confirmed in the text mining section of the paper, throughout the illustration of the word clouds, collocation, and co-occurrence analysis. As an example, starting in 2020, economic growth has become the most common collocation in the selected articles, followed closely by the green growth concept. At the same time, the general sentiment of the papers will be a positive one throughout the years since the literature seems to focus on the benefits and constructive characteristics of the new green energy framework: sustainable, innovative, strong, smart, or competitive.* ***Originality:*** *By illustrating these results, the paper contributes to the related field, since it brings to light the evolution of an extremely relevant topic, framed in the fervent economic context. By looking at the trends in the literature, we can confirm that green energy has become a key priority for the smart sustainability revolution, being recently analysed from newer perspectives that clearly impact different aspects of the economy, whether it's the business sector, certain industries, human capital, or the overall economic growth. At the same time, by constructing a classification framework and employing text mining and sentiment analysis, a subdomain of machine learning techniques, we have extracted valuable information from a large volume of text, methodically proving that the term is frequently linked with economic development, and evolving conceptually throughout the last 20 years.*
Keywords*: green energy, green economy, economics, sustainability, literature review, text mining, sentiment analysis*

FROM FOSSILS TO RENEWABLES: DRAWING A PATH TO SUSTAINABLE ENERGY IN EUROPE

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Abstract
Objective*: The objective of this study is to explore the application of advanced analytics, specifically predictive analytics methods, in the energy sector. The main goal is to identify the necessary changes and measures required to achieve an increase in the proportion of renewable energy generated in a sample of 23 European countries. Additionally, the study aims to investigate the evolution of predictive analytics in the energy sector and identify effective methods for balancing energy supply and demand.* ***Method****: To accomplish the objectives, this study utilises various techniques and methodologies. Firstly, a descriptive analysis is conducted, examining four main indicators: Renewable energy, Gas price, Gas consumption, and Renewable energy consumption. These indicators provide a comprehensive overview of the energy landscape and its evolution over time. The study compares data from the years 2011 and 2020 for the 23 European countries under analysis. To visualise the trends and patterns, visual graphics specific to the Tableau business intelligence software are employed, offering a clear representation of the data. In addition to the descriptive analysis, the study employs the Random Forest algorithm, which is widely used for predictive modelling. The algorithm considers three key indicators: Gas price, Gas consumption, and Renewable energy consumption. By utilising statistical decisions, the study aims to obtain input parameters for the Random Forest algorithm. This allows for the prediction of the percentage of sustainable renewable energy that can be generated by a country based on the aforementioned indicators. These predictions provide insights into the expected increase or decrease in the average amount of renewable energy produced in the economies of the European countries under examination. The study also focuses on identifying the necessary measures that can contribute to sustainable growth in terms of renewable energy generation. Through an extensive review of specialised literature, the usefulness of predictive analytics methods in the energy sector is explored. The study investigates the improvements that can be achieved through the manipulation of big data, which has become increasingly available with the advent of technologies such as smart meters, automatic fault switches, and drone sensors.* ***Results****: The study provides several key results that contribute to the understanding and advancement of renewable energy development in the European countries under analysis. The descriptive analysis of the four main indicators offers valuable insights into the evolution of renewable and fossil energy from 2011 to 2020. By utilising visual graphics generated with Tableau software, the study presents a clear comparison and visualisation of the trends in renewable energy, gas price, gas consumption, and renewable energy consumption. At this stage of the study, it is desired to predict the percentage of sustainable renewable energy that can be generated by a country based on gas consumption, renewable energy consumption and gas price. Using statistical decisions, an input parameter for the Random Forest algorithm will be obtained to predict what is the expected increase or decrease in the average amount of renewable energy produced in the economies of the European countries included in the analysis. These predictions provide an indication of the potential for renewable energy generation in each country and highlight the factors that influence it. The statistical decisions obtained from the algorithm enable a deeper understanding of the relationship between the indicators and renewable energy production. Additionally, the study identifies the necessary measures that can support sustainable growth in renewable energy generation. By analysing the findings and considering the literature on*

predictive analytics in the energy sector, the study provides insights into the best practices and technologies that can be implemented to achieve a balance between energy supply and demand. This information can guide decision-makers and policymakers in formulating strategies and policies to promote renewable energy development and reduce reliance on fossil fuels. ***Originality****: This study presents an original approach by integrating predictive analytics methods, data manipulation, and renewable energy indicators in the analysis of energy systems. By focusing on the specific context of the European countries under examination, the study contributes to the understanding of the potential for increasing renewable energy generation in the region.*
Keywords*: Renewable energy, Sustainability, Energy consumption, Fossil fuels, Random Forest, Predictive analytics*

RENEWABLE ENERGY OF UKRAINE: UNREALIZED POTENTIAL

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Abstract
The "green" economy emphasises the satisfaction of human needs, taking into account the interaction with the environment, with the priority being the well-being of future generations. The theory of "green" economy is based on three axioms: the impossibility of endless expansion of the sphere of influence in a limited space; the impossibility of meeting endlessly growing needs in conditions of limited resources; everything on Earth is interconnected. One of the key principles of the "green" economy is the introduction of renewable energy sources. ***Objective****: This paper is devoted to researching the potential of renewable energy in Ukraine, identifying obstacles to its implementation that arose as a result of Russia's war against Ukraine, and ways to restore the alternative energy sector in post-war times.* ***Method:*** *The following research methods were used in the work: system generalisation method, statistical data analysis method, system analysis and synthesis method, comparative analysis method, system-structural method, graphic method.* ***Results:*** *According to The National Commission, which carries out state regulation in the spheres of energy and communal services, as of December 31, 2021, the installed capacity of the renewable energy sector of Ukraine reached 9,655.9 MW, including solar installations for private households, or 8,450.8 MW. However, it should be noted that, as in previous years, an active pace of development in 2021 was observed only in one segment — domestic solar power plants (SPP), the capacity of which increased by 426.1 MW in 2021, which is 36.4% of new renewable energy sources (RES) capacities , put into operation last year. Industrial solar energy, on the contrary, showed not the best development indicators, but rather their reduction. Wind energy remained second, after solar energy, in the national RES sector, in terms of total installed capacity. However, it should be noted that it was the wind energy sector of Ukraine that added the largest number of new capacities to the country's "green" energy mix last year. The gas crisis of the end of 2021 and the beginning of 2022 confirmed the significant prospects for the development of the bioenergy sector of Ukraine. The geography of the location of RES facilities differs according to the renewable source of energy that is natural and corresponds to the natural potential of RES of a particular region. If wind power plants are located mainly in the southern and south-eastern regions, primarily on the coast of the Black and Azov Seas — about 85%, then solar generation is much more widespread, but again, about 60% of industrial solar power plants are concentrated in the southern and south-eastern eastern regions of Ukraine. The war unleashed in Ukraine by the Russian aggressor deepened the financial crisis in the country's energy sector. The lack of sufficient funds to continue operations has become an urgent problem that all sectors of the Ukrainian energy system are currently facing. However, this had a particularly painful effect on the renewable energy sector. As already mentioned, before the war in Ukraine, a number of regulatory documents and national strategies were adopted, which determined the future direction of the development of renewable energy sources in Ukraine during this and future decades. Thus, in particular, the Energy Strategy of Ukraine until 2035 "Security, energy efficiency, competitiveness" envisages the possibility of achieving a 25% share of RES in the total primary energy supply by 2035, since according to the text of the Energy Strategy "RES will develop at the most dynamic pace compared to other types of generation". The Energy Strategy also substantiates the need for the development of distributed generation from RES, in particular the development and start of implementation of the plan for the implementation of "smart" energy networks (Smart Grids). However, in the conditions of a full-scale war with the Russian*

Federation, the provisions of the Recovery Plan of Ukraine until 2032, presented by the Government of Ukraine in July 2022 at the international donors' conference in Lugano, gained priority importance for the further development of RES. Taking into account the current trends, the post-war development of Ukraine's economy will take place in accordance with this Plan, and the sector of renewable energy sources is no exception. ***Originality:*** *The originality of the research lies in the personal contribution of the authors in summarising the peculiarities of the Ukrainian case of the development of alternative energy.*
Keywords*: green economy, renewable energy, renewable energy sources, war, post-war recovery and development of Ukraine*

ENERGY TARGETS AND TRANSITION TOWARDS NET-ZERO

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Abstract
Objective*: To achieve goal 7 of SDGs, that is, for ensuring access to clean and affordable energy, it is required energy transition from non-renewable to renewable sectors through transformation of the global energy sector from fossil-fuel based to zero carbon sources. Thus, the main objective of this paper is to introduce broad energy issues, market system and price differentials, efficiency factors, electricity generation, attributes and trade system.* ***Method****: The study is based on both qualitative and quantitative approaches, including discussion of theories and presenting secondary data with graphs and tables. The secondary data were collected from IEA – International Energy Agency, Eurostat – European Statistical Agency, IRENA – International Renewable Energy Agency, and EIA – Energy Information Administration (US Energy Agency).* ***Results****: In discussing existing energy generation and consumption dynamics, it is observed diverse characteristics/patterns of supply-demand over the world. The major supply sources are based on non-renewables whereas consumption is increasing remarkably day-by-day and thereby, emitting carbon to the atmosphere. Electricity could be a way for decarbonizing our economies but as it is produced by both non-renewable and renewable energy sources, in order to decarbonize our activities we have to look forward to how we can generate electricity more and more from renewable sources. There are other segments like transmission and distribution networks of electricity which are very infrastructure heavy. Thus, there is a lot less competition such that there are state entities or private companies who have the monopoly control of transmission and distribution networks depending on country characters. For an effective transition towards net-zero, we need an efficient energy system by which the energy conversion process will be less harmful for the environment.* ***Originality****: The originality of the study is justified as the study finds new insights in case of theories and empirical findings for energy targeting and decarbonisation approach.*
Keywords*: Sustainable Energy, renewable energy, electricity, efficiency factors, energy trading system, Net-zero*

ENERGY AND CIRCULAR ECONOMY - EUROPEAN DIMENSIONS IN TWIN TRANSITION CONTEXT

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Abstract
Objective*: Humanity is in a complex process of twin transition, the rational use of resources being a necessity. The new energy transition is underway, European countries being the most important promoters of this politically driven process. The involvement of companies and consumers by increasing social responsibility and awareness are necessary. Due to the transformations and developments to which society is subjected nowadays, energy requirement and consumption has increased over time, thus energy efficiency represents a vital issue for modern life. This study examines the energy index and the dynamic relationship between energy index and circular economy through generation of municipal waste.* ***Method****: Using a panel data of 372 observations over the period 2009–2020, we employ a PCA in order to create a composite index to reflect energy efficiency and a Vector Auto-Regression model, as well as Granger causality method to examine the relationship between energy index and circular economy through waste generation for European countries. The panel VAR for analysing the impulse response function was enriched with the 5% and 95%, using Monte Carlo simulations. The choice of European countries to carry out this study is justified by the intense concerns of the public authorities to promote the principles of the circular economy and to change the energy mix by reducing the share of energy generated by the use of fossil fuels.* ***Results****: Our contribution consists in investigating this interrelationship and its causality for European countries in order to see if generation of municipal waste is caused by energy use. The results highlighted that in the European countries a bidirectional causality between energy index and municipal waste generation is manifested. Our results are filling the gap in the literature, from our knowledge being the first attempt in this direction. The development of economies is accompanied by an increase in energy consumption and waste generation, which causes complex challenges for central and local public authorities that must find solutions both for the energy transition in the context of the need for energy security and for waste management considering the intensification of urbanisation.* ***Originality****: As an element of originality, our study demonstrates that energy consumption contributes to generation of municipal waste, on the other hand, the generation of municipal waste determines energy consumption. Therefore, the energy - environment relationship is a complex relationship, with numerous determining factors, which requires a transdisciplinary approach to this subject and economic policy measures to ensure the promotion of the principles of sustainable development on various levels, in the context of the energy transition.*
Keywords*: energy, sustainable development, waste management, circular economy*

RETHINKING THE GREEN ECONOMY AMIDST ENERGY CRISIS IN NIGERIA: A CONTENT ANALYSIS

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Abstract
Objective: *This paper discusses the need for Nigeria's oil-dependent economy to reconsider the green economy (GE) given the energy crisis the country is facing.* ***Method***: *The exploratory focus of this paper made the qualitative research method, an interpretivist research paradigm, the most appropriate. We collected non-numerical data from scholarly articles on the green economy and energy crisis in Nigeria from the Google Scholar database based on the purposive sampling technique and inclusion/exclusion criteria of relevance, compatibility, and recency of the articles. Data collected were reviewed, integrated, and synthesised using content analysis.* ***Results***: *The content analysis produced five insightful findings. First, the transition of Nigeria's energy sector to the GE is threatened by inadequate energy infrastructure, poor maintenance, a weak institutional environment, a corrupt oil industry, hostile oil communities, oil theft and higher energy demand with little supply. Secondly, the GE is comparatively better than the non-green economy as the former has a low carbon footprint, is resource efficient, cost-effective, socially inclusive, and environmentally friendly. Third, GE's promotion requires a compromise by adopting renewable energy sources (solar, wind, and hydro) to replace fossil fuels (oil, coal, and natural gas). Fourth, in the absence of a weak institutional environment, the GE agenda is feasible, due in part to increased awareness and access to low-carbon technologies, sustainable finance, low-carbon agriculture, solar technologies, and renewable energy solutions. Finally, the transition to GE in Nigeria is premised on four policies and strategies, namely: National Renewable Energy and Energy Efficiency Policy (NREEEP), Rural Electrification Strategy and Implementation Plan (RESIP), National Energy Efficiency Action Plan (NEEAP) and Sustainable Development Goals (SDGs).* ***Originality***: *The novelty of the paper lies in its proposal for a framework that encompasses the development of renewable energy and energy efficiency projects as a real way to accelerate the transition to GE.*
Keywords: *content analysis, energy crisis, green economy, Nigeria*

SESSION 2: DIGITAL INCLUSION-FACTORS, LIMITS AND IMPACT

ANALYSING CHALLENGES AND SOLUTIONS FOR IMPLEMENTING INDUSTRY 4.0 IN THE ALBANIAN FOOD MANUFACTURING INDUSTRY

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Abstract
The global focus on environmental and social challenges has prompted the exploration of sustainable strategies, including the concept of Circular Economy (CE). The CE model advocates for a shift from linear production patterns to circular ones, aiming to maximise resource utilisation and minimise waste. While the importance of CE is recognized, companies in the food manufacturing industry face barriers when attempting to implement circularity into their operations. This research aims to analyse the barriers faced by incumbent manufacturers of food manufacturing machinery and food manufacturers in the Albanian food manufacturing industry and explore the potential of Industry 4.0 technologies as solutions. By examining practitioners' understanding of CE and identifying specific challenges and technological advancements, this study seeks to contribute to making the food manufacturing industry more circular. The Albanian food manufacturing industry, like many others worldwide, confronts multiple challenges in transitioning towards a circular economy. These challenges include inefficient resource allocation, high waste generation, limited data visibility, and insufficient adoption of digital technologies. To address these barriers, the concept of Industry 4.0, which integrates advanced technologies such as the Internet of Things (IoT), artificial intelligence (AI), and big data analytics, can play a significant role. ***Objective****: The study focuses on the challenges faced by incumbent manufacturers of food manufacturing machinery and food manufacturers in the Albanian food manufacturing industry in implementing circular economy practices. It explores the potential of Industry 4.0 technologies as solutions to these challenges. The objective of the study is to analyse the barriers faced by the Albanian food manufacturing industry in adopting circular economy practices and to examine the potential of Industry 4.0 technologies as solutions.* ***Method****: The study will employ qualitative data collection methods, primarily in-depth interviews with key stakeholders, including incumbent manufacturers of food manufacturing machinery and food manufacturers. The interviews will gather insights into stakeholders' understanding of circular economy principles, current practices, challenges faced, and the level of adoption of Industry 4.0 technologies.* ***Results****: The main results of the study include a comprehensive understanding of the challenges faced by the Albanian food manufacturing industry in implementing circular economy practices and integrating Industry 4.0 technologies. The identified barriers include lack of awareness and understanding of circular economy principles, resistance to change, high implementation costs, and regulatory constraints. Furthermore, technological advancements associated with Industry 4.0, such as real-time monitoring, predictive maintenance, and supply chain optimization, will be examined to determine their potential for overcoming these challenges.* ***Originality****: The study's original approach lies in its focus on the Albanian food manufacturing industry and its examination of the challenges specific to this industry in adopting circular economy practices. Additionally, it explores the potential of Industry 4.0 technologies as solutions to these challenges, contributing to the existing literature by providing insights into the specific context of Albania. Moreover, recommendations and guidelines will be formulated based on the findings to assist industry stakeholders, policymakers, and technology providers in developing effective strategies for a more sustainable and circular food manufacturing industry in Albania. Ultimately, this study seeks to bridge the gap between the theoretical framework of circular economy and its practical implementation in the Albanian context. By understanding the challenges and potential solutions associated with implementing Industry 4.0, stakeholders in the food manufacturing industry can make informed decisions and take proactive steps towards achieving circularity, thereby contributing to a more sustainable future in Albania and beyond.*

Keywords*: Circular Economy, Food manufacturing industry, Industry 4.0, Sustainability, Albania*

POPULATION AND HOUSING CENSUS ROUND 2021 – TOWARDS INTEGRATION TO DIGITAL SOCIETY

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***Abstract**:*
Data collection has evolved significantly in recent years. The Population and Housing Census round 2021 was the first edition in Romania with mixed mode data collection i.e. CAPI and CAWI and thus a channel for integration to digital society. In this research important characteristics of census process will be outlined with a focus on the self-enumeration process, not just at national level, but also for European level. In Romania, important differences are noticed across counties, residential areas and across type of self-enumeration - assisted or not.
***Keywords**: census, data collection, self-enumeration, digital society*

INTELLIGENT AUTOMATION DEVELOPMENT FROM PROVIDERS TO CUSTOMERS - CHALLENGES, APPROACHES AND INFLUENCES, PERSPECTIVES OF THE INSIDE AND OUTSIDE TECHNOLOGY MARKETPLACE EXPERIENCE IN INSURANCE INDUSTRY

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Abstract
*The insurance industry is leveraging advances in automation technology to build a more efficient, cost-effective and customer-centric environment. As the evolution of technology is gradually leaving its mark on all fields of activity, we consider it important to have a comparative analysis of the feedback of current customers both from the perspective of the investment of human and financial resources, as well as the real results and capabilities that automation technologies provide. **Objective**: Assessing the development potential of business process automation represents the key factor that will indicate the impact of robotic process automation in the insurance context. As the circumstances are quite vast and the production environment of the domain is largely based on data operations, we can confirm the potential for continued innovation in the insurance industry remains high, as the industry continues to embrace automation development. With further advances in automation technology, insurers can ensure they remain competitive by providing a better level of service at an optimal cost. **Method**: Complex and dynamic, both fields of tech and insurance require a vast need for knowledge of the perspective of internal and external business development lines and workflows, an approach that goes beyond basic understandings. The methods used are based on the analysis of underlying principles and techniques that can be employed to outline research methodologies in insurance range from the use of statistical models to qualitative*

research methods that involve in-depth analysis of data. Another essential aspect in this development is the knowledge of the relevant normative and legal frameworks that guide insurance practice. Without minimal basic knowledge about the info previously mentioned, we risk deviating from the laws and regulations in force, especially as any field of activity that has its object activity, an action that involves the legislative framework and daily working with sensitive customer data, must be protected and kept safe carefully. ***Results****: This paper aims to analyse the activity reports of the most important insurance companies in the world, whose attention was directed to the evolution in the tech plan. The goal is to create a report, as a practical guide, in which we highlight the targeted aspects that an insurance company must take into account before implementing such a technology in its framework. It is also essential to point out the approach of these companies towards exploring the impact of automations on the industry. Such research entails a complex analysis of the various automations involved, including artificial intelligence, machine learning, chatbots, and other digital tools that streamline insurance processes.* ***Originality****: This research study provides a unique approach of analysing the subject matter by viewing it through the lenses of both insurers and intelligent automation developers. Exploring the intricacies of insurance requires a nuanced approach that takes into account the perspectives of the industry's key players. This method allows for a thorough examination of the subject from a different angle, revealing insights and perspectives that may have previously been overlooked. The use of this innovative approach brings a new depth to the research and provides valuable contributions to the field and, of course, to potential future automation customers.*
Keywords*: insurance industry, intelligent automation, software development, market leaders, business processes*

INNOVATIVE ASPECTS OF PUBLIC SERVICES IN ALBANIA

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Abstract
Public services take up an important place in the economic activities of a country, which makes it crucial to deliver high-quality and efficient services to the public, cut down unemployment, and improve social welfare. Recent years have seen an increase in the use of innovative practices being used in the public sector to facilitate service delivery and increase efficiency in the Albanian public sector. The organisations of the public sector seek new ways to carry out their mission. The desire of providing better quality, faster, and lower-cost public services has prompted central and local governments to be oriented toward Internet usage, turning innovation into one of the greatest goals of recent times (Costake, 2008). The public sector aims to produce new innovative ideas in the field of goods and services, human resources, and economic development, as well as to implement them to create solutions and social value. Organisations offering public services need to be innovative to meet the constantly changing needs of their customers and build trust. There is no better option than concentrating on service innovation if the public administration wants to effectively deliver public services to citizens. (Karagoz, 2013). Innovation is considered an essential condition for development processes at a time when public organisations face competitive and progress-related challenges. (Koç & Gunal, 2021). ***Objective****: The objective of this study is to emphasise the importance of innovation in public service delivery. Within the scope of this study, it is first defined the concept of public innovation, then its positive impact on public services is examined. It is also important to understand the innovation policies of public services in Albania. The literature will be supported by examples of innovative public services in Albania. This study is focused on offering a theoretical contribution by reviewing available literature. Innovation in public services is a topic with increasing interest in recent years that directly affects the quality of the delivered service, therefore the literature related to the topic is extensive.* ***Method****: As a first step, peer-reviewed research articles were chosen with the help of academic search tools, such as digital databases, public administration journals, and articles. The author searched the digital databases for articles published from 1995 to 2023 using terms such as "innovation", "innovative", "public service", "innovation in public service", and "service delivery". The articles were then organised and analysed according to the context, characteristics, and relevance to this study. Around 25 % of the used literature includes studies published between 1995 and 2012, while the remaining 75% included studies between 2013 and 2023. Documents from official governmental online sources were also used to determine the innovative public services in Albania.* ***Results****: The literature shows that the phases of the innovation cycle should be strengthened through collaboration with public and private stakeholders, through the empowerment of human resources, and by accepting feedback from the community/customers. The main factors that impact the success of innovation in public services are related to the integration of services, benefiting from partnerships, and increased citizen participation. In recent*

years the digitalization of public services has helped to reduce the time of delivering a public service, to reduce unnecessary bureaucratic actions, to increase transparency, and facilitate access to information. According to INSTAT (Institute of Statistics of Albania), during 2018-2020, 36.5% of organisations in Albania have undertaken at least one innovative activity, which was noted to be higher in the services sector than in industry. Albania became part of the European Innovation Scoreboard for the first time in 2022, and it is ranked as an Emerging Innovator as it shows a performance that remains at 41.7% of the EU average. ***Originality****: Innovation in public services is a topic of interest for many governments, thus this study will offer a point of view related to the importance of innovative public services together with some suggestions to overcome burdens during the delivery of innovative public services in Albania. Innovation in the private sector has a wide place in the literature, but more research is needed in terms of public administration. This paper focuses on innovation in the public sector, offering like this a contribution to the literature related to this sector that offers its services to the public.*

Keywords*: innovation, public service, service delivery, public administration, organisation*

THE IMPORTANCE OF DIGITAL HEALTH APPLICATIONS IN THE MANAGEMENT OF POSTPARTUM DEPRESSION

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Abstract

Objective*: PPD is an important health problem that affects one in seven mothers after birth. Women with PPD may experience sadness, anxiety, guilt, feelings of worthlessness, helplessness, irritability or restlessness, loss of interest, sleep and eating problems. But women with severe PPD may exhibit thoughts of harming their baby and themselves. According to studies, the second most common cause of death in postpartum women is suicide, accounting for approximately 20% of postpartum deaths. According to practice guidelines published by the American College of Obstetricians and Gynecologists (ACOG), obstetric care providers say that women should be screened for symptoms of depression and anxiety at least once during the perinatal period. In the US, women are screened for postpartum depression at the first postpartum visit (2-6 weeks after birth). There is no such routine screening in Turkey. Cognitive Behavioral Therapy (CBT), Dialectical Behavioral Therapy (DBT), Behavioral Activation Therapy (BAT) and Interpersonal Therapy (IPT) are known to be effective in the treatment of postpartum depression. Despite care guidelines recommending screening women at high risk for PPD, evidence suggests that about half of pregnant women with depression symptoms go untreated. To increase awareness of postpartum depression and reduce stigma, mobile-based technologies can leverage features such as artificial intelligence to provide accelerated and actionable alerts for behavioural health management in support of treatment of PPD.* ***Method****: The literature on postpartum depression (PPD) was reviewed and discussed theoretically in this study.* ***Results****: There are few published studies examining the effectiveness of digital-based therapy for postpartum depression (PPD). More research is needed to increase the usability and evaluate the effectiveness of digital behavioural health applications in psychological health care such as PPD, which has a risk of stigmatisation and affects mother-infant health.* ***Originality****: There are a limited number of studies in the literature in which PPD is followed digitally. As a result of the study, a guided online behavioural activation (BA) therapy, NetmumsHWD therapy and MamaLift Plus program to support the treatment of postpartum depression (PPD). Convenient and practical mobile tool to use on a weekly basis for the management of their PPD. Digital Health Applications and tools are very important for healthcare institutions, hospitals and especially for PPD of individuals.*

Keywords*: Digital Health Applications, Management, Postpartum Depression, Stigmatization, Behavioral Health Management*

DIGITALIZATION OF SERVICES PROVIDED IN RESIDENTIAL CARE UNITS FOR ADULTS IN ROMANIA

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Abstract
Objective*: The paper analyses the digitalization of services provided în residential care units for adult persons, starting from the assumption that digitalization will greatly contribute to increasing the degree of satisfaction for beneficiaries / next of kin. It is indeed a pressing issue, firstly because the number of individuals applying for residential care is continuously growing on the national level. Consequently, the social assistance system – both public and private – needs to cope with the difficulties caused by handling such complex cases as quickly as possible and with rather limited resources. On the other hand, according to the legal framework, the licensing of residential care units depends on meeting a set of criteria on the quality of services, hence the necessity to identify new ways to make the activity more fluent and efficient. Last but not least, digitalization represents a field of interest at European level, precisely because the Digital Single Market Strategy, adopted in 2015, focuses on digital transformation, including the development of new and innovative services. In this respect, according to the DESI (Digital Economy and Society) index, Romania has been ranking last among member states for a few years. Official data point out, for example, that the process of implementing digital technologies is slow, which makes it difficult for applicants to access the services, with a long waiting period for a response. Besides, the digital competencies of the staff in residential care units are scarce or totally absent, a fact that causes delays in processing the documents of current or potential beneficiaries. Furthermore, the excessive amount of documents in paper format required for the admission in residential care units brings about additional problems, as the storage space is insufficient. The objective of this study consists in pointing out the advantages of digitalization in residential care units for adult persons in Romania. Thus, digitalization of services in residential units aims at gradually giving up documents in paper format for the electronic ones, and at digitizing the archive already existing in each residential facility. To this end, software solutions will be developed, to ease the access of applicants to centres' services and to simplify the process of delivering the required documents in electronic format. At the same time, electronic archiving solves the space – related problems and reduces the risk of data degradation, due to its being an efficient and secure alternative to store beneficiaries' files and centres' documents.* ***Method****: The study will be based on both the qualitative and the quantitative methods. The qualitative and quantitative research of document workflow used in residential institutions reveals the fact that handling the applications within the legal time frame and up-dating beneficiaries' individual files take an excessive amount of time that could be used either to improve existing services, or to create new ones.* ***Results****: The results of this study will prove that digitalization of services in residential care units for adults contribute to maximising the quality of services, and consequently to increasing the degree of satisfaction for both beneficiaries and next of kin. The paper will show that solving the above -mentioned malfunctions will have positive effects on all parties involved: beneficiaries / next of kin; staff in the centres; representatives of public authorities. Thus, for beneficiaries / next of kin, digitalization will result in shortening the waiting period of response to their application. For the staff in residential units, implementing a software that processes the data fast and without errors will contribute to making the activity more efficient, to consolidating the administrative capacity, and to carrying out an efficient resource management. For these reasons, the implementation of digital technology will become a crucial factor to ensure high quality services, in order to increase the degree of satisfaction for the applicants.* ***Originality****: The main reason for conducting this analysis was to demonstrate the key role played by digitalization in an appropriate management of resources and how it determines an improvement in services provided în the field of social assistance. This is especially relevant because in Romania, digitalization of services represents a major concern, against the background of European policies, but the emphasis is on public administration and on small and medium – sized enterprises. This approach will create in time a development delay with unfortunate consequences among these sectors considered of high priority and other types of services, less visible ones, but equally important for any country's economy. That is why we consider that the issues addressed in the paper form a subject of reflection worth discussing about.*
Keywords*: social services; residential care; digitalization*

IS DIGITAL INCLUSION AN EFFICIENT OPTION FOR BOOSTING CULTURAL PRODUCTS CONSUMPTION? RISKS AND LIMITS ON THE SPECIFIC BUSINESS SECTOR

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Abstract
Digital cultural products have registered an important diversification during the pandemic, many cultural products going digital, totally or partially, depending on the specifics of the offer and the practical possibilities of respecting the limitation of physical interaction. The advantages of the cultural sector were the continuity of the activity, but also the diversification of the offer and the methods of consumption associated with the use of digital products and services. From the consumer's perspective, the main limitation was digital access, defined by accessibility and affordability. In the paper I analysed, on the one hand, the typology of digital cultural products and related services, which would allow the continuity of cultural consumption and, on the other hand, the limits (online access, the financial resources needed to own digital support equipment and payment for services) as well as the risks associated with digital exclusion (digital literacy, access to training for digital skills). The results show us that digital inclusion must be viewed in a broad sense and is associated with poverty and geo-spatial vulnerability categories (dwellings in isolated areas, greater risk of social exclusion in rural areas and in poor households with a low level of education). Therefore, policies to support social inclusion should consider a package of facilities that allow and stimulate digital cultural consumption or hybrid forms of digital consumption, and that address both the provision of digital infrastructure (affordable costs for services and equipment or various forms of subsidy) and digital education for all.
Keywords*: digital cultural products; digital inclusion; consumption*

DIGITAL TRANSFORMATION AND THE OFFER OF CULTURAL CONSUMPTION SERVICES

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Abstract
Europe is characterised by the richness and diversity of its cultural heritage. Culture has the potential to play an important role in making the European Union (EU) stronger and more democratic, uniting European citizens and providing a sense of identity. To outline the impact of information technology on today's society and economy, the evolutionary patterns of the past and the main trends of the present and future must be understood.
When we refer to digital transformations and the transformative role of digitization, we also refer to the changes they generate. That is why we need to analyse the technological trends that cause changes and sometimes even ruptures (disruptive effects) in various fields. ***Objective****: The paper aims to present the forms of digitization in the field of tourism, which can influence the sustainability of this sector and the attraction of new consumers.* ***Method****: Statistical indicators of the dynamics of the link between the digitization factor and tourism activity are used. Indicators regarding the spatial characterization of digitalization in tourism are used.* ***Results****: Evidence of the level of digitization in tourism in a territorial profile. Quantification of the effects produced by digitization in tourism activity.* ***Originality****: The research consists of a multifactorial and multidimensional approach, both in the territorial profile and in time of the analysed phenomenon.*
Keywords*: digitalization, cultural heritage, tourism, time series, spatial statistics*

INSTITUTE OF NATIONAL ECONOMY

QUALITATIVE ANALYSIS OF SOCIAL MEDIA VISITORS' OPINIONS ABOUT ROMANIAN BUILT HERITAGE

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Abstract

Objective*: The castles and palaces in Romania have distinctive architectural features and are well-known due to numerous tales and stories. The study analyses the opinions posted by the visitors of these heritage assets on the TripAdvisor platform. For this purpose, tourists' opinions are identified, selected and grouped, and a database is created. The visitors' emotional responses to their experiences, as well as the relationship between emotions and sentiments are also highlighted. The access to information is changing as a result of the digital revolution in the tourism industry. As a result, the advancement of the ICT industry enables tourism enterprises to reach out to customers via devices.* ***Method****: The study groups visitors' emotional reactions into categories based on importance, generates a word cloud of visitors' perceptions, and examines the relationships between emotions and sentiments using techniques from text mining, sentiment analysis, and regression analysis. The text mining results, sentiment rankings, and emotion classifications were supplied by R software. The correlations between emotions and sentiments were also determined using the EViews software. The key finding demonstrates that tourists' emotional reactions to Romanian castles and palaces were positive.* ***Results****: The findings show that visitors are impressed by the stories because they find them to be lovely, fascinating, and intriguing. Visitors felt excitement, trust, and astonishment, among other emotions. The biggest issues that visitors run into, though, are out-of-date information and a lack of virtual tours, all of which cause unpleasant emotions like sadness or anger. The managers can benefit from understanding tourists' opinions of Romanian castles and palaces, by developing activities that will satisfy to a greater extent the expected experiences.* ***Originality****: The investigation emphasises the sentiments and emotions associated with how tourists felt when they visited the castles and palaces in Romania. The findings could be applied as useful management tools by various organisations to create or customise the cultural heritage products, to more precisely target consumers, and to better understand their preferences and aspirations for expanding their cultural knowledge.*

Keywords*: cultural heritage, sentiment analysis, text mining, TripAdvisor, visitors' comments*

Funding*: This work was developed within the 2023 annual research theme from the Institute of National Economy, Bucharest, Romania: "The digital transition and the reform of the tourism sector in Romania. Geographical differences and limits of cultural heritage management".*

THE STUDY OF THE ONLINE LABOR MARKET AND THE COMPLETION OF THE THEORETICAL AND LEGAL FRAMEWORK IN ALBANIA

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Abstract
Objectives*: The purpose of this paper is to create a theoretical and legal basis in relation to the online labour market. This is due to the fact that in this field in Albania there are still no real studies and there are no changes or additions to the legal framework, which are very necessary. In recent years, online work has received a great development. This is worth saying about countries like Albania and the countries of the Western Balkans region. Since we are in a period of rapid globalisation and after the spread of the Sars Covid-19 pandemic, it made us take steps to change the mindset of work in general, but above all for online work in particular, as there was a noticeable increase of the work that was done online, which continues today with even greater proportions. In contrast to the more developed countries where they have a good practice and a more complete legal framework, the opposite happens in Albania. In recent years, online work has spread to extremely large proportions, but without having a regulatory system and a complete legal framework. In the current labour code, online and home work is regulated by only one article, which is insufficient to regulate the relations between the participating actors. In this legal gap, it is very necessary to do a study and a further supplement on how it should work. within the rules, all activity and relations between the parties, to determine their rights and obligations. It is very important to find and adapt the legal basis and models applied by the most developed countries regarding online work. This is to adapt to the rapid developments taking place in the economic plane. But it should be done based on the economic, political and social conditions and culture that prevail in Albania. Among the main objectives are: 1. Study of the online job market and work from home. 2. Finding and adapting the legal basis and models applied by the most developed countries regarding online work. 3. To fill the legal gaps encountered during the initial work to have a regulatory system between the parties. 4. To make the study known to interest groups, to see the impact.* ***Method****: Both primary and secondary sources will be used to achieve the goals and objectives of the work. After the hypotheses and research questions are raised, qualitative and quantitative methods will be interwoven to prove or reject the hypotheses and to answer the research questions. As a start, we will have to research the literature regarding the online job market on the theoretical and practical level. By means of the comparative method, we will be able to make a comparison between different countries in the region and beyond to see how online work is regulated and works. As a quantitative method, we can use the survey by distributing it to subjects who work in this field. . By means of these methods we will look at the dependence between the variables, in the validation or rejection of the raised hypotheses. Then we will make a synthesis of the paper, listing the recommendations and conclusions reached.* ***Results****: The main result of this paper would lie in the goal to further complete the theoretical, legal and practical side regarding online work and work from home, given that we are in a period of rapid globalisation and come after 3 years of pandemic. The last one made us take steps to change the mindset of work in general, but above all for online work in particular.* ***Originality****: The originality of this study lies in the fact that there are still not many genuine studies on this topic. In contrast to the more developed countries where they have a good practice and a more complete legal framework, the opposite happens in Albania. In recent years, online work has spread to extremely large proportions, but without having a regulatory system and a complete legal framework. In the current labour code, online and home work is regulated by only one article, which is insufficient to regulate the relations between the participating actors. In this legal gap, it is very necessary to do a study and a further supplement on how it should work within the rules, all activity and relations between the parties, to determine their rights and obligations.*
Keywords*: online work, work from home, work code, globalisation*

THE DYNAMICS OF CHANGING SKILLS FOR THE NEXT DECADE AT THE CROSSROADS

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Abstract
The so-called digital decennial has well defined objectives for 2030s in terms of human capital and skills development. Labour force specific indicators as well as complex indicators such as Digital Economy and Society Index will be emphasized. One point is that Romania shall sustain education tailored for its own labour market. Moreover, the national education shall reflect the needs for skills and shall contain incentives for attracting graduates on the labour market.
Keywords: *skills, digital economy, digital society, labour market, human capital*
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DIGITIZATION AND THE PERFORMANCE OF THE UNIVERSITY SYSTEM. GOOD PRACTICES AND LIMITS ON AREAS OF PROFESSIONAL SPECIALIZATION

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Abstract
***Objective**: The main objective of this research is to investigate the impact and benefits of partnerships between universities and businesses in the context of the digitization of higher education and their strong connection with the business environment. The article underlines how these partnerships contribute to the stimulation of innovation, the development of relevant skills for the labor market and the creation of an enabling a framework for the transfer of technology and knowledge between academia and business environment.* ***Method**: The research is based on a mixed approach, combining analysis of case studies, relevant statistical data, and interviews with representatives of universities and companies involved in such partnerships. This methodology allows a comprehensive understanding of the ways of collaboration, the types of activities carried out and the results obtained within these partnerships.* ***Results**: The research results indicate that partnerships between universities and companies in the context of digitalization of higher education have a significant impact on the business environment. These partnerships contribute to the development of students' digital and technological skills, provide opportunities for internships programs in companies, facilitate the transfer of knowledge and technologies between academia and business, and promote innovation and entrepreneurship among students.* ***Originality**: The original approach of this research consists in integrating in a single study the multiple aspects of partnerships between universities and companies in the context of the digitization of higher education and their strong connection with the business environment. This integration enables a deeper understanding of the benefits, challenges and critical success factors involved in such partnerships, providing a broad and comprehensive*

perspective on this topic. In conclusion, partnerships between universities and companies in the context of the digitization of higher education and the strong connection with the business environment have a significant potential to stimulate innovation, develop relevant skills and create synergies between academia and business. This research makes an important contribution to the understanding and promotion of these partnerships and can serve as a basis for the development of policies and strategies in the field of education and business.
***Keywords**: digitization, business environment, academic environment*
***Funding**: This work is supported by project POCU/380/6/13/125031 „DECIDE - Development through entrepreneurial education and innovative doctoral and postdoctoral research", co-financed by the European Social Fund under the Human Capital Operational Program 2014-2020.*

DIGITAL SKILLS AS MAIN DETERMINANT OF GRADUATES' EFFICIENT INCLUSION ON THE LABOR MARKET. IMBALANCES BETWEEN THE SUPPLY OF THE EDUCATION MARKET AND THE DEMAND OF THE BUSINESS ENVIRONMENT

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Abstract
Digital skills are part of the package of generic skills required for training young people. At the same time, the pandemic period demonstrated the need for all people to have digital skills, either to continue their initial training period, or to meet the tasks of the workplace, or to facilitate the continued consumption of goods and services, while maintaining social distance and of the other limits of human interaction. Therefore, the education system is under increased pressure regarding digital skills and associated knowledge, which it must provide to graduates, at all levels of education. The period of the pandemic changed the learning paradigm in the context of the development of the digital economy and forced the digital transition for all. Starting from the requirements of forced digital adaptation, during the pandemic, according to the available data (Eurostat), we analysed the digital training deficit of employees, measured by the courses organized by companies, both for their own employees and for other employees, whether they are ICT specialists or ITC non-specialists. The results obtained indicate that the digital transition of companies continued even during the pandemic, not only because of the urgent requirements to carry out some online activities, to ensure working conditions for remote workers, but also as a result of the implementation programs at company level of some digital solutions for production or managerial activities, according to their own digitization strategies. The digitization efforts of small companies were minimal, and for some of them, only during the pandemic restrictions. The higher the digital intensity of the company before the pandemic, the more consistent the digitization efforts were, and they continued, on both levels, even post-pandemic. Moreover, the advantages related to the economy of operational costs, as well as the increase in the work productivity of employees in the hybrid or remote system, determined the reconfiguration of employment models in the post-pandemic period, and supported the faster economic recovery, keeping the advantages of forced digitization - online communication within the company and with business partners, development and then continuity of online services for clients, online management of assets, etc.
***Keywords**: digital skills, digital economy, training, digital intensity; companies*

SESSION 3: LABOR MARKET, SKILLS AND THE DIGITAL TRANSFORMATION EFFECTIVENESS

PARTICULARITIES OF DUAL SCHOOL APPLICATIONS IN EUROPE AND ROMANIA

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Abstract
Objective*: The European vocational education and training system is very diverse, with each country adopting different particularities in their application of it. A unitary European solution would be desirable, but a lack of a systematic comprehensive knowledge in this field prevents the development of policies for a basic model applicable to each country with some variations, which are inevitable due to the particularities of the socio-economic environment. European policymakers and other stakeholders have recognised the importance of vocational education and training in its various forms, whether we are talking about Dual School or Work based learning, just to name a few. This study aims to fill some of the systematic comprehensive knowledge, which is crucial for creating a general overview of the system. Also, by presenting some successful applications of Dual School from Europe and Romania, we wish to promote the successful examples which in turn would help to improve the collective perception of the vocational education and training in Romania. At European level, there are different tiers of openness toward dual school implementation. National educational strategies and policies regarding the implementation of dual school within vocational education and training are somewhat flexible because they are inevitably conditioned by the type and the particularities of the environment. Some countries have long realised the need to optimise their professional training system by implementing superior collaboration with all involved stakeholders, creating a regulatory framework that has stimulated the development of qualified professional training. There is no education and professional training without economic partners who are motivated to be actively involved in it. Other countries like Romania or Bulgaria have only recently adopted laws to allow dual school application at national level. Still, examples of good practice are beginning to emerge signalling a shift in the national strategy. The dual school applications in Romania have mainly adopted the German particularities due to the features of the economic environment which pioneered this form of education in our country.* ***Method****: The method used is the bibliographic study to deepen the topic of vocational education and training.* ***Results****: The results refers to the expanding knowledge regarding the vocational education and training and performing a comparison on the existing dual school applications in Europe and Romania.* ***Originality****: There is a scarcity of studies conducted on vocational education and training, and this study improves comprehensive systematic knowledge in the field at the European level and helps create an efficient unitary solution.*
Keywords*: Dual School applications, openness, productivity, stakeholders, strategic improvement, vocational education.*
Funding: *This paper was financially supported by the Project "Network of excellence in applied research and innovation for doctoral and postdoctoral programs / InoHubDoc", project co-funded by the European Social Fund financing agreement no. POCU/993/6/13/153437.*

IMPACT OF DEMONETIZATION ON SKILL DEVELOPMENT AND INCOME GENERATION

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Abstract
Objective: *The objective of the study is to understand the impact of demonetization on informal labor. In developing countries most of the workers are engaged in the informal sector. In India, it accommodates more than 90 percent of the total workforce and contributes around 50 percent to the Indian GDP. Being a key contributor to economic growth, and jobs, the informal labor force is still considered as the most underprivileged and vulnerable section in the Indian labor market. They are highly dependent on cash and are frequently without any social security protection. Demonetization is one of the macroeconomic shocks that happened in November 2016 leading to a liquidity shock for informal labor. Their income got degraded and savings became negative leading to a rise in inequality and poverty among the informal workforce. Skill development in such a situation is a key factor in addressing poverty reduction because it increases employability, productivity, and supports inclusive growth (CII, 2015). Therefore, another objective of the study is to understand how the productivity, and employability of labor are related to the enhancement of the skill of informal workers which can thereafter address the SDGs 1 (No Poverty), 5 (Gender Equality), 8 (Economic Growth and Decent Work), and 10 (No Inequality). From a developing country perspective, in order to address these SDGs, it is important to address the informal sector as it acts as a last resort against unemployment at the backdrop of a reduction in income and fall in savings. India pioneered the admirable concept of fostering economic development and good employment through Make in India, Startup India, Skill India, and Digital India to address the SDGs 1, 5, 8, and 10. For the achievement of the above four SDGs, there is a need to enhance income generation and skill development within informal labor along with meaningful and effective social safety nets through implementable policies. The study aims to address how such effective policies of social safety nets can be implemented in an industrial cluster of Haryana, India to address SDGs 1, 5, 8, and 10.* ***Method***: *The study comprises a mixed method consisting of primary and secondary data. The impact of money supply and income generation on savings is tested using regression analysis to check the causality between money supply, income generation, and gross domestic savings. This was buttressed by survey-based primary data from informal workers of a chosen industrial cluster of Faridabad. Further, the descriptive research shows how employability and productivity can promote skill development among informal workers which may reduce poverty supported by a national, state level policy analysis.* ***Results:*** *The study showed a decrease in mean income (from INR 10,340 to INR 7,075) and savings (from INR 1,330 to INR -2,092) of informal workers after demonetisation. Moreover, they were forced to spill hard-earned savings by 2.5 times and their earnings by one-third. On the other hand, skill development among informal workers is one of the key parameters that may promote opportunities for income generation, decent working condition and economic growth. Along with this, it seeks to advance steady, all-encompassing, and sustainable economic growth, create complete and productive employment, and respectable employment for everybody (Rai et al., 2019). For informal employees, the idea of decent labor is crucial because their employment is defined by poor productivity and low remuneration. Decent work for them should ensure unbiased equal opportunities in terms of a fair wage, workplace security and social protection (Küfeoğlu, 2022). Hence, in the backdrop of falling income and savings due to economic shock, it is an urgent need to foster skill development and social security measures and policies, so that they could survive from ensuing macroeconomic shock.* ***Originality***: *The study is based on a mixed method based analysis where an empirical investigation has been done for understanding the impact of change in the Gross Domestic Product (GDP) and Money Supply (In India, M3 is the official measure of the money supply) on the Gross Domestic Saving (GDS) of households through secondary data analysis. Domestic savings contribute significantly to the nation's economic expansion in terms of enhanced investment financing, job creation, and productivity improvement in a nation. For primary data collection, a questionnaire has been prepared which has helped in getting the real data in the context of the informal sector.*
Keywords: *informal sector, demonetisation, savings, Sustainable Development Goals, skill*

THE IMPACT OF EDUCATION ON THE LABOUR MARKET - CASE STUDY: ROMANIA

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Abstract
Objective*: The labour market is one of the forms of the market in which the object of the transaction is special, namely, the ability of people to work. What is traded on this market is the willingness of the population to work, and not the man himself. This market lacks transparency and is influenced by a multitude of factors, such as: the development of the economy, the demand for goods and services, and the investment potential of the area or the level of education of the population that is available to work. The present work follows the interaction between the main indicators of the labour market and the education level of the population at the level of the counties in Romania.* ***Method****: The paper uses spatial econometric techniques. The econometric analysis allows observing the influence of the educational level on the employment level of the population on the labour market. Spatial econometric analysis allows, in addition, the identification of influences arising from the interaction of observations located in a geographical vicinity, both at the level of the dependent and independent variable, as well as errors.* ***Results****: The results of this analysis reflect, at the level of each county, the average degree of training of the population available to work, as well as the degree of employment on the labour market. It also confirms that education has a demand and a supply in the labour market.* ***Originality****: The work contributes to the specialised literature, especially through the advanced econometric method that captures the existing dependencies between neighbouring observations from a geographical point of view. Also, following the crisis caused by the COVID-19 pandemic, but also the difficult economic situation in which we find ourselves, a recent analysis of the labour market can be valuable to the authorities, but also to interested persons.*
Keywords*: education, labour market, unemployment, Romania, econometrics, spatial econometric models*

DEMOGRAPHIC ANALYSIS OF DATA FROM POPULATION CENSUSES BETWEEN 1992-2022

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Abstract
Objective*: Demographic aging is a global phenomenon with significant implications for society. Understanding this phenomenon and identifying innovative solutions are becoming essential to meet current and future challenges. In Europe, many countries face the impact of demographic transitions, where the birth rate is well below the mortality rate and no improvement is expected soon. Romania is falling into the general trend, registering significant changes at the demographic level over the last decades. This research aims to analyse demographic changes among the Romanian population in the period 1992-2022, using census data, with an emphasis on current and future trends and changes, as well as assessing the economic consequences of demographic aging.* ***Method****: The study uses the "demographic transition model" to explore the reasons for these changes and to provide insight into the country's demographic future. This model makes it possible to understand the factors that influence changes in the structure of the population and provides a solid basis for developing appropriate policies and programs. The purpose of this research is to identify the demographic evolution of the country and at the same time to highlight the need to adopt innovative solutions to address the challenges generated by demographic aging in Romania. In the face of a declining population and an increased proportion of the elderly, it is essential to develop effective strategies and policies that respond to these demographic changes and to ensure a favourable environment for a healthy, active and productive society. These solutions may include measures to stimulate fertility, promote a healthy and active life among the elderly, improve working conditions and continue education that can help adapt society to demographic changes. The main data sources used in this research are the censuses conducted in Romania between 1992 and 2022 and the data provided by the National Institute of Statistics. The calculations based on these statistical data will follow the evolution of the Romanian population until the last available census. Both the factors that contributed to the quantitative changes in the population, such as birth rates, mortality and migration, and the factors that influenced the qualitative changes,*

will be analysed, such as age group structure and population distribution in rural and urban areas. Descriptive analysis will be used for the purpose of conceptual delimitation (definition of notions and processes), as well as comparative analysis in order to highlight specific characteristics. ***Results****: The research will highlight, on the one hand, the operation and interpretation of annual statistical information resulting from official administrative sources and, on the other hand, the sequential information of the population censuses. The correlated perspective of information obtained from multiple sources will allow the quantification of demographic change. Some of the concepts will be represented graphically in the form of figures or tables. This method of analysis will allow comparisons to be made, identify relations between the concept and also a detailed perspective on the demographic evolution in Romania and its impact on the economy.* ***Originality****: Research results can contribute to the reassessment and strengthening of policies on managing demographic and thus labour market change, to develop the complex relationship between demography and economics in the specific context of Romania and will provide valuable information for the development of sustainable economic policies and decisions.*
Keywords: *demographic changes, population, census, labour market, demographic transition model*

THE LONG-TERM BENEFITS OF WOMEN'S INVOLVEMENT IN THE EMERGING LABOR MARKET

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Abstract

Objective*: The long-term benefits of women's involvement in the emerging labor market have been a topic of discussion for many years. Increasingly, research has shown that when women are granted access to the labor market, not only do their own lives improve, but the benefits ripple through to their families, communities, and even the economy at large. This paper aims to explore these benefits, both short and long-term. One of the short-term benefits of the labor market's inclusion of women is the increase in economic growth. With more women working, the economy is stimulated, and more money is circulated into the consumer market. This, in turn, leads to long-term benefits such as increased government revenue, which can be further invested in social programs and infrastructure development. Another short-term benefit is the breaking down of gender barriers. When women enter the labor market in large numbers, this can lead to greater equality in the workplace and society. This, in turn, can lead to a reduction in gender-based violence and harassment, as well as more equitable treatment of women in general. Yet another short-term benefit is the improvement in women's financial independence. When women have access to regular employment, they can earn their own income and become less reliant on their partners or families. They are then able to use their income for investment, saving, or even starting their own businesses. This ultimately leads to greater autonomy and decision-making power for women and a reduction in poverty among women and children. One of the long-term benefits of women's involvement in the emerging labor market is the improvement in education for girls. As more women enter the workforce and become active contributors to the economy, they begin to value education even more. This, in turn, leads to greater investment in education, particularly for girls, who traditionally receive less education than boys. Over time, this leads to a more informed and educated workforce, which is essential for economic growth. The objective of this paper is to explore the long-term benefits of women's involvement in the emerging labor market. This paper will investigate the impact of women's participation on their economic, social, and personal lives.* ***Method****: Furthermore, this research method will involve analysing statistical data on gender representation in emerging labor markets to identify reference values, trends, and gaps in female participation that require attention. The findings from the literature review, and statistical analysis will be used to develop a framework of best practices for overcoming the challenges faced by women in emerging labor markets. This framework will be practical and actionable, providing guidelines and recommendations for policymakers, employers, and women themselves on how to promote equal opportunities and greater female participation in these markets.* ***Results****: The result of this paper will provide valuable insights into the advantages of women's involvement in the workforce.* ***Originality****: This paper represents a comprehensive synthesis of existing literature examining the lasting benefits of women's participation in emerging labor markets. By analysing areas of research that have been more fully explored and those that require further investigation, this study suggests avenues for future research.*
Keywords*: women, gender equality, economic growth, workforce participation, gender gap, career advancement.*

SKILLS DEVELOPMENT AND SKILLS MATCHING IN ROMANIA IN THE CONTEXT OF RECENT EXTERNAL SHOCKS

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Abstract
***Objective**: During the last years, Romania has faced many challenges caused not only by the important mutations of the technological landscape and institutional framework, but also by external shocks, such as the COVID-19 pandemic, and the war in Ukraine. The extended use of ICT and digitalised/automated technologies, the evolution of the educational and training system, and the external labour supply mobility have determined important changes in skills development and matching. The experiences accumulated in Romania, in the context of the second decade of the 21st century underpin the limited collaboration and communication between the education system and the labour market at national/regional level. Repeated interventions in the education system still marked by uncertainty and instability regarding certain aspects like curricula, examinations, and matching of teaching and learning with the actual labour demand, highlight the reality that continuing training and lifelong learning are still not assimilated completely in the organisational culture be it within the public or the private sector. When we analyse skills matching, we have also to consider the impact of external shocks on the labour market. Therefore, the COVID-19 pandemic is assumed to contribute to accelerated changes as the 4th Industrial Revolution unfolds and recent analyses show that convergence and social cohesion are most at risk in the post-pandemic period based on a country's ability and capacity to undertake measures for investing in skilling and reskilling the existing workforce and those preparing to enter the labour market. In this context, a first objective of the paper is to identify the main reasons for the skills mismatches and labour market disequilibria in Romania and to outline main changes foreseeable and necessary in jobs supply and demand. The second objective of the paper is to reveal the impact of the major shocks of the early 2020's on skills development and the skills mismatch gap between Romania and other countries from the European Economic Space. The third objective is to reveal the skills mismatches in a regional context for Romania. **Method**: Our analysis relies on employing various statistical methods including descriptive statistics, dispersions, correlations and regressions, and comparisons regarding skills mismatch in Romania compared with other relevant clusters of member-states. The Beveridge curve is used to determine the nature of the labour market disequilibria in Romania in the context of the pandemic shock. **Results**: The estimations of the considered statistical model reveal the differences in the skills development among the EU member-states and Romania's regions. Moreover, we found a correlation between skills development and skills matching in the context of a major external shock. The methodology provides for analysing skills development and skills mismatch by resorting to a Chi-Square test regarding labour market gaps with respect to occupations and vacancies between the developed and the less developed NUTS2 regions of the country by taking into account skills development and skills activation related data, on which we build hypotheses from the perspective of the current landscape for skilling, upskilling and reskilling in Romania. The findings show that the main fields of intervention for improving the overall context for skills' development in Romania and alleviating the impact of external shocks are: 1. Increased policy stability in the field of education and continuing vocational training, 2. Improve attractiveness of less developed regions by building meaningful partnerships between the educational and vocational-training system and interested regional/local stakeholders. 3. In the context of demographic change to model more business-related curricula in both education and vocational training. **Originality**: The paper's approach is original by employing regressions between the indicators of skills development and skills matching. Also, the use of the Beveridge curve allows us to identify the evolutions of the labour market in the context of a major external shock. This way, it is possible to build a more complete image of the necessary interventions from the stakeholders involved in the Romanian skills development for improving labour outlook on medium- and long-term. Another original approach is the use of a Chi-Square test for identifying main risks related to labour market gaps based on the use of labour market and institutional variables. In this manner, a more clear and complete image is obtained regarding the necessary interventions from the perspective of the main stakeholders for improving labour outlook on medium- and long-term.*

***Keywords**: unemployment rate, vacancies rate, frontier analysis, labour force participation, over-qualification rate*

THE COMPETENCE "INFORMATION SECURITY" IN HUMAN RESOURCES MANAGEMENT - A KEY FACTOR FOR COMPETITIVENESS AND DIGITAL TRANSFORMATION EFFICIENCY

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Abstract
Objective: *The challenges of the labor market related to the new qualities and competencies in HRM are currently in exceptional dynamics. In relation to this, the subject of information security is an essential part in the transformation of society, business processes and the competitiveness of organisations. Proof of this is the widespread penetration of information technologies into all business processes, which placed the creation and use of information at the center of economic activity, the so-called information economy, in which information, in addition to being a product, is also a tool for carrying out the activity. This imposes new and high requirements for the knowledge, skills and qualifications possessed by both managers at all levels and the employees of the organisations whose identification is the key objective of the development.* ***Method***: *Through a comparative methodology, including a study of literature sources, identification of good practices and a comparative analysis of current studies, answers to key questions on the topic will be sought, aimed at identifying the challenges of the labor market related to the new qualities and competencies in HRM which are currently in exceptional dynamism. For the needs of the research, the analytical tools "GAP analysis", "A3Thinging" and "Improvement roadmap" will be used.* ***Results***: *In relation to this, the topic of information security is an essential part in the transformation of society, business processes, and the competitiveness of organisations. The expected results are related to the identification of key moments and characteristics of competences in the studied topic. This will be realised with the clear awareness that proof of the importance of the topic is the wide penetration of information technologies in all business processes, which has placed the creation and use of information at the centre of economic activity, the so-called information economy, in which information, in addition to being a product, is also a tool for carrying out the activity.* ***Originality***: *The scientific research and its expected results are innovative and applied in nature. This is linked to the understanding that the human factor is a cornerstone in the information security of the organisation, especially in the context of the search for sustainability and competitiveness of national economies - under the sign of creativity, crisis and conflicts, which is related to increasing the opportunities for success of the initiatives (undertakings) and is related to effective development of human capital in the organisation. The originality of the article is expressed in the fact that it directs attention to the critical factors for ensuring the development of "Information Security" competence, which are mainly related to the balanced participation, management, training and strengthening of human resources, effective internal communication, brand management, reputation, and values.*
Keywords: *"Information security" competence; human resource management; crises; digital transformation; transformations*

IMPROVING SALES AGENTS' DIGITAL SKILLS AND COMPETENCES FOR A SIGNIFICANT INCREASE IN SALES EFFICIENCY AND EFFECTIVENESS

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Abstract
Objective*: Any economic system is interdependent with the external environment and it is affected by input actions and acts on the environment by output actions. Any sales firm is inevitably part of a supply chain, as it has suppliers and has different ways of reaching its customers. Distribution is a very large economic field, with many suppliers and a wide and varied range of customers. Both longer and shorter supply chains can be tested in this area. The economic units that make up the supply chain all have the same objective: economic performance, but participate differently in the construction of the chain through the specific strategy adopted. Technological progress has throughout human history been linked to social evolution. The new level of technological evolution is digital technology, whose impact is felt in all economic and social spheres. We live in a time when vast amounts of information are available to many people and can be processed by increasingly powerful computers. Businesses are being pushed to re-engineer and digitise to keep pace with the demands of the times, and the workforce also needs to catch up with the new demands, which means an obvious increase in digital skills and personal work performance. It is important to consider who has access to the information, how it is used, the costs of the digitization process, the benefits and the risks. Investment in digitization of a business area needs to be linked to digital education of the staff involved. Everything must be done with discernment, balance and the preservation of the moral values that define man as a superior species. The objectives of this article can be concisely listed as follows: O1. Redefining sales workforce performance; O2. Setting new coordinates for building the supply chain; O3. Establishing the risks and constraints imposed by the digitization phenomenon in the supply chain.* ***Method****: The methods used for the study are both quantitative and qualitative. Experiment and occasional surveys will be used to describe the phenomenon under study as meaningful as possible. In terms of qualitative research, the aim will be to identify and outline the main problems related to the digital skills of the workforce, to briefly diagnose the situation of economic units from the perspective of IT development, to understand the reasons why they will or will not make efforts to integrate or not integrate this global trend of digitization of economic and social activities.* ***Results****: The results are connected to: R1: Improving sales team performance; R2: Improving organisational characteristics. The article is based both on existing references in other studies and articles published on the topic, but also on personal experience gained in the field of distribution of products and services over a long period of time.* ***Originality****: Working with a large number of suppliers, customers, and staff at different levels in organisations provides the possibility to identify the motivations behind the adoption and deployment of new technologies and software, the technical, financial and people-related difficulties encountered during this period, and the fears of older employees about keeping their jobs in the face of increasing demands for digital skills.*
Keywords*: digital skills, digitization, efficiency, effectiveness, supply chain*

THE ROLE OF PERSONNEL MANAGEMENT IN AGRICULTURAL BUSINESS

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Abstract
***Objective**: The relevance of improving the efficiency of agriculture in Albania and, accordingly, the role of personnel management in the implementation of this task has grown especially in recent years when the number of pastures and arable land has substantially decreased due to an increase in the area of mineral extraction. The purpose of the study is to determine the most effective motivation and planning system for them, considering the national characteristics and mentality of agricultural workers, and to form recommendations on the most acceptable management style for this group. **Method**: The Hofstede typology of cultural dimensions was used as a key method to identify the cultural and behavioural characteristics of the target audience. **Results**: According to the obtained data on the typology of cultural dimensions, the values in the examined social group are largely determined by traditions and customs, which means that a managerial model is in demand. This model will not impose existing Western management principles but uses its own tools based on relatively democratic principles. **Originality**: Based on the obtained characteristics, recommendations were formed on key management tools as the principles of subordination, the system of setting tasks and monitoring their implementation, and the effective motivation of personnel. The practical importance of the study lies in the development of recommendations for improving personnel management with the result of increasing the efficiency of agricultural businesses in Albania.*
***Keywords**: management, cattle breeding, agrocomplex, agriculture, Hofstede method*

WORK-LIFE BALANCE, EMPLOYEE ENGAGEMENT, AND EMPLOYEE JOB PERFORMANCE: A STUDY OF PUBLICLY LISTED COMPANIES IN SRI LANKA

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Abstract
***Objective**: It is evident that most of the employees and job seekers prioritise work-life balance, more than anything. Work–life balance is the balance between work life and family life. Employee engagement is the head, heart, and hand involvement of an employee's job as well as their organisation. Employee job performance is one of the main consequences of employee engagement. The aim of this study is to identify the mediating effect of employee engagement on the relationship between work-life balance and employee job performance. The main theory is the general systems theory. **Method**: This is a quantitative study. Unit of analysis is individual i.e. managerial employees of the publicly listed companies in Sri Lanka. Sample size is 250 and the sampling technique is non-probability convenience sampling. Purpose of the study is hypothesis testing. This cross sectional study was conducted in a non-contrived environment with the minimum researcher interference. Type of investigation is correlational. **Results**: Data analysis is done through partial least square modelling. The statistical software package used is SMART-PLS. The results indicated that there is a mediating effect of employee engagement. **Originality**: This study indicates the importance of work-life balance initiatives and employee engagement.*
***Keywords**: work-life balance, employee engagement, employee job performance*

DETERMINANTS OF THE MIGRATION OF MEDICAL GRADUATES FROM ROMANIA

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Abstract
Objective*: In the conditions of a global labour market, migration is a natural phenomenon that affects all states of the world, regardless of the status of the country of origin or of the country of destination and their level of economic development. However, the migration of medical personnel, especially medical graduates, is worrying, given the acute shortage of doctors facing Romania for such a long period. This shortage was further deepened by the migration of medical personnel during the COVID-19 pandemic, when many of the medical personnel decided to emigrate to work in states that were also facing a shortage of doctors but offered them higher salaries and better working conditions. The major problem of this exodus during the COVID-19 pandemic was the fact that many of those who left were recent graduates, who were not yet employed in medical units in Romania. The purpose of this paper is to identify the determinants of the decision to migrate immediately after studies, by conducting a qualitative analysis.* ***Method****: In this sense, a questionnaire was developed and was applied to students from medical faculties in Romania. Among the responses received, 984 questionnaires were validated. In this study, independent variables such as age, sex, economic level, specialisation pursued or environment of residence were used, and the dichotomous nature of the dependent variable determined the application of a logistic regression.* ***Results****: The obtained results are worrying, as a result of the fact that the intention to migrate for work is recorded, especially among future doctors, more than in the case of dentists or pharmacists, and the economic situation of the family is not a determining factor. Thus, public policies prove to be poorly effective in retaining graduates, the reasons being multiple, from salaries, working conditions, career prospects and the stressful work environment in conditions of staff shortage, quantitative and structural.* ***Originality****: This study is important and innovative as a result of the fact that it tries to identify the causes of migration from the origins of potential employees, who have not yet managed to become active in the field. The changes made by public authorities are necessary to rebalance employment deficits of specialists and medical staff in general as a fundamental step in preparing the health sector for the future and increasing the quality of medical services. A recommendation for the country of origin, without restricting the right to free movement for education and for a job, is to rethink the public policy measures to retain young doctors in the country of origin, both for studies and for work, communication, high-performance infrastructure and, finally, attractive salaries and working conditions. As a further research direction, we aimed to expand the questionnaire and increase the number of respondents. At the same time, we anticipated the expansion of the questionnaire by including questions related to the intention of labour force migration, not only that of studies, as a result of the fact that there is a tendency to complete studies in the country, but with employment abroad.*
Keywords*: Romania, logistic regression, medical personnel, medical shortage, migration*
Funding*: This work is supported by project POCU/380/6/13/125031 „DECIDE - Development through entrepreneurial education and innovative doctoral and postdoctoral research", co-financed by the European Social Fund under the Human Capital Operational Program 2014-2020.*

DETERMINANTS OF LIFE EXPECTANCY IN EU: THE CASE OF INTERVENTION ON MALIGN DISEASES

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Abstract
Objective*: The Human Development Index (HDI) provides a single index measure to capture three key dimensions of human development: a long and healthy life, access to knowledge, and a decent standard of living. Many studies were carried out to explain the main determinants of life expectancy. The main objective of this research is to identify the influence of some medical interventions and procedures related to malign diseases on life expectancy. The target group is feminine population in 27 EU countries, in the period 2012-2021.* ***Method****: The methodology used for the analysis took into account several indicators provided by Eurostat: life expectancy for female population as a dependent variable and, breast cancer screenings - historical data, surgical operations and procedures performed in hospitals (partial and total excision) as independent variables. A literature review analysis was performed for the various aspects related to cancer investigations and treatment and direct relation with live expectancy. The research used a regression panel model for 27 EU countries in order to evaluate the impact of each independent variable on the life expectancy in the EU as a whole and in each member state.* ***Results****: The literature analysed has underlined the importance of prevention and screening in efforts to cure the malignant neoplasm of breast. Our research showed that, from a statistical point of view, screening has a significant effect on life expectancy. On the other hand, surgical interventions have a role in the overall medical process and positively influence life expectancy. The panel model has shown that partial interventions contribute to increasing life expectancy but less than screening procedures. Total interventions, that represent approximately 25% of partial interventions, have less statistical significance in increasing life expectancy. The model showed that screening is the variable with the highest influence on life expectancy; an increase of 10% in screening will produce an increase of 0.3 years (4 months) of the Life expectancy for the whole EU (228.390 million feminine population).* ***Originality****: The originality of the research paper consists in developing a model that relates life expectancy to some determinants as screening and surgical intervention. One important outcome of the paper is to highlight the importance of a health care policy that would favour the preventive procedures. This approach has direct influence on early detection of the cancer risk and, in the end, enhancing the life expectancy. The presented results of the analysis have been limited by the data available to Eurostat for the period 2012-2021. More data and research are needed due to the complexity of the topic.*
Keywords*: life expectancy, screening procedures, partial and total surgical interventions, statistical analysis of surgical interventions, OLS panel model*
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THE LABOUR MARKET AND THE PUBLIC EMPLOYMENT. THE ALBANIAN CASE

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Abstract
***Objective**: In many OECD countries, public employment represents an important share of total employment. The policymakers consider public employment as one way to economically support the lagging regions. This paper presents a general overview of the labor market performance in Albania specially related to the public administration and public sector, and the role of the local government in the labor market. Employment in the public sector is possible at all levels of government, including the federal, state, and local governments as well as non-financial public enterprises. Employment in general government is defined to encompass employment in both the central government and the state and local governments. The work in the public sector also includes work in the nonfinancial public enterprises sector. The objectives of this paper are related to general knowledge of the labor market and the correlation with employment in the public sector, practically studied by the Albanian public administration. To carry out this scientific work, the authors have used the method of evaluating the information collected by the local government and central government institutions, as well as the studies carried out before in this field. **Method**: This research investigates the dynamics of the labor market from the perspective of employment in the public sector in the Albanian public administration. The methodology includes the primary and secondary data collected from the INSTAT, public institutions and publications related with this topic in Albania. The authors provide that employment in the public sector is a much discussed issue through different government or political regimes, often accused of being used as a political instrument. To draft the method, a statistical model is used that measures the employer orientation in Albania. The extant literature notes that in Albania the human resources management in public organisations typically is often chosen because it is considered a secure workplace and the public sector seems to be more attractive because of the organisational culture, philosophy but often because of more pragmatic reasons such as for example less effort, job security, bureaucracy, etc. **Results**: Theory suggests that public employment may not only crowd out private employment, but also increase overall unemployment if, by offering attractive working conditions, it draws additional individuals into the labour force. According to previous research in most advanced economies, public (-sector) employment plays centre stage on many dimensions, firstly because the public sector is the single largest employer in the country. Secondly, while the annual budget is being prepared, public employment is frequently the main item of public spending taken into account in the political sphere. **Originality**: At the end of this study, based on the purpose and objectives, the raised hypotheses aim to draw the results and conclusions that will be put at the service of local and central institutions in Albania as a component of public administration. On the other hand, the majority of essential public goods—most notably, justice, general defence and security, as well as substantial amounts of health and education—are delivered by the state through public employment. In the end, the political parties frequently use the topic of public employment during election campaigns to win support (either in favour of socially conservative parties or against more liberal political platforms).*
***Keywords**: public administration, employment, labor market, local government, central government.*

SESSION 4: SUSTAINABLE LOCAL DEVELOPMENT: TOURISM AND HERITAGE CAPITALIZATION

GREEN INFRASTRUCTURE AS A DETERMINANT OF SUSTAINABLE TOURISM DEVELOPMENT. A CASE STUDY OF DISTRICTS IN POLAND IN 2010-2020

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Abstract
***Objective**: The purpose of the study was to identify and assess the spatial disparity of balanced tourism and its linkages with green infrastructure at the county (micro-region) level in Poland. The research process also sought to identify the areas affected by polarisation in terms of the main criterion and the strength of their mutual influence in the changing pattern of developmental inequalities of the district economy in 2010-2020. The study pointed out the importance of sustainable tourism, green infrastructure, and a green economy. Their interrelationships are indicated, key areas are characterised from the point of view of the district economy. Addressing the issue of sustainable tourism and green infrastructure, the authors decided to formulate the following research questions adequate to the main objective: how does the spatial differentiation of tourism and green infrastructure in counties in Poland present itself? Is the level of sustainable tourism of counties interdependent with the level of green infrastructure? Does the level of differentiation of tourism and green infrastructure depend on the level of endogenous variables of the region? **Method**: A synthetic measure was used to rank and group the surveyed counties from the point of view of the main criterion. The Technique for Order Preference by Similarity to an Ideal Solution was used to construct the synthetic measures. **Results**: The green economy (which is the result of the ongoing climate and environmental crises, the depletion of non-renewable energy sources, and the growth of social inequality) results in improved prosperity and social equality while reducing environmental pressure and ecological damage. The green economy is multi-layered, encompassing all aspects of the economy - social, infrastructural, financial, etc. Green areas have become an increasingly common part of development planning, which is justified by environmental and social benefits. These vary depending on the infrastructure. Green infrastructure is that which focuses on incorporating and integrating the protection and enhancement of natural processes into planning ventures. Green infrastructure focuses on preserving, restoring, improving and connecting existing areas and functions, as well as creating new areas and functions. Green infrastructure can perform many functions and bring many benefits to an area. These functions can be environmental, social and economic, structural. The synthetic measure of sustainable tourism ranged from 0.04 to 0.41 in 2010 and 0.07 to 0.56 in 2020, while the measure of green infrastructure 0.28-0.52 and 0.32 - 0.60. An increase in the value of the measure indicates that against the background of the studied community the situation of the studied unit is improving, a decrease informs about the deterioration of its situation. Measures of central tendency (mean, median, quartile) take values for the measure of diversified tourism in the relationship 2010 to 2020 - equal (close), while for the measure of green infrastructure - higher. In the case of measures of volatility (the spread, standard deviation, coefficient of variation), we observe an increase. Environmental, social and*

economic problems are closely intertwined. The multifaceted nature of the problems is becoming a serious challenge for governments and policy makers. The problem of appropriate management of natural environmental resources becomes extremely important in connection with the competitiveness of these areas, which promote the development of tourism. Tourism and green infrastructure are both a factor and an outcome of regional and local socioeconomic development or socio-cultural transformation. They are also a factor in the transformation of the natural environment, or space, turistics, green infrastructure as multidimensional (complex) phenomena. ***Originality****: The results obtained can be an important source of information for local authorities on the disparities between units. In terms of new directions of research, we can point out, among other things: the choice of a larger number of diagnostic variables, making analyses over an increased time period in order to learn about the tendency of changes, the choice of new methods of construction of the synthetic measure. The results also indicate the need to analyse outliers and determine their impact on the situation of the study area. The added value of the article is the results of the relationship of green infrastructure and sustainable tourism development of counties in Poland in 2010-2020. The indicated areas are most often analysed separately. The synthetic measure is an instrument for monitoring and modeling of local government action, an indicator for assessing the economic asymmetry of action in the conditions of the dynamics of changes in economic and social phenomena, as a criterion for selection in a particular situation, a measure of modeling of action (decision-making measure), a measure of the economic situation of the unit.*
Keywords*: sustainable tourism, green infrastructure, green capital, county, synthetic measure, spatial variation*

SOME FINDINGS IN REVEALING STATISTICS RELATED TO CULTURAL TOURISM IN ROMANIA

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Abstract

Objective*: Statistics characterising cultural tourism are rather scarce in Romania. Both supply-side and demand-side statistics in the field of tourism do not provide accurate information to clearly identify cultural tourism as a distinct form of tourism. However, statistics are indispensable in the research and analysis of the cultural phenomenon to measure the evolution of cultural tourism in order to have an image as close as possible to reality. Being part of tourism industries according to international standards, museums are some of the most representative establishments where activities pertaining to cultural tourism usually occur. The purpose of this research is to analyse some statistics in order to better reveal the flows of cultural tourism in Romania considering available statistics produced by National Institute of Statistics (INS) both in the field of culture (i.e. museums statistics) and in the field of tourism (i.e. accommodation statistics).* ***Method****: Preference was given to supply-side statistics since these are exhaustively covering all municipalities that register flows of visitors in the museums in Romania. Thus, it was assumed a priori that the number of visitors in museums is a good proxy for identifying the flows of cultural tourists. Annual data at municipality level concerning number of tourists (more precisely, arrivals in accommodation establishments) together with data on number of visitors in museums are considered in a first step in order to exhaustively identify the list of municipalities that are registering both flows of visitors in museums and tourists staying in accommodation establishments. Comparisons between the size of these flows have been made for each municipality as well as between the pandemic years (2020 and 2021) and the pre-pandemic ones (2019 and before).* ***Results****: There were between 237 and 311 municipalities in Romania that registered both visitors in museums and tourists in accommodation establishments in the period 2005-2019 and 309 and 319 municipalities in the pandemic years 2020 and 2021. These municipalities accounted for between 75% and 82% of the total tourists registered in accommodation establishments in Romania. This denotes the importance of cultural attractions (i.e. museums) for tourism in our country. At the same time, reported to the total flows in Romania, a higher concentration of flows of visitors in museums was noted compared with flows of tourists (half in 10 municipalities vs. half in 16 municipalities and two thirds in 21 municipalities vs. two thirds in 50 municipalities in 2019). Also it has been revealed that cultural tourism was affected to a greater extent by pandemics since the closure of museums was a fact in some periods with travel restrictions during the pandemic years 2020 and 2021. This is confirmed by the decline rate in the first pandemic year for tourists in municipalities*

*that registered visitors in museums that is with 2 percentage points higher than the same rate for tourists in Romania (-54.2% vs. -52.2%); if one considers visitors in museums, the same decline rate is a little higher (-56.4%). One should be aware that municipalities that registered visitors in museums but not having tourists in accommodation units could also be considered as part of cultural tourism flows assuming some visitors in museums are not staying in the same municipality where a museum is located (there were more than 100 municipalities in 2019). However, in this case, due to lack of data no quantification is possible from a tourism perspective. **Originality**: This is a research study that was trying to quantify a form of tourism in Romania namely cultural tourism. It was based on exhaustive data covering visitors in museums confronted with data for arrivals in accommodation establishments (number of tourists). A territorial approach was employed at the level of each municipality with available data in the period 2005-2021.*
***Keywords**: cultural tourism, statistics, visitors, arrivals, Romania*
***Funding**: This work was supported by Nucleu program carried out with the support of Ministry of Research, Innovation and Digitization [PN 23-42, 2023]*

EXPLORING COMMUNITY PARTICIPATION CHALLENGES IN TOURISM DEVELOPMENT IN MOUNTAINOUS STATE: A CASE STUDY OF UTTARAKHAND, INDIA

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Abstract
*Developing countries often face difficulties in developing tourism in their mountainous and remote rural areas due to factors such as subsistence economies, limited success in farming, reliance on pastoralism, widespread poverty, weak governance, delicate physical natural environment, and vulnerability to disasters (Sood et al. 2017; Kala & Bagri, 2018). However, it has been noted that socio-economic, political, and environmental aspects may impact the extent of local community participation in tourism (Nyaupane et al. 2006; Bello et al. 2016). The current state of tourism development predominantly favours big business organisations such as tour & travel companies, and hotels, while locals have been significantly overlooked and marginalised due to perceptions of being uneducated, culturally unsophisticated, ignorant, and lacking effective communication skills (Tosun, 2006; Aref, 2011; Kunjuraman & Hussin, 2017). This has resulted in limited or even marginalised involvement of local people in decision-making processes, leading to a lack of financial benefits from tourism, particularly in remote areas. **Objective:** This study aims to explore the challenges for the limited participation of local communities in the development of tourism in mountainous destinations. **Methods**: The focus of this study was Uttarakhand, a mountainous state in India. Uttarakhand, located in the northern part of the country, shares international borders with Nepal and Tibet (China), and domestic borders with Himachal Pradesh and Uttar Pradesh within India. Known as the 'Land of Gods' (Devbhoomi), the state is renowned for its connection with various Hindu deities. Uttarakhand is a diverse destination offering a wide range of tourism attractions, including religious, national parks, UNESCO World Heritage site, historical temples, wildlife, yoga, mountains, forests, glaciers, rivers, flora and fauna (Bagri & Kala, 2016). This research employed a qualitative research method, prioritising the explanation of phenomena rather than quantitative measurements. The researchers made multiple trips to the research sites and conducted meetings with members of the local community, which provided insights into the factors contributing to the lack of community participation. To guide the interviews, a set of questions was prepared based on the study's theme. The primary data collection utilised in-depth interviews, qualitative questionnaires, and observations. Participants were selected through purposive and snowball sampling methods. A total of 36 in-depth interviews were conducted, with an effort made to include individuals from various age groups, genders, professions, and income levels to capture diverse perspectives, understandings, and priorities concerning tourism development. Each interview lasted between 30 to 45 minutes, with interviewees preferring to communicate in English/Hindi/Garhwali (a local dialect). The analysis of themes, sub-themes, and quotes was conducted to achieve the research objectives. **Results**: The results reveal that the involvement of local community members in decision-making regarding tourism development is limited to a select few individuals from the elite group. Most of the local population is excluded from the consultation and decision-making processes. Through interviews, the researchers identified four categories of challenges that help explain the lack of community participation in tourism development. These were (a) Practical Challenges (Tourism by chance, lack of knowledge, and low education); (b) Socio-Cultural Challenges (Poor living conditions, busy daily routine, and*

*passive role of women); (c) Apprehension Challenges (Perceiving tourism seasonality, lack of expertise, and perceived negative impacts); and (d) Institutional Challenges (Power disparities). **Originality**: Community participation challenges hinder residents' engagement and discourage their involvement in tourism-related decision-making, both in the present and in the future. It is crucial to recognize local communities as an integral component of the tourism product. To ensure a participatory approach free from discrimination, tourism policymakers should strive to include the contributions of diverse stakeholders. Government initiatives such as providing vocational training, organising workshops, implementing capacity-building programs, establishing information centers, and offering financial support can significantly change the community's attitude towards tourism development in a positive manner. By addressing these challenges to community-based tourism development in remote and mountainous destinations, it becomes possible to empower residents, encourage tourism entrepreneurs, and maintain a harmonious relationship between the community, tourism planners, and the government.*

***Keywords**: Community participation; tourism development; challenges; India*

PROMOTING SMART HISTORICAL TOURISM FOR CAPITALIZATION

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Abstract
*The tourism industry is one of the important growing industries and historical sites have become key resources of attraction for tourism bringing economic revenue to its society. The down break of the Covid-19 Pandemic has caused an economic crisis around the world and all countries have been trying to find solutions to overcome this phase. Many industries such as the tourism industry have been affected by this pandemic. According to the WTTCs latest annual research, even though in 2022 there has been 22% increase from 2021, the GDP global contribution from the Travel and Tourism Sector is still 23% below the level in 2019 due to the Covid-19 Pandemic (2023). Therefore, there is a need for solutions that can promote safe travel and help the industry contribute to its society. Today where mobility is still considered as an issue (to prevent the spread of the virus) and safe travel is a necessity, developing smart tourism destinations can help people overcome their desire to visit tourism sites. In May 2020, the World Travel and Tourism Council (WTTC) worked on the Safe Travel project and launched the first global safety stamp with toolkits for the 'new normal' in order to recognize the protocols for safe tourism around the world. Protocols have been adjusted for related sectors in the tourism industry along with guidelines and operational preparedness. In these protocols, digital innovations and technologies have been considered important where applicable. The use of technologies to integrate the virtual experience have been considered as part of the tourism events. This can help smartness in this industry and lead towards the emergence of new applications. **Objective**: Historical and cultural destinations are one of the main attractions in the tourism industry therefore promoting safe and smart historical tourism is the main aim of this research. This research attempts to understand innovative solutions for smart tourism development for historical destinations. Smart accessories such as the use of Virtual Reality (VR) have been used in some tourism destinations therefore this research will try to evaluate the outcome and the acceptance rate of smart technologies among tourists. **Method**: This qualitative research aims to evaluate the viewpoints of tourists regarding new gadgets in historical destinations. The World Heritage Site of Persepolis located in the Fars Province in Iran is chosen as the case study and smart facilities in these destinations are reviewed for evaluation. VR Goggles have been used on site to give the impression of how the palaces and sites used to be in order to help tourists gain a better experience of the glory of this era. This research tries to evaluate the viewpoints of tourists towards smart accessories such as VR goggles in this destination. **Results**: Results indicate that tourists are in favour of sensing the era by VR Goggles as well as the presence of Tour Guides on site. But can these two experiences be given together to tourists without being physically on site? Based on the results and viewpoints of tourists, this research tries to introduce an innovative smart facility to promote safe travel. **Originality**: This research aims to narrow the gap between virtual reality and augmented reality. The next phase of this research is to work on ways that can promote historical destinations remotely with virtual accessories but give the sense of place and the sense of the era. This can become a new way of tourism and bring back part of the GDP global contribution from the travel and tourism sector in vulnerable tourism destinations as well as a safe solution for outbreaks such as the Covid-19 Pandemic. Smart historical tourism is believed to help capitalise the historical significance of the area while promoting safe and sustainable tourism.*

***Keywords**: Smart Tourism, Historical Destinations, Capitalisation, Covid-19 Pandemic, Sustainable Tourism*

RESILIENCE OF THE TOURISM SECTOR DURING AND AFTER THE HEALTH CRISIS IN ROMANIA, AT THE REGIONAL/LOCAL LEVEL

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Abstract
Considered one of the main contributors to the service industry, tourism represents one of the most dynamic sectors globally. During the pandemic with the COVID-19 virus, this sector, along with other important economic sectors, was heavily affected by the restrictive measures imposed to stop the spread of infections. These measures stopped or reduced the flow of tourists, causing significant losses in the field of tourism and the economy as a whole. At the same time, most of the employees lost their jobs, as most of the work was done from home and telework was resorted to, in order to limit social interaction. During the period when restrictions were relaxed, tourism managers adopted new, more flexible strategies adapted to the conditions imposed by the pandemic period. Making decisions under conditions of uncertainty, promoting tourist destinations, adopting new technologies, ensuring a safe stay and well-being for tourists were the main problems that managers had to face and find solutions for. 2020 was the most difficult year, an atypical year for tourism, after a glorious period when there was a continuous upward trend in tourist arrivals, overnight stays and income, both globally and in the European Union. The statistics showed that international arrivals in 2021 decreased by 73%, while in 2021 they decreased by 72%. At the end of the year, a slight global recovery was beginning to be seen, which brought hope for this sector. Currently, there is still a gap of 63% compared to n 2019. In Europe, tourism has started to recover slightly, already seeing an increase of 18% in 2021 compared to 2019. Considering the fact that people like to travel, the conditions are favourable for this sector to recover quickly. Romania also faced difficulties in the tourism sector, especially in the first part of the pandemic. The program entitled "Rediscover Romania" secured approximately 48% of the total number of arrivals (accommodation places) from tourist units in 2019. The main destinations where tourism activities took place were: seaside resorts (during the summer season), mountain resorts and spa tourism units. Regarding the location, the majority of tourists oriented themselves both towards the seaside hotels, which ensured the sanitary safety conditions imposed by the pandemic, and towards the small hotels, villas, cabins and agro-tourism guesthouses located in isolated areas. The year 2021 brought relaxation measures that led to the partial resumption of tourism services, and in 2022, tourism resumed its slightly upward trend, but on a larger scale. ***Objective****: The aim of the paper is to analyse Romania's tourism in the period of the COVID-19 pandemic, in order to quantify the gaps compared to the highest performance achieved in 2019 and in what measure tourism started to resilience and recover.* ***Method****: The main studied indicators were: the offer expressed in terms of units with function for tourists' accommodation, their number, structure and evolution, number of places and their dynamics by accommodation type, and demand in terms of arrivals, overnight stays both at national level and in rural tourism, index of net use of accommodation capacity, incoming and outgoing tourism. They were analysed using fixed basis and structural indices and comparison method.* ***Results****: Compared to 2019, in 2021 the number of accommodation units was higher by 8.8% and the number of places accounted for was 364.5 thousand (+2.2%). In 2020, tourist arrivals represented 47.8% and in 2021 accounted for 69.3% of the 2019 level, and the overnight stays followed a similar situation. The year 2021 was better than 2020, as the relaxed measures started earlier than in 2020 and tourism managers adopted flexible offers, personalised packages, last minute, early booking, free cancellation, lower tariffs, bonuses etc.* ***Originality****: The increasing trend is a hope that in 2022 tourism will have a much better dynamics and there are chances to recover.*
Keywords*: tourism sector, Covid-19 pandemic, Romania tourism, regions NUTS II*

ANALYTICAL HIERARCHICAL METHOD (AHP) AS A SUSTAINABILITY MEASUREMENT TOOL: A BIBLIOMETRIC ANALYSIS

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Abstract
Objective*: An approach for organising and analysing complicated decisions that combine math and psychology is called the Analytic Hierarchy Process (AHP). It was created by Thomas L. Saaty in the 1970s, and since then, it has been improved. Research on the Analytical Hierarchical method is scant and there is a need to conduct a review related to the application of the AHP method in sustainability measurement. There are limited studies that have applied the AHP method to evaluate sustainability performance.* ***Method****: This study aims to portray the publication trends in Analytical Hierarchical Method (AHP) as a Sustainability Measurement Tool using bibliometric analysis. Bibliometric analysis is used to measure the impact of the published research in a scientific and quantitative manner. The Scopus database is used as the source of a bibliographic database that has multidisciplinary scope including millions of records from journals, books, conference proceedings etc, and is also used as a citation index. The biblioshiny package was used for statistical computing and graphical modelling in R software language was used in quantitative analysis and data visualisation. A total number of 384 documents from the English language were refined after excluding the articles published in other languages and non-related to sustainability. Articles from 2004- 2023 May were considered for broad identification of the publication trends with the time.* ***Results****: The results depicted that 1) during 2004-2022 the number of pieces of literature depicts a steady increase in growth of publications and maximum publications in the year 2021. 2) Literature covers 63 countries including China, Jordan, India, Greece and the United Kingdom are the most cited countries. China has had the highest country-level production since 2004. Sustainable development, hierarchical systems, analytical hierarchy process, decision-making, sustainability, and planning are the high-frequency keywords in the field since 2004. 4) Trending topics were diversified along with time. 5) Evolution of themes becomes more complex after 2020. 6) Environmental sustainability, risk assessment, sustainability assessment, index system, and water resources are identified as emerging themes in this field. This study found there is a need to measure corporate sustainability using the AHP method and measure in various countries including various sectors.* ***Originality****: The findings of this study can aid academics and businesses in better comprehending the Analytical Hierarchical Method (AHP) as a Sustainability Measurement Tool, particularly in terms of publishing trends, geographic distribution, and the development of cogent themes. Exploring the potential for more study will be aided by a careful examination of the gathered papers.*
Keywords*: Analytical Hierarchical Method (AHP), Bibliometric Analysis, Biblioshiny, Thematic evolution, Sustainability*

ROMANIA'S SUSTAINABLE DEVELOPMENT PROSPECTS IN THE POST-PANDEMIC PERIOD

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Abstract
The recent events (CoVid-19 pandemic, Ukrainian war)~~,~~ had a negative impact on the global economy causing a major imbalance in the labour market and economic sustainability. Currently, the concept of "sustainability" takes into account both external and internal factors associated with dynamic changes from an economic, social, etc. perspective, ensuring an adequate framework for sustainable development. Change and sustainability have been constant concerns in the field of research. Sustainability is a concept that encompasses a series of measures and strategies to ensure the minimum necessary stability at the level of ecological, economic and social systems. The efficiency of the use of resources has triggered the emergence of many innovations in the economic environment. This phenomenon determined the acceleration of the degree of digitization, with an important role today, as a development tool. The degree of digitization has increased a lot in today's society, characterised by the fact that permanent challenges for the use of resources affect many parameters used in the optimization of resource allocation. According to specialised literature, a relevant indicator of the degree of digitization is the Digital Inclusion index, which concentrates all access activities related to information and communication technologies, including reliable access to: internet, digital devices, technical and content assistance, applications and software. Being in a permanent economic quest, it is essential for Romania to identify the relevant elements of the international context and, based on them, to develop an inclusive economic model, viable from a digital point of view, capable of offering decent economic perspectives to its own citizens by creating new jobs and increasing the level of well-being, while protecting the environment. ***Objective****: The proposed work addresses the sustainable development prospects of Romania in the post-pandemic period. In this context, we want to achieve the following three specific objectives: carrying out a review of the specialised literature; stating, verifying and validating some hypotheses; presentation of the obtained results.* ***Method****: The research carried out is based on the evaluation of three variables, namely: the degree of digital inclusion, the eco-innovation index and the degree of use of resources, in relation to the established economic-financial parameters at the current Romanian level. The data considered in the research were taken from the Europass website and that of the National Institute of Statistics. The first part of the research has the role of providing an x-ray of the Romanian economy, from both microeconomic and macroeconomic points of view. Next, in addition to the quantitative study, an artificial neural network was built to evaluate the behavioural implications of the variables related to sustainability, namely the degree of digital inclusion, the eco-innovation index and the degree of use of resources in the evolution of the economic-financial establishment at the level Romania.* ***Results****: The research carried out is based on the evaluation of three variables, namely: the degree of digital inclusion, the eco-innovation index and the degree of use of resources, in relation to the established economic-financial parameters at the current Romanian level. The data considered in the research were taken from the Europass website and that of the National Institute of Statistics. The first part of the research provides an x-ray of the Romanian economy, both from a microeconomic point of view and from a macroeconomic point of view. Next, in addition to the quantitative study, an artificial neural network was built to evaluate the behavioural implications of the variables related to sustainability, namely the degree of digital inclusion, the eco-innovation index and the degree of use of resources in the evolution of the economic-financial establishment at the level Romania.* ***Originality****: Our study attempts for a new approach to Romania's sustainable development prospects in the post-pandemic period. It can be expanded through the quantitative approach of the sub-components of the indicators in relation to the dynamic capacities of Romanian organisations.*

Keywords*: Sustainability, Degree of digitization, Eco-Innovation, digital inclusion index, degree of use of resources, economic-financial stability, artificial neural network*

SESSION 5: FINANCE, INVESTMENTS AND GLOBAL CAPITAL MARKETS

FINANCING ENTREPRENEURSHIP AND THE EFFECTS OF COVID-19 PANDEMIC

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Abstract
***Objective**: Despite their significant role in the national economy, small and medium sized enterprises face a number of challenges, one of the most significant being access to financing, which affects the productivity and growth of enterprises. This is especially relevant when considering the global pandemic, proving the relevance of the research topic. The study aims at analysing challenges and opportunities of financing entrepreneurship in Eastern Partnership countries. In this regard, it is important to understand how affordable the financing was before the pandemic and how the pandemic crisis has affected SMEs. **Method**: In order to achieve the objective of the study, a mixed research approach, based on both primary and secondary data, was used: literature review, analysis of statistical data, comparison, synthesis, deduction, as well as questionnaire-based survey. The total number of respondents amounted to 106 entrepreneurs in 2020 and 204 entrepreneurs in 2022 from different regions of the Republic of Moldova. **Results**: The study reveals that SMEs have proven to be vulnerable to crises, and access to financial resources remains one of the pressing issues affecting SMEs activity, including in the current crisis caused by the Covid-19 pandemic. Generally, the problem of SMEs' access to finance needed for the business operation is more pronounced in developing countries, compared to developed ones. Banks are the main providers of external financing, about 80% of the total credit supply in the Republic of Moldova is covered by bank financial sources. Totally, 87.8 % of Moldovan firms experienced decreased liquidity or cash flow availability since COVID-19 began (Enterprise Survey, 2020). Along with all the negative effects, the COVID-19 pandemic has accelerated the trend towards digitalisation, including digital transformation in the financial sector. Over the years, the crowdfunding market was increasing in the Republic of Moldova, reaching 178.4 mil. USD in 2019. But due to uncertainty on the market conditioned by the Covid-19 pandemic, the amount dramatically decreased by 47.9% in 2020. Alternative sources of financing such as leasing, crowdfunding and venture capital are still poorly developed and require special attention. Access to finance is an important component of the entrepreneurial ecosystem. The evaluation of access to finance for enterprises in the Republic of Moldova reveals its relatively weak advantage for the development of entrepreneurship and entrepreneurial ecosystem in the country (KEE = +0.58). According to survey data, enterprises face the biggest problems in accessing venture capital (KEE = -0.96), financing on the securities market (KEE = -0.58) and use of electronic platforms to attract funding (crowdfunding, cryptocurrencies, etc.), obstacle for 75.0%, 61.5% and 39.5% of respondents who assessed this indicator) KEE = +0.02. Obtained results are important for further research, practitioners and in determining measures to facilitate access to finance: provision of financial support, development of fintech and alternative sources of funding (crowdfunding, venture capital, business angels, etc.). **Originality**: This study contributes to the growing literature on the effects of the COVID-19 pandemic on entrepreneurial finance, as well as analyses alternative finance markets in developing countries, for example of the Republic of Moldova.*

***Keywords**: finance, entrepreneurship, venture capital, alternative sources, crowdfunding, fintech*
***Funding:** The article is based on the results of the research within the Project 20.80009.0807.38 "Multidimensional assessment and development of the entrepreneurial ecosystem at national and regional level in order to boost the SME sector in the Republic of Moldova".*

RISK MANAGEMENT AND INTERNAL CONTROL SYSTEM OF THE MOLDOVAN BANKS

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Abstract
Objective*: The field of risk management and internal control has made significant progress in recent times. Their interrelation has become increasingly vital due to the growing need to avoid corporate scandals. The main purpose of this research is to examine the connection between the internal control system and risk management in the Moldovan banking industry. This subject matter is crucial and relevant to the Republic of Moldova because the continuous development of the banking internal control system is imperative. Moreover, this study considers recent developments in the Moldovan banking sector. It is expected that this study will offer valuable insights into the effective management of financial risks.* ***Method****: The research investigates a range of indicators that are considered representative for the internal control system (composition of the board in terms of its size, solvency indicator, capital adequacy ratio, loans to total assets ratio, etc.) and representative indicators for risk management such as the level of credit, market, liquidity and operational risks to evaluate how well risk is managed. The study employs mainly quantitative methodology, with a focus on deductive statistical analysis to identify causal connections and consider the significance level. In order to process the necessary data, EViews 13 Student Version was used, an econometric analysis program for correlation tests and regression analysis (a multiple regression equation was created using the least squares method). The data was collected, and calculations were done using Excel spreadsheet software. Therefore, as there are included time series and was adopted cross-sectional research design, data were organised into panel, which involves examining the relationship between the independent and dependent variables.* ***Results****: The results determined that a well-structured internal control system has a direct relationship with risk management in the Moldovan banking sector that was represented in current study by the four systemically important banks. Specifically, the results demonstrate an inverse correlation between both credit risk and market risks and internal control, while a direct correlation is observed between both liquidity and operational risk and internal control. Thus, it could be stated that: (1) the lower the internal control in Moldovan banks, the greater the credit risk; (2) the greater the market risk, the lower the effect of the current internal control of Moldovan banking system; (3) the liquidity ratio increases as more effective internal control measures are implemented; (4) strong operational risk reduces the efficacy of existing internal control measures. Therefore, the research suggests that banks should adopt appropriate measures to evaluate potential risks and establish effective control mechanisms to govern their operations. As well, banks and the National Bank of Moldova, should increase their supervisory efforts to ensure that banks comply with best practices in risk management. Nonetheless, the study's scale is insufficient to derive conclusions that are broadly applicable.* ***Originality****: It is noteworthy to mention that no investigations have been discovered on how the internal control mechanism influences the risk management of the banking industry in Moldova. Therefore, this study's scientific novelty is based on the creation of an econometric model to improve the analysis regarding the correlation between risk management and internal control within Moldovan banks.*
Keywords*: credit risk, liquidity risk, market risk, operational risk, banking system, internal control*

ANALYSIS OF TAXPAYERS' PERCEPTION OF THE TAX EVASION PHENOMENON AND THE INFLUENCE OF ITS DETERMINING FACTORS

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Abstract
Objective*: In the current economic context, the business environment is effervescent through the prism that the activities in the field are complex and innovative, which requires market actors to use techniques and mechanisms in order to reduce the amount of tax liabilities due to the general consolidated budget. The growing budget deficit has led the executive to find solutions to increase the funds purchased from the budget system, mainly by increasing the revenues generated from the fiscal revenues. Achieving this requires either increased tax pressure or reduced tax evasion through increased voluntary compliance by taxpayers. As practice has shown, increased taxation under conditions of economic recession leads to lower tax revenues due to tax evasion or tax abstention by taxpayers. In this situation, the measures adopted by the Government must call on the tax civism of the taxpayer, but also reduce tax evasion by conducting tax inspections based on a risk analysis based on the information provided by the taxpayer's tax file, but also on the digital to analyse the tax apparatus by developing IT applications for the purposes of performing analyses of the results of tax inspections, in order to comply with risk criteria and to provide information for future risk analyses. Voluntary compliance has been implemented by restricting the number of forms and declarations to be submitted by taxpayers, the possibility to submit them electronically, and also by assessing the quality of tax services from the perspective of taxpayers based on the evaluation questionnaire.* ***Method****: As regards the reduction of tax evasion and tax fraud, the aim was to harmonise the risks identified at the level of the fiscal control activity, in order to establish a unique risk profile of the taxpayer, which will be the basis of the activity carried out by the National Agency for Fiscal Administration. It also sought to inform taxpayers about possible irregularities that could lead to tax and tax differentials, to introduce the random tax compliance testing programme, to organise anti-fraud control in line with the European model of non-compliance risk management by reducing the level and frequency of sanctions applied for acts of low social danger, to refine the methodological and procedural framework necessary to reduce tax, tax and contribution under-reporting, as well as by conducting tax inspections in line with the BEPS (Base Erosion Profit Shifting) plan and the ATAD - European and international regulations on preventing and combating tax evasion. Whatever the measures adopted, they must be supported by taxpayers in the fair distribution of their tax burdens.*
Results*: Tax evasion is a practice used knowingly by economic agents not to report taxable goods and transactions with the aim of diminishing the tax liability, by carrying out fraudulent actions, and not assuming responsibility for ethical behaviour. Starting from the above in order to establish the taxpayers' perception of the phenomenon of tax evasion, we used the questionnaire as a research method, which allowed us to obtain relevant information on their attitude to the determination, assessment and declaration of taxable matter.* ***Originality:*** *The originality of the study is that it analyses the perception of taxpayers on the phenomenon of tax evasion through the prism of the recent amendments to Law 241/2005 on preventing and combating tax evasion.*
Keywords*: tax evasion, taxpayer, tax liability, tax matters, risk analysis*

A COMPARISON OF CONSUMER PRICE INDEX FLUCTUATIONS IN WESTERN BALKAN ECONOMIES AND THE AFFECTING VARIABLES

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Abstract
Objective*: In this paper, we use time series for the period 2005 to 2020 for a selection of Western Balkan countries to investigate the factors affecting the changes in Consumer Price Index (CPI) during the same period. The selected countries are Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia. These countries have different characteristics regarding their socioeconomic development trends, nevertheless according to the theory tend to react in similar ways in front of financial and economic external shocks. According to the theory, there are supply-side factors and demand-side factors that influence the trend of CPI during the time. Supply-side analyses are strictly related to the higher production costs and the consequential behaviour of enterprises, causing a rise in the general level of prices. The so-called "cost-push approach" is related to the scarcity of raw materials in the world market and the exposure of different countries to external economic shocks such as commodity price volatility, and exchange rate depreciation. On the other hand, the demand side factors rely on the Keynesian school of thought where inflation is a consequence of higher aggregate demand due to increased government expenses. Moreover, we include the changes in the money supply to capture the Monetarist effect on inflation.* ***Method****: In our study, we will use GMM models for both supply and demand analyses, where the dependent variable in both cases is the Log of CPI. While, for the supply side model, the independent variables are the exchange rate, world wheat price, and world oil price. For the demand side model, the independent variables are the Log of GDP, remittances, government expenditure, and broad money. Before proceeding with the model, we check that no perfect linear correlation exists among the variables.* ***Results****: From our estimation results with slight differences among countries, we noticed that government spending has an evident effect on CPI, in this way by increasing government expenditure in the long run we may obtain a reduction in CPI. In the long run CPI is positively related to the variables of imports and global wheat price. This relationship is statistically significant only for two countries from the sample. World oil Brent price and wheat price have a positive sign but only the latter is statistically significant in the models we estimate. This outcome may be related to the fact that the countries chosen are small and open economies. Quite interesting is the negative and statistically significant CPI with the government spending in the case of North Macedonia, and Bosnia and Herzegovina. However further investigation is needed to evaluate if there are other variables affecting CPI.* ***Originality****: Our estimation results have policy implications since we noticed that government spending has an evident effect on CPI, in this way by increasing government expenditure in some economic contexts we may obtain a reduction in CPI. Following the interesting empirical results, deeper analysis is needed, including both micro-financial variables and adopting different methodologies, such as ARDL regression.*
Keywords*: CPI, GDP, GMM models, Government spending, Economic shocks*

ENSURING THE RIGHT TO A DECENT STANDARD OF LIVING THROUGH EFFICIENT PUBLIC EXPENDITURE MANAGEMENT

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Abstract
The study is based on established approaches to the right to a decent standard of living, a fundamental right of every human being, acquired outside any legal regulation by virtue of their humanity. Ensuring the right to a decent standard of living requires the state to develop policies and establish effective instruments for economic progress, without which an improvement in living standards is impossible. ***Objective:*** *This paper analyses the respect for the right to a decent standard of living through the lens of efficient management of public expenditure related to this right.* ***Method****: Given the complexity of the subject under investigation, various research methods were employed, such as quantitative and qualitative analysis of relevant documents and statistical data, synthesis method, comparative method, induction and deduction method, etc.* ***Results****: Ensuring a decent standard of living for every citizen and their families is an imperative of the contemporary state, based on respect for human rights and freedoms. Recognition of the right to a decent standard of living through legal acts provides every human being with the guarantee of a standard of living that corresponds, at the very least, to minimum living standards, particularly in terms of material conditions, ensuring the enjoyment of essential subsistence rights such as adequate food and nutrition, clothing, housing, and necessary care when needed. The realisation of this right is directly proportional to the economic resources available within the state. In this regard, how the government allocates resources, establishes priorities for budgetary expenditures, and achieves efficiency in public spending is key to ensuring this right. Considering both direct and indirect expenses related to the standard of living, a considerable portion of the national budget's resources are directed towards ensuring the right to a decent standard of living. Depending on the economic performance of the state, some public services aimed at guaranteeing the right to a decent standard of living are provided free of charge or at a minimal cost, or they are granted in the form of allowances, aids, pensions, benefits. Typically, these services are related to education, healthcare, social protection, culture, and the arts, among others, which individuals cannot individually fulfil, making it the responsibility of the state to ensure their provision. In states with high economic potential, such facilities account for up to 50% of national income. The analysis of the right to a decent standard of living in the Republic of Moldova highlights that public expenditures related to this right mainly target areas such as education, healthcare, culture, social protection, housing, and the environment. Expenditures on social protection hold the largest share in the national public budget (approximately 36%) and 14% in the gross domestic product (GDP). Expenditures on education constitute 15.4% of the total public budget expenditures and 5.8% of the GDP. A similar situation is observed in the healthcare sector, with 5.43% of the GDP and 15.9% of the public budget expenditures. The domains of culture, sports, youth, religions, and leisure, as well as housing, are even more vulnerable, with expenditures for these areas slightly exceeding 2% of the national public budget and approximately 1% of the GDP. The modest economic performance of the Republic of Moldova has placed environmental activities at the bottom, with public expenditures for this domain ranging between 0.2% and 0.5% of the national public budget in the past five years. In conclusion, public expenditures for ensuring the standard of living in the Republic of Moldova have ranged from 68% to 73% of the total public budget expenditures in the past five years.* ***Originality****: This study presents the analysis of the right to a decent standard of living in the Republic of Moldova through the lens of public expenses management.*

Keywords*: the right to a decent standard of living, public expenditure, national public budget, gross domestic product, economic performance.*

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DEVELOPMENT OF THE SOCIAL INSURANCE SYSTEM IN ALBANIA

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Abstract
Objective*: Public spending as a tool of fiscal policy through forms, which increases greater care to the categories with low income, also influences the redistribution of income. Pension reforms have often aroused interest both in the field of pension fund management and in employer-employee relations. This is because most existing pension systems may be unsustainable in terms of limited financial resources. This study's goal is to analyse Albania's pension system and compare it to pension systems in other nations that are comparable to our own, the developments and changes that have occurred in the economy of our country, and to present their reflections also in the insurance system. Through this analysis, we hope to demonstrate the pension system's ability to manage the payment of pensions both now and in the future (financial stability), as well as provide alternatives for achieving it. To accomplish this goal, this study attempts to: Study the most widely used social security models and find the model that most closely resembles Albanian reality.* ***Method****: Analysing the variables that influence the stability and viability of the social insurance component of the scheme, analysing and assessing the viability of the current system. The Rural-Urban Projection approach was utilised to create population projections as the basis for the model's design. The authors used the issued by the Ministry of Finance and the Monetary Fund International for forecasts of the development of economic indices like gross domestic product GDP, the rate of inflation, the rate of unemployment, or the anticipated indexation of salaries and pensions.* ***Results****: Public spending as a tool of fiscal policy through forms, which increases greater care to the categories with low income, also influences the redistribution of income. This research will bring reforms to the pension system in Albania as one of the biggest challenges the government is still facing. In the end, a shred of evidence will be made of the problems and concerns that require improvements and further development of the social insurance system. The developments and changes occurring in the social-economic system of the country have their reflections on the insurance system, especially in the functioning of the pension system. Many of these difficulties consist of decision-making and reforming this system.* ***Originality****: Pension system policies are a very controversial topic in our country as a very important element in social environments, family budgets, and national income as a system brought over by the communist system and is based on contributions from both employers and employees. It is intended to offer comprehensive insurance against the risks of old age, disability, health problems, and unemployment. This research will bring the challenges of the economy of Albanian families, and the importance to expand the system of pensions in continuing, even with the lowering of senior childcare.*

Keywords*: pension systems, personal income, socio-economic, employer, employee, challenges*

FACTORS IMPACTING FOREIGN DIRECT INVESTMENT IN DEVELOPING COUNTRIES

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Abstract
Objective: *According to International Monetary Fund statistics, developing countries' share of FDI inflows has increased significantly from 26 percent in 1980, to 37% in 1997. In the 2000s the world inflows of foreign direct investment reached 1.3 trillion US dollars, with 80% of the recipient of these inflows being located in "developed countries". The aim of this paper is to investigate the factors impacting foreign direct investments in developing countries.* ***Method:*** *The paper includes a multiple regression analysis of cross-sectional data for a group of 36 countries for the year of 2016. Data have been analysed statistically following a regression analysis. Irrelevant variables and those violating the assumption that states that there is no strong correlation among independent variables have been omitted from the model.* ***Results:*** *As a result, we reached the desired statistically significant model that fulfilled all the six CLM assumptions. Infrastructure, openness, and corporate tax resulted to be highly significant for our model. On the other side, GDP/Capita growth, labor cost, and risk rested to be non-significant statistically and a high correlation with other independent variables.* ***Originality:*** *The importance of foreign direct investment in the economy has grown following the global trade development, while global markets have continued becoming more competitive over time.*
Keywords: *factors impacting FDI, multiple regression analysis, cross-sectional data, developing countries.*

THE ANALYSIS OF THE TAX MORALE AMONG ROMANIAN MILLENNIALS AND "ZOOMERS"

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Abstract
Objective*: Tax morale for the Romanian Millennials (Generation Y) and "Zoomers" (Generation Z) is analysed in this paper, to identify the variances between generations. The ethical framework in the area of taxation refers to the taxpayer's moral obligation to pay taxes and is influenced by the relationship between the taxpayer and the authorities. Increasing awareness about the ethical framework can lead to an increase in tax compliance, a concept that refers to the timely reporting and payment of tax liability, voluntarily, by the taxpayer. Thus, the degree to which the taxpayer complies with the tax rules is emphasised, by declaring the income, submitting a tax report and paying the due taxes.* ***Method****: A questionnaire and an analysis of behavioural differences were developed, with an emphasis on ethical principles observed for Millennials and "Zoomers". The study took into account different indicators, such as the awareness of the components of the tax system, the law enforcement, information services, trust in the policymaker, measures adopted by the policymaker and so on. Econometric models were used to capture the effects of selected variables on tax morale.* ***Results****: In the analysis, the impact*

on tax morale from various variables were considered. The findings show a positive impact from the majority of the variables. The results of the study underline the need for the authorities to implement measures to increase awareness of the tax system and the tax morale of citizens. It is essential to develop appropriate strategies to stimulate tax compliance, thereby influencing tax revenues raised to the budget, with a focus on increasing awareness of the beneficial aspects of paying taxes. The revenue raised to the budget register an increase also due to the improvement of the level of tax morale. Another important aspect is represented by taxpayers' trust in the tax authority, thus emphasising the need to build a trusting relationship among them. ***Originality***: *The original contributions are underlined by the obtained results, for the total of the respondents, but also for each demographic cohort (Generation Y and Generation Z).*
Keywords: *tax morale, tax compliance, tax ethics, Generation Y, Generation Z*
Funding: *This work was developed within the 2023 annual research theme from the Institute of National Economy, Bucharest, Romania: "The ethics of taxing labor earnings and economic growth. Romania in a European context".*

MONETARY POLICY AS A FACTOR OF INFLUENCE ON CIRCULAR ECONOMY IMPLEMENTATION IN THE EU

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Abstract
The circular economy is a component of the green economy paradigm, shortly defined by low carbon emissions, high resource efficiency and social inclusion. Therefore, the transition to a circular economy is an objective of the European Green Deal and a goal for sustainable development at all levels because, through the processes of the circular economy, many of the 17 Sustainable Development Goals of the UN 2030 Agenda are simultaneously promoted. Monetary policy, along with policies in other economic fields, are significant influencing factors in the implementation of the circular economy. At the European level, the European Central Bank is the institution responsible for establishing development objectives and directions. The influence of monetary policy will be analysed through the lens of Euro currency use and the differences between the countries that currently use this currency and those that are not yet part of the Euro area. ***Objective***: *The main objective of this research is to identify how financial-monetary policies influence the circular economy at the EU level, by country groups and in particular in Romania. The ranking considered was based on membership of the Euro area: member states versus non-member states in the Euro area.* ***Method***: *The methodology used for the regional analyses took into account the criterion of the membership of some of the EU member states in the Euro area. A literature review analysis was performed for the specific literature on monetary policy, a discussion of the convergence criteria applied to the candidate countries as well as the stage of their fulfilment. The research continued further with the analysis of specific circular economy indicators as well as the econometric analysis based on the OLS method. It was applied to panel data series and was carried out for the 28 EU member countries (it must be stated that the analysis included Great Britain, until the 2020 Brexit event) for a period of 12 years.* ***Results***: *The research was carried out on three indicators, out of the 11 indicators that are part of the Circular Economy data set provided by EUROSTAT database. These indicators are Recycling of municipal waste, Circular material use rate (CMUR) and Waste from Electrical and Electronic Equipment (WEEE). The results of the conducted research showed different outcomes for each of the analysed circular economy indicators. First of all, the influence of the Euro area can be considered positive, but not excessive regarding the recycling of municipal waste: there is an increase of 5.3% in the average of recycled municipal waste for the countries of the Euro area compared to the rest of the European countries, in the period 2000-2020. Furthermore, the influence of the Euro area on the degree of circularity of the economy, expressed by the CMUR indicator, can be considered significant in a positive way: the countries of the Euro area have an average of 9.9% compared to 6.9% recorded by the other member states, for the analysed period. The analysis of the correlation between eco-investments and CMUR indicates that, in the*

Euro area, the efficiency of eco-investments in promoting the circular economy is higher than in European countries that do not belong to this monetary area. However, membership of the Euro area did not show a positive influence regarding the recycling of WEEE: the best results for the recycling of WEEE are recorded by the countries outside the Euro area (Sweden, Denmark, UK) with an average of 6.81 kg/person, for the period 2009-2018, compared to 5.4 kg/person as recorded in the countries that use euro coin. ***Originality****: The present paper aims to create an original contribution to the research regarding empirical evidence towards the influence of monetary policies on the implementation of the circular economy in EU countries. The EU Circular Economy Action Plan states that the European Union needs to double its circular material use rate in the next ten years, therefore, our research has focused on the analysis of circular economy indicators, out of which CMUR is the most synthetic. Furthermore, it is an endeavour to identify the main drivers of increasing the degree of circularity in the EU, focusing on the influence of the Euro Area.*
Keywords*: circular economy, monetary policy, Euro Area, econometric analysis, OLS model*
Funding*: This work was supported by the Institute of National Economy, as part of the 2022 annual research theme ”Economic-Social Development Policies from The Circular Economy Perspective, Financial-monetary policies” carried out by the Economic Development Department research team.*

SESSION 6: ACCOUNTING, LAW AND SUSTAINABLE BUSINESS MODELS

SUSTAINABLE BUSINESS MODELS IN AGRIFOOD BUSINESS. STANDARDS, INDICATORS AND REWARDING SYSTEMS

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Abstract
Objective*: This paper explores how different business models can contribute to the sustainability of food systems and develops a new typology of business models in agroecology. Economic actors in the agri-food sector are looking for solutions for the development of agro-ecological markets. The authors analyse and identify the various value propositions that can sustain a business in the long term, as well as the challenges imposed on the strategic management of innovation and sustainability. The specific aim of this study is to identify new business models based on indicators and standards.* ***Method****: Considering the complexity and diversity of business models in agroecology, we chose to initiate exploratory research to describe the evolution and typology of sustainable business models. Data collection was based on the triangulation principle of sources, including interviews, additional documents, and observation. Thus, the analysis of agroecological practices and production systems was based on long-term observations in several selected farms, informal conversations with stakeholders, and organisation of interviews depending on the case. These took place in the form of semi-structured interviews in which the interviewees were the managers and collaborators of the farmers, who participated in the entire process or knew the history of sustainable agricultural production. For a better identification of viable sustainable business models, sustainability indicators were taken into account on the four dimensions: the economic one, which considers profit and cost optimization based on green principles, carbon markets or win-win stakeholders' cooperation; the environmental one that includes agroecological practices, ecological products, the use of renewable energy, the quantities of inputs used in agriculture; the social one which refers to equal distribution of value, protection of local know-how and cultural heritage, social responsibility and the nutrition, and health dimension which encompasses food security, quality and healthy food products.* ***Results****: The main result of this study was the development of a typology of sustainable business models in agroecology related to the evolution of standards in the field. Analysing each sustainable business model individually, the authors understood the different dimensions of the evolution of BMs considering the organisational complexity. Several different types of business models for sustainable food systems were identified: disruptive business models, circular business models, regional food hubs, innovative food hubs, etc. Sustainable agribusiness models are based on key factors such as innovation, company values, the role of actors and stakeholders, the role of partnerships and collaborations, the importance of circular economy principles, and the importance of alternative approaches to food systems.* ***Originality****: The article investigates innovation in agroecological business models taking into account the indicators, rewarding system, and standards impact perspective. The agroecological business model is a subject that is still little discussed in the literature. In addition, the authors chose the Romanian context that includes economic, social, environmental and health aspects and a few specificities of farming in Romania.*
Keywords*: agroecology, business model, sustainable development, standards*
Funding: *This work was supported by the Spiru Haret University [Agroecology-TRANSECT, ID101060816, 2022]*

REDEFINING INNOVATION FOR SUSTAINABLE DEVELOPMENT: EXPLORING THE GLOBAL IMPACT OF SUSTAINABLE INNOVATION

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Abstract
Objective*: The concept of innovation needs to be reformulated, together with the notion of sustainable development, moving towards the formula of sustainable resource reproduction and well-being. The literature confirms the positive effect of access to external and internal markets on innovators, with sustainable innovation referring to new concepts, commercialisation of technologies, products and services and entrepreneurship. Given that the study of the world economy is conceived within the realist, liberal and constructivist paradigms, which differ in terms of the place and role of states in the world economy and international economic relations, the conditions of stability of the structure of the international system and the growth of inter-state cooperation, the changing nature of innovation is considered a forced process. However, when there is no single definition for sustainable innovation, reflecting the general difficulty in defining sustainability concepts, and when there are differences between the criteria of the innovation process and the scientific, social, economic, informational, environmental, etc. effects of innovation, the importance of sustainability objectives for innovation policy-making remains differently perceived, and the full effect of sustainable innovation, the effects on international markets and the resulting impact on the world economy are difficult to assess. In this context, the objective of our study was to determine the dimensions of the innovation process in dynamics at the level of groups of countries and companies in order to clarify the effects of sustainable innovation on the world economy.* ***Method****: In search of new explanations of the effects of innovation in the context of the global trend towards sustainability and the dynamics of the dimensions of the innovation process, we calculated and analysed the correlations between innovation performance indicators by innovation profiles based on EIS 2021 data for the period 2014-2021 for European countries, as well as 10 countries in the world, which had an increase in government spending on technologically advanced products close to the EU average. Seventeen indicators expressed in percentage growth were chosen as performance indicators, including: number of innovative firms per product, number of innovative firms per process, number of innovative firms, volume of exports of high and medium technology goods, volume of exports of science-intensive services, volume of sales of innovative products, level of sales impact, public sector R&D expenditure, venture capital expenditure, volume of government support for R&D in the business sector, finance and support, expenditure on R&D in the business sector, volume of expenditure on non-research and development innovation, volume of expenditure on innovation per employee, volume of business investment, volume of overall income per capita and volume of business expenditure on R&D per 10 million inhabitants. Countries were grouped into four categories of innovation profiles, including: innovation leaders, strong innovators, moderate innovators and emerging innovators.* ***Results****: The main results of the study are: analytical presentation of the dimensions of sustainable innovation from the perspective of global economic trends and international measurement models; updated treatment of the relationship between sustainable innovation indicators and innovation performance by groups of countries according to innovation profiles; development of tables of pairs of innovation performance indicators by country, identified on the basis of the GII 2021 for the years 2014-2021 and calculated correlation coefficients, including table-maps of positive and negative correlations of innovation performance indicators.* ***Originality:*** *The identification of new correlations between the dimensions of sustainable innovation for extracting the sustainability component in the full effect of innovation allowed the concretization of directions for innovation policy adjustment based on the analysis of the perception of government innovation policy objectives, the dynamics of the dimensions of sustainable innovation and the developed map of the correlation of innovation indicators for innovation leader, strong, moderate and emerging innovator country groups.*
Keywords*: innovation, dimension, sustainable, development, impact, performance, global economy, effect, correlations.*

THE IMPACT OF CSR DIMENSIONS ON BUSINESS MODEL INNOVATION, COMPETITIVE ADVANTAGE AND FIRM PERFORMANCE. AN EXPLORATION OF IRAN SMES

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Abstract
Objective*: This study investigates corporate social responsibility's impact on business model innovation, competitive advantage and company performance in small and medium-sized companies in Iran. This study aims to show whether the adherence of companies to social responsibility can bring benefits for companies or not. The results of this research can help managers who are hesitant about engaging in CSR activities so that they can make better decisions in this regard with more information about the effects of corporate social responsibility on company performance. In addition, considering the insufficient knowledge of some Iranian managers, this study aims to show the impact of various corporate social responsibility dimensions on business model innovation, competitive advantage and company performance to create a better insight for managers and Iranian academics. The framework and the results enriched the existing literature. Also, they can support the decisions of different companies' managers about CSR strategies.* ***Method****: To achieve the goals of this research, questionnaires were distributed and collected face-to-face among small and medium-sized companies in Iran and 483 valid questionnaires were obtained. The model's fit was evaluated after checking the divergent and convergent validity and the construct reliability. Finally, the data obtained from these questionnaires were analysed using the structural equation modelling method. SPSS and AMOS programs were used to perform the required analyses.* ***Results****: This research shows corporate social responsibility's impact on business model innovation and competitive advantage and, ultimately, on firm performance. The results of the research show that the economic, legal, ethical and environmental dimensions of the social responsibility of companies directly and significantly affect the innovation of the business model. In addition, this research shows that CSR's economic, legal and ethical dimensions directly and significantly affect the competitive advantage. Finally, the research results show that business model innovation and competitive advantage positively and significantly affect the company's performance. Also, the results of this research show that among all dimensions of corporate social responsibility, economic responsibility has the greatest impact on business model innovation and competitive advantage of small and medium-sized Iranian companies. As a result, this research encourages managers to focus on their economic responsibility in addition to paying attention to legal, ethical and environmental responsibilities in order to achieve competitive advantage and business model innovation and ultimately company performance. They should try to make their performance more profitable.* ***Originality****: This study is one of the first works that specifically examines the impact of each dimension of corporate social responsibility on business model innovation and competitive advantage. In this research, a new dimension (environmental responsibility) was added to Carroll's proposed model due to the increasing importance of environmental issues. Also, little research has been done in the field of social responsibility in the developed country of Iran, and this research can help to expand the insight of academics, researchers and company managers about social responsibility. As a result, considering that most of the similar research has been done in developed countries, the results of this study can have a significant contribution to the existing literature.*

Keywords*: Corporate social responsibility, Environmental responsibility, Business Model Innovation, Competitive Advantage, Firm Performance, SME, Iran*

THE IMPACT OF INFRASTRUCTURE ON THE SPATIAL VARIATION OF POVIAT ENTREPRENEURSHIP IN POLAND IN 2010-2020

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Abstract
Objective*: The aim of the article is to analyse the spatial differentiation of infrastructure and its impact on entrepreneurship in counties in Poland in 2010-2020. The authors, complementing the main objective, decided to formulate a research question: how does the spatial differentiation of infrastructure and entrepreneurship in counties in Poland present itself? What is the interdependence between infrastructure and entrepreneurship? The authors see a research gap in the area of green infrastructure and its impact on entrepreneurship and the region, as it is not analysed from an economic point of view, especially in the area of counties.* ***Method****: The authors first used literature analysis and statistical analysis. A synthetic measure was used to rank and group the studied counties from the point of view of the main criterion. The Technique for Order Preference by Similarity to an Ideal Solution (TOPSIS) method was used to construct synthetic measures. It allows comparisons between the analysed units, to identify weaker and better areas of performance, to assess the effectiveness of the policy instruments used so far.* ***Results****: Enterprise, as an element of the economic space, affects the development of regions through the effective use of available resources, innovative activities or the use of regional resources. Entrepreneurship allows for sustainable, independent and long-term development. Besides, endogenous development provides an opportunity for the periphery to avoid development that is dependent on growth centres, based, for example, on investment inflows and knowledge transfer. Counties have a high level of infrastructural development are areas considered by potential investors and residents as attractive for business and residence. There is spatial differentiation of entrepreneurship, infrastructure, and green infrastructure in counties in Poland. The effects generated by infrastructure and green infrastructure can have a positive impact on minimising the impact of external factors causing disruption to regional systems. The synthetic measure of entrepreneurship ranged from 0.11 to 0.46 in 2010, from 0.23 to 0.72 in 2020. For the synthetic measure infrastructure, values ranged from 0.14 to 0.45 in 2010 and 0.16 to 0.53 in 2020. The synthetic measure green infrastructure took values of 0.28 to 0.52 in 2010 and 0.32 to 0.60 in 2020, respectively. Infrastructure is very important to the processes of the local economy. It represents an investment proposal and an offer of the conditions necessary for business. Green infrastructure, infrastructure, and entrepreneurship serve to improve the quality of life, social equality and reduce environmental risks and ecological deficiencies, or greater territorial cohesion. Entrepreneurship infrastructure must be built on the basis of available potentials of the region.* ***Originality****: Systematic surveys of entrepreneurship and infrastructure should provide the information necessary for authorities to evaluate and adjust policies. The increase or decrease in synthetic measures must be considered as a way of assessing the effects of past activities. The results obtained can be an important source of information for local authorities on the disparities that exist between units. In terms of new directions of research, we can point out, among other things: the selection of a larger number of diagnostic variables, making analyses over an increased period of time in order to learn about the tendency of changes, the selection of new methods of building a synthetic measure. The results also indicate the need to analyse outliers and determine their impact on the situation of the study area. The added value of the article is the results of the relationship of infrastructure and entrepreneurship of counties in Poland in 2010-2020. The indicated areas are most often analysed separately. The synthetic measure is an instrument for monitoring and modelling of local government action, an indicator of the assessment of the economic asymmetry of action in the conditions of the dynamics of changes in economic and social phenomena, as a criterion for selection in a particular situation, a measure of modelling of action (decision-making measure), and a measure of the economic situation of the unit.*
Keywords*: entrepreneurship, infrastructure, green infrastructure, synthetic measure, district, spatial diversity*

ECONOMIC REFORMS AND THEIR IMPACT ON THE ECONOMY OF ALBANIA

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Abstract
***Objective**: This study aims to examine the current situation of the Albanian economy. It focuses on policies and goals, as well as challenges and necessary economic reforms and their effects on the main aspects of the economy. The worth of goods and other outputs produced on a nation's soil over an extended period is measured by the gross domestic product (GDP) on a yearly basis. While analysing Albania's economic reforms, the emphasis is on the necessity to change from a centralised to a market economy. As Albania moves forward to become a future EU member, economic reforms carried out in the best way play a crucial role in the overall development of the country. **Method**: The methodology used for this analysis is based on theoretical research referring to the economic developments of the last years as well as the analysis of data from Albanian government agencies. In addition, a questionnaire is designed and distributed to gather data for the research topic. The hypotheses are: H1: Economic reforms create issues for the management of economic policy instruments, H0: Economic reforms, their design, and change play a significant role in the overall economic development of the country. Albania has experienced numerous changes throughout the years because of various political regimes that have had an influence on the economic development of the country. Now it is trying to embrace sustainable development, aiming to support the local economy and encourage the expansion of sustainable economic growth in different directions of development. The authors provided reasons for this aim based on the primary materials examined, particularly the analysis of the documentation on the interactions between Albania and the EU. Materials from the World Bank as well as publications from Albanian government organisations will make the analysis clearer and provide a reliable basis. **Results**: This research at the end, summarises and discusses the theoretical components of the research, the provision of socioeconomic infrastructure, the degree of development, and methods of structuring the economy. Additionally, this study observes that the period in which economic growth is trending downhill also happens to be when the public debt is rising, and vice versa. This analysis shows us that, over time, public debt has a detrimental impact on economic growth. All these elements have an impact on economic reforms as a continuous process. Albania offers various benefits to investors, including a strategic location, a free market, resources, and industries that can be utilised, developing infrastructure, and fair taxes. Even now, foreign investments are still crucial to the process of integrating the world's economies. They are regarded as a crucial component of every nation's economic activity, particularly in developing nations like Albania. Another main aim of the Albanian administration is to attract international investment. However, to do this, the legal system needs improvement, the business climate needs improvement too, and strategies and policies must be put into action. **Originality**: National income will be acquired from external sources, produced by national entities but in other nations, growth identifies favourable changes in the production of goods and demonstrates an economy that has developed in a specific time. The general level of the prices of different items in an economy is known as inflation. The work based on the National Program of Economic Reforms in Albania, improvements, and implementation of the key elements of macroeconomic and fiscal policy, as well as the top structural reforms the Government of Albania has planned for the medium term provided the basis for the theoretical research.*

***Keywords**: economic development, economic reform, public institutions, GDP, EU, economic growth.*

RESILIENCE OF THE HEALTH SYSTEM IN THE ERA OF CRISES

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Abstract
***Objective**: Humanity entered an era of crises that affected all systems, including health systems. The actuality of the research resides in the fact that health systems are fragile to current vulnerabilities, and crises, both the COVID-19 pandemic, military conflicts, but also natural disasters have left their long-lasting mark on health systems. In this context, health systems must be sufficiently resilient to deal with crises. The objective of the study is to determine the resilience of the healthcare system in the Republic of Moldova to crises, but also to reconfigure it in the context of strengthening the system in order to better respond to the current crises and to the crises after the crisis. **Method**: The research methods used in the present article are summarised in the classic methods of analysis and synthesis, induction and deduction, history and logic, comparative and systemic analysis, as well as the contemporary approach to the specialised literature related to the issue addressed. **Results**: The main results obtained from the investigations can be used to adopt measures that contribute to increasing the resilience of the current health system, as well as the argument that recovery from a crisis is critically important for the health system to return to normal. Additionally, the importance of efficient and economical resource utilisation during and after a crisis has been reiterated. **Originality**: The originality of the study consists in attesting the resilience of the health system in the era of crises, by offering practical recommendations for decision-makers, practitioners in the health system, thus making possible a better management of crises in health. In conclusion, a resilient health system is one that can cope with any crisis, but is also flexible, adaptable to changes and emerging risks.*
***Keywords**: crisis, health system, resilience, effective, resources, risks.*

MANAGEMENT PERSPECTIVE ON THE NEED TO APPLY LEAN MANAGEMENT IN HEALTHCARE

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Abstract
*Since a developed society requires an efficient healthcare system, several management instruments and methods were applied to improve quality, productivity and effectiveness, and decrease costs, time and errors in the medical field. Lean Management is a system developed in the automotive industry which contains a set of tools aimed to streamline and optimise activities and processes on a continuous basis. After showing improvement in performance indicators in automotive, Lean started to be implemented in a wider range of fields, first in production and later in services, too: IT, hotel industry, commerce, banking, logistics, healthcare, and others. Lean Management system is used as a business strategy in top hospitals all over the world, leading to reduction of the response and delivery time, of medical errors, of costs, of the number of accidents, improvement of service quality, of staff motivation, increase of patients' satisfaction and other beneficial effects. **Objective**: Our objective was to check the perspective of the managers from healthcare institutions and organisations on the Lean application in the medical environment. Their opinion is very useful, since any change must be preceded by awareness of the need, and managers play an important role in change management. Top management commitment plays a key role in a successful implementation of Lean tools. **Method**: We developed and applied a questionnaire in the Romanian healthcare institutions, both private and public, with the aim to see if managers consider it important to apply Lean Management in Romanian healthcare and in their institutions. In the questionnaire we presented what Lean is, which are the types of waste it helps to eliminate, with examples from*

the medical field so that the respondents can identify waste easier in their workspace. 152 respondents from 125 institutions participated to the study, 61.5% of them have top-management or middle-management positions. ***Results****: We analysed the answers of the managers and found out that only 19.8% of them have applied Lean Management in their activity. 20% of them work in the private sector, while 80% in the public sector. 13% of the respondents were working in the rural area, while 87 in the urban one. 63% of the respondents were women. As we expected, managers identified many types of waste: 41.8% of managers perceive waste of waiting time, 40.7% perceive unexploited potential, and 28.6% - overprocessing waste. Using a Likert scale, 72.5% of the managers consider Lean Management quite necessary or very necessary to be introduced in the institutions they work for, and 75.9% agreed that the need to apply Lean instruments in Romanian healthcare institutions is quite necessary or very necessary.* ***Originality****: To our knowledge, the interest towards Lean Management in Romanian Healthcare, especially from the managerial perspective, was not tested before.*
Keywords*: healthcare, hospitals, Lean instruments, Lean management, managers.*
Acknowledgement*: This research was carried out during the postdoc training period within School of Advanced Studies of the Romanian Academy (SCOSAAR)*
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ECONOMIC EVALUATION OF EFFICIENCY IN THE PUBLIC HEALTH SYSTEM IN THE REPUBLIC OF MOLDOVA

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Abstract
Objective*: Health economics is the assessment of how best to use existing resources to achieve the goals of the healthcare system.* ***Method****: The economic evaluation of public health services is a way of trying to answer the three fundamental questions of health economics: what services should be produced, how and for whom.* ***Results****: Economic evaluation in the public health system is important because it helps to answer the question of how to use limited resources in the face of unlimited needs and wants and in the context of increasingly complex health services.* ***Originality****: The analysis of the field of healthcare in the context of the market economy mechanism, using economic laws and principles of problem solving, and knowledge of the basics of the market economy are necessary for all specialists in the public health system.*
Keywords*: health system, costs, benefits, efficiency, resources*
Funding*: This paper is developed within the project "Human Rights in the Republic of Moldova: financial dimension and consolidation through the sufficient public experiences management" (code 20.80009.0807.35), funded through the National Agency for Research and Development of the Republic of Moldova under the State Program 2020-2023.*

THE ELECTRICAL ENERGY IMPORTS AND THE DYNAMICS OF ROMANIA'S FOREIGN TRADE

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Abstract
Objective*: The objective of this paper is the analysis of the exports and imports of energy, on the one hand, and the dynamics of Romania's foreign trade during the 2017-2022 period, on the other hand. The respective time interval was marked by external shocks, such as Covid 19 pandemic and the restructuration of the international supply chains. The analysis emphasises the energy balance of trade and reveals the deficit which has occurred during the last years. A special attention is paid to the prices of energy exports and imports, respectively. The analysis focused on the structural changes of the total foreign trade and on the correlation between the energy imports and the dynamics of the total foreign trade.* ***Method****: In order to achieve the proposed objectives, the author use statistical methods such as: descriptive statistics, Vector Correction, Tests for stationarity (Augmented Dickey-Fuller, Johansen) tests for causality (Granger) and for the significance of the estimated variables (Wald).* ***Results:*** *The analysis reveals a significant difference between the prices of the energy exports and energy imports, being one of the main causes of the increasing deficit of the foreign balance concerning the electrical energy. Also, the increase of the energy imports acted as a brake for the exports and favoured the imports expansion.* ***Originality****: The original contribution of this paper is mainly related to the analysis of the impact of the energy imports expansion on the dynamics and structural changes of the total foreign trade and especially to the exports. It is also to note that the analysis is based on the use of a complex statistical methodology. Also, the results of estimated econometric models argue for the design and implementation of a policy which stimulates the development of the energy production capacity in Romania.*
Keywords*: External shocks, energy prices, foreign trade balance, structural change, correction mechanism*

OPPORTUNITIES, RISKS AND PECULIARITIES OF FOREIGN TRADE OF ROMANIA DURING CRISES

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Abstract
Changes in the global demand and supply of goods and services have created significant pressures on international trade in 2020. In 2020, the adjustments in the evolution of trade in goods have been less geographically synchronized between the states of the world compared to the evolution during the economic and financial crisis of 2008-2009. Based on the latest available statistical information on the foreign trade of Romania, this paper is dedicated to the international trade transactions during the last two biggest crises at global, regional / European and national level. The reduction in global trade in 2020 was smaller than during the global financial crisis of 2008-2009, but the impact of COVID-19 was marked by the heterogeneity of effects on certain goods and trading partners. Globally, trade in services has declined more and the recovery after the lock-down has been slower than in the case of trade in goods. The structure of foreign trade by category of goods has been changed in the context of significant disruptions in the international transport sector. Although it is currently unknown which changes will have long-term and short-term effects, the pandemic period is likely to have long-term effects in most areas. The unprecedented heterogeneity of the effects of the pandemic on trade lead to the need for adaptation which means the identification of opportunities but also means a high degree of uncertainty accompanied by significant adjustment costs. It is necessary to identify directions for action and strategies to reduce risks at both company and government level.
Keywords*: pandemic crises, foreign trade, financial crises*
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WATER RESOURCE DEVELOPMENT AND POVERTY REDUCTION AS INTERCONNECTED FACTORS OF SUSTAINABLE LOCAL DEVELOPMENT

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Abstract
***Objective**: Demographic aging is a global phenomenon with significant implications for society, and understanding this phenomenon and identifying innovative solutions are becoming essential to meet current and future challenges. In Europe, many countries face the impact of demographic transitions, where the birth rate is well below the mortality rate and no improvement is expected soon. Romania is falling into the general trend, registering significant changes at the demographic level over the last decades. This research aims to analyse demographic changes among the Romanian population in the period 1992-2022, using census data, with an emphasis on current and future trends and changes, as well as assessing the economic consequences of demographic aging. The study uses the "demographic transition model" to explore the reasons for these changes and to provide insight into the country's demographic future. This model makes it possible to understand the factors that influence changes in the structure of the population and provides a solid basis for developing appropriate policies and programs. The purpose of this research is to identify the demographic evolution of the country and at the same time to highlight the need to adopt innovative solutions to address the challenges generated by demographic aging in Romania. In the face of a declining population and an increased proportion of the elderly, it is essential to develop effective strategies and policies that respond to these demographic changes and to ensure a favourable environment for a healthy, active and productive society. These solutions may include measures to stimulate fertility, promote a healthy and active life among the elderly, improve working conditions and continue education that can help adapt society to demographic changes. **Method**: The main data sources used in this research are the censuses conducted in Romania between 1992-2022 and the data provided by the National Institute of Statistics (NIS). The calculations based on these statistical data will follow the evolution of the Romanian population until the last available census. Both the factors that contributed to the quantitative changes in the population, such as birth rates, mortality and migration, and the factors that influenced the qualitative changes, will be analysed, such as age group structure and population distribution in rural and urban areas. Descriptive analysis will be used for the purpose of conceptual delimitation (definition of notions and processes), as well as comparative analysis in order to highlight specific characteristics. The research will aim, on the one hand, at the operation and interpretation of annual statistical information resulting from official administrative sources, and on the other hand the sequential information of the population censuses. The correlated perspective of information obtained from multiple sources will allow the quantification of demographic change. Some of the concepts will be represented graphically in the form of figures or tables. This method of analysis will allow comparisons to be made, identify relations between the concept and also a detailed perspective on the demographic evolution in Romania and its impact on the economy. **Results**: Research results can contribute to the reassessment and strengthening of policies on managing demographic and thus labor market change, to develop the complex relationship between demography and economics in the specific context of Romania and will provide valuable information for the development of sustainable economic policies and decisions.*
***Keywords**: demographic changes, population, census, labor market, demographic transition model*

TARGETING THE SUSTAINABLE DEVELOPMENT GOALS BY FOREIGN TRADE: STRENGTHS AND WEAKNESSES

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Abstract
International trade is about delivering mutually acceptable benefits between trading partners and achieve balanced economic, environmental and social outcomes. Sustainable trade is linked with the capacity of economies to participate in international trade in a manner that supports the long-term domestic and global targets of economic growth, environmental protection, and better social equity. Trade is of utmost importance for economic development but cannot realize its full potential without commitment to environmental stewardship and social development. An economy will be closer to sustainable and mutually beneficial global trade when it is prepared for the impact of trade growth on the economy, the environment, and society. The National Strategy for the Sustainable Development of Romania 2030 (SNDDR), like the 2030 Agenda for Sustainable Development, adopts a firm position through its commitment to leave no one behind. The Sustainable Development Goals (SDGs) in the strategy are designed to take society to the next level and reflect important aspects it wants to protect, such as access to opportunities and services, inclusive economies, a clean and safe environment, human rights, strong institutions and accessible, diverse communities that support heritage culture. It should be noted that the pandemic slowed down the implementation of the Sustainable Development Goals and, in some cases, regressions were recorded, the crisis touching all segments of the population, sectors of the economy and areas of the country and it is not surprising that it affected the most vulnerable groups, increased inequalities in our society and exacerbated existing disparities. By analysing the sustainable development indicators in the foreign trade area for Romania, in EU and global context, the paper reflects how trade can contribute to the country's development from different perspectives, economic, social and environmental. Moreover, as the indicators cover the period between 2008 and 2022, the impact of the two important crises is highlighted: the financial and economic crisis from 2009 and the pandemic crisis from 2020. At the level of each of the 17 SDG goals, the impact of foreign trade in Romania is diverse. While the exports and imports of goods of high technological intensity contribute to a sustainable development, the trade deficit deeply affects the possibilities of reaching the targets established by the SNDDR.

Keywords: *foreign trade, sustainable development, Agenda 2030, high-technology, trade deficit, export, import*