

CHALLENGES, PROCESSES AND POLICIES FOR
CIRCULAR ECONOMY THAT WORKS FOR
CONSUMERS

ECO4ALL mid-term International Conference
9 – 10 May 2025

COST Action CA22124 - ECO4ALL
Book of Abstracts

Alexandru Ioan Cuza University
Iasi, Romania

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SCIENTIFIC COMMITTEE

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Alexandrina Davidov, WG 4 Member, Moldova State University, Moldova

CONFERENCE PROGRAMME

DAY 1 - 9 May 2025

9:00 AM - 10:00 AM	COFFEE NETWORKING AND REGISTRATION
10:00 AM - 10:15 AM	OPENING CEREMONY OF THE EUROPEAN WEEK AT THE UNIVERSITY ALEXANDRU IOAN CUZA OF IASI
	WELCOME WORDS BY NICOLETA POPA VICE- RECTOR OF THE UNIVERSITY ALEXANDRU IOAN CUZA OF IASI
	WELCOME WORDS BY MIHAELA TOFAN VICE CHAIR ECO 4ALL COST ACTION, FULL PROFESSOR OF LAW, "ALEXANDRU IOAN CUZA" UNIVERSITY OF IASI, ROMANIA
10:15 AM - 12:00 PM	JOINT PLENARY SESSION: ECO4ALL COST ACTION CA22124 AND JEAN MONNET EUFIRE- RE
	MODERATOR: KOSJENKA DUMANČIĆ WG 1 LEADER COST ACTION CA22124 ECO4ALL
	PASQUALE PISTONE JEAN MONNET AD PERSONAM CHAIR IN EUROPEAN TAX LAW AND POLICY AT WU VIENNA <i>THE USE OF AI IN TAX PROCEDURES: SELECTED ISSUES FROM THE CONSTITUTIONAL, EU LAW AND ECHR PERSPECTIVES</i>
	MARTIN GELTER PROFESSOR, FORDHAM UNIVERSITY SCHOOL OF LAW <i>REGULATORY COMPETITION IN CORPORATE LAW: EUROPE AND THE UNITED STATES</i>
12:00 PM - 2:00 PM	LUNCH, HOUSE OF ACADEMICS, CAROL BOULEVARD NO. 9
2:00PM - 3:30PM	PLENARY OF THE ECO 4ALL MID-TERM CONFERENCE IN IASI FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.22, B BUILDING, FLOOR 1, ROOM B417
	MODERATOR: OLESEA PLOTNIC ACTION COST CHAIR CA22124 - ECO4ALL
	OPENING REMARKS
	MIHAELA ONOFREI PROFESSOR OF FINANCE AND PUBLIC ADMINISTRATION,

	UNIVERSITY ALEXANDRU IONA CUZA OF IASI
	DANIEL JURAVLE VICE-MAYOR OF THE IASI MUNICIPALITY
	KEYNOTE SPEAKERS
	ISIDORA MILOŠEVIĆ WG 2 LEADER ECO4ALL, UNIVERSITY OF BELGRADE, SERBIA <i>EMPOWERING CONSUMERS THROUGH CIRCULAR ECONOMY: BENEFITS AND CHALLENGES</i>
	MARIA MENSHIKOVA WG 3 LEADER ECO4ALL, UNIVERSITAS MERCATORUM, ITALY <i>THE ROLE OF EMPLOYEES IN ADVANCING THE CIRCULAR ECONOMY AND CREATING BENEFITS FOR CONSUMER S</i>
	DEMETRIS F. LEKKAS MC MEMBER ECO 4ALL, UNIVERSITY OF THE AEGEAN, GREECE <i>FOOD WASTE AND CIRCULAR PRACTICES IN THE HOSPITALITY SECTOR</i>
	ANTONIS A. ZORPAS MC MEMBER ECO4ALL, OPEN UNIVERSITY OF CYPRUS, CYPRUS <i>THE IMPACT OF FAST FASHION ON GLOBAL POLLUTION AND CIRCULAR PRACTICES PROMOTING SUSTAINABLE SOLUTIONS</i>
	NATALIA ZAMFIR WG 3 MEMBER ECO 4ALL, MOLDOVA STATE UNIVERSITY, MOLDOVA <i>REGULATORY FLEXIBILITY AND EXPERIMENTATION IN THE CIRCULAR ECONOMY TO PROMOTE EFFECTIVE COMPETITION FOR THE BENEFIT OF CONSUMERS</i>
3:30PM - 3:45PM	COFFEE BREAK
3:45PM - 6:00PM	CONFERENCE PAPER PRESENTATIONS - SPECIAL SESSION FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.22, B BUILDING, FLOOR 1, ROOM B417
	MODERATOR: SORIN GABRIEL ANTON WG 1 MEMBER COST ACTION CA22124 ECO4ALL
	KOSJENKA DUMANČIĆ UNIVERSITY OF ZAGREB, CROATIA <i>THE CIRCULAR ECONOMY IN THE EUROPEAN UNION: EXAMINING THE LEGAL FOUNDATIONS AND REGULATORY FRAMEWORKS</i>

	TATJANA TAMBOVCEVA RIGA TECHNICAL UNIVERSITY, LATVIA <i>LATVIAN CONSUMER PERSPECTIVES AND INDUSTRY INSIGHTS ON SUSTAINABLE PACKAGING</i>
	EKATERINE KARDAVA GORI STATE UNIVERSITY, GEORGIA <i>CONSUMER- ORIENTED CIRCULAR ECONOMY POLICY – CASE OF GEORGIA</i>
	DANIELA CASTILHOS INSTITUTO POLITÉCNICO DE LEIRIA, PORTUGAL <i>ADAPTING GREEN PUBLIC PROCUREMENT FOR A CIRCULAR ECONOMY: CHALLENGES, PROCESSES, AND POLICIES IN PORTUGAL</i>
	KATERINA BOJKOVSKA UNIVERSITY "ST. KLIMENT OHRIDSKI", REPUBLIC OF NORTH MACEDONIA <i>INNOVATIONS IN FOOD PRODUCT DESIGN: LIFE CYCLE OPTIMIZATION FOR SUSTAINABLE CONSUMPTION IN THE REPUBLIC OF NORTH MACEDONIA</i>
	DZINTRA ATSTAJA BA SCHOOL OF BUSINESS AND FINANCE, LATVIA <i>CONSUMER AWARENESS AND BEHAVIORAL DYNAMICS IN THE CIRCULAR ECONOMY</i>
	GURANDA TCHELIDZE CAUCASUS UNIVERSITY, GEORGIA <i>THE CHALLENGE OF RAISING PUBLIC AWARENESS FOR THE DEVELOPMENT OF A CIRCULAR ECONOMY IN GEORGIA</i>
	YI WANG UNIVERSITY OF BEDFORDSHIRE, UK <i>CIRCULAR TOWARDS INDUSTRY 5.0: CIRCULAR ECONOMY AND THE ROLE OF CONSUMER BEHAVIOR</i>
	JELENA TADIĆ CEGNAR UNIVERSITY OF ZAGREB, CROATIA <i>EMPOWERING SUSTAINABLE CONSUMPTION: THE ROLE OF THE RIGHT- TO- REPAIR DIRECTIVE IN ADVANCING THE EU CIRCULAR ECONOMY</i>

DAY 2 - 10 May 2025

9:00 AM - 9:30 AM	REGISTRATION
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9:30 AM - 10:45 AM	CONFERENCE PAPER PRESENTATIONS: IN PERSON AND ONLINE PRESENTATIONS DIVIDED IN 4 PARALEL SESSIONS
	SESSION 1: CIRCULAR ECONOMY POLICIES AND REGULATIONS
	HOUSE OF ACADEMICS, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.9, FLOOR 1, ROOM „ION SIMIONESCU”
	MODERATOR: KOSJENKA DUMANČIĆ WG 1 LEADER COST ACTION CA22124 ECO4ALL
	ODYSSEAS CHRISTOU UNIVERSITY OF NICOSIA, CYPRUS <i>LEGAL AND ECONOMIC DIMENSIONS OF THE EU CIRCULAR ECONOMY ACTION PLAN: STRATEGIES FOR HARMONIZATION AND MARKET TRANSFORMATION</i>
	ELIF KORKMAZ TUMER EGE UNIVERSITY, TURKEY <i>TOWARDS A SUSTAINABLE FUTURE: THE ROLE OF TRANSNATIONAL COOPERATION IN THE CIRCULAR ECONOMY</i>
	ARDITA HYKAJ MEDITERRANEAN UNIVERSITY OF ALBANIA, ALBANIA <i>FOSTERING THE CIRCULAR ECONOMY THROUGH FISCAL POLICY: INSIGHTS FROM ALBANIA AND THE WESTERN BALKANS</i>
	MADALINA VOICAN UNIVERSITY OF CRAIOVA, ROMANIA <i>PUBLIC PROCUREMENT FOR CIRCULAR ECONOMY</i>
	LILIANA TURCANU, IANA ROSCA EUROPEAN UNIVERSITY OF POLITICAL AND ECONOMIC STUDIES. MOLDOVA <i>LEGAL FRAMEWORKS FOR AN INCLUSIVE GREEN TRANSITION: CHALLENGES AND OPPORTUNITIES IN THE REPUBLIC OF MOLDOVA</i>
9:30 AM - 10:45 AM	MERITA GECAJ AGRICULTURE UNIVERSITY OF TIRANA, ALBANIA <i>CHALLENGES AND POLICIES FOR A CONSUMER CIRCULAR ECONOMY IN ALBANIA' S AGRICULTURAL SECTOR</i>
	SESSION 2: CONSUMER BEHAVIOR AND AWARENESS IN CIRCULAR ECONOMY HOUSE OF ACADEMICS, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.9, FLOOR 1, ROOM „VESPASIAN

	PELLA”
	MODERATOR: IZIDORA MILOŠEVIĆ WG 2 LEADER COST ACTION CA22124 ECO4ALL
	ADRIANA BUZDUGAN, NEPOTU LUCIA MOLDOVA STATE UNIVERSITY, MOLDOVA <i>CONSUMER AWARENESS AND BEHAVIORAL DYNAMICS IN THE CIRCULAR ECONOMY OF THE REPUBLIC OF MOLDOVA IN THE CONTEXT OF SUSTAINABLE TRANSITION</i>
	MÜSLÜM KAPLAN BARTIN UNIVERSITY, TURKEY <i>BRIDGING THE KNOWLEDGE GAP: CONSUMER EDUCATION AS A CATALYST FOR SUSTAINABLE TEXTILE CONSUMPTION</i>
	AJTENE AVDULLAHI UNIVERSITY ISA BOLETINI, KOSOVO <i>A SYSTEMATIC REVIEW OF THE LITERATURE ON SUSTAINABLE BUSINESS MODELS IN RESTAURANTS, ZERO FOOD WASTE PRACTICES, AND CONSUMER AWARENESS</i>
	MARIA HAMURARU, ADRIANA BUZDUGAN MOLDOVA STATE UNIVERSITY, MOLDOVA <i>ANALYZING CIRCULAR ECONOMY VALUE CHAINS WITH A FOCUS ON STAKEHOLDER ENGAGEMENT AND COLLABORATION DYNAMIC</i>
	EVA JADERNÁ ŠKODA AUTO UNIVERSITY, CZECH REPUBLIC <i>THE BEHAVIOR OF CZECH CONSUMERS IN THE AREA OF RECYCLING</i>
	ERIKA LAGZDINA UNIVERSITY OF LATVIA, LATVIA <i>EXPLORING CONSUMER AWARENESS AND BEHAVIORAL DYNAMICS IN CIRCULAR SYSTEMS THROUGH THE LENS OF HUMAN SCALE DEVELOPMENT (H- SD) THEORY</i>
	ANNA MARTIROSYAN EURASIA INTERNATIONAL UNIVERSITY, ARMENIA <i>DETERMINANTS OF INDIVIDUAL WILLINGNES TO REDUCE, REUSE AND RECYCLE AMONG ARMENIAN STUDENTS</i>
9:30 AM - 10:45 AM	SESSION 3: CONSUMERS AND VALUE CHAINS IN CIRCULAR ECONOMY
	HOUSE OF ACADEMICS, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.9, FLOOR 1, ROOM „IRINEU MIHĂLCESCU”

	MODERATOR: MARIA MENSHIKOVA WG 3 LEADER COST ACTION CA22124 ECO4ALL
	SORIN GABRIEL ANTON UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, ROMANIA <i>CLIMATE VULNERABILITY AND RENEWABLE ENERGY CONSUMPTION: NEW EMPIRICAL EVIDENCE</i>
	STELA BALTOVA INTERNATIONAL BUSINESS SCHOOL, BULGARIA <i>UNDERSTANDING THE CONSUMER'S ROLE TO CREATE SERVITIZED CIRCULAR BUSINESS MODELS</i>
	VERONICA LOPOTENCO UNDP PROJECT MOLDOVA, MOLDOVA <i>STRENGTHENING LEGAL AND POLICY FRAMEWORKS FOR A CONSUMER- CENTRIC CIRCULAR ECONOMY IN MOLDOVA'S GREEN TRANSITION</i>
	MARIJA RADULOVIC STATE UNIVERSITY OF NOVI PAZAR, SERBIA <i>COMPETITIVENESS AND INNOVATION IN THE EU CIRCULAR ECONOMY</i>
	JOAO ZAMBUJAL- OLIVEIRA NOVA LINS (FCT) UNIVERSITY OF MADEIRA, PORTUGAL <i>ENABLING CIRCULAR SUPPLY CHAINS: THE ROLE OF DIGITAL SOLUTIONS AND CONSUMER PARTICIPATION IN SUSTAINABLE TRANSITIONS</i>
	VALERIA PRAPORŠCIC, IURIE LISNIC MOLDOVA STATE UNIVERSITY, MOLDOVA <i>ENVIRONMENTAL REGULATIONS AND CONTRACTUAL RISK: WHEN CAN NON- PERFORMANCE BE JUSTIFIED?</i>
	ELENA, GASULLA TORTAJADA UNIVERSIDADE DA BEIRA INTERIOR, PORTUGAL <i>REPAIR, DON' T REPLACE: HOW BRAND COMMUNICATION OF REPARABILITY CAN CHANGE CONSUMER FASHION CHOICE S</i>
9:30 AM - 10:45 AM	SESSION 4: CIRCULAR ECONOMY AND INDUSTRY INNOVATIONS
	HOUSE OF ACADEMICS, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.9, FLOOR 1, ROOM „VASILE ARVINTE”
	MODERATOR: GURANDA CHELIDZE

	WG 4 MEMBER COST ACTION CA22124 ECO4ALL
	RENE HERRERA DIAZ UNIVERSITY OF THE BASQUE COUNTRY, SPAIN <i>VALORIZATION OF OAK BARK AS A SUSTAINABLE SOLUTION FOR PRODUCING CHEMICALS AND BIOCHAR DERIVED MATERIALS</i>
	EVRIK CELIK MADENLI UNIVERSITY OF LIVERPOOL, UK <i>ENHANCING WATER RECOVERY IN ROSE OIL PRODUCTION: CERAMIC MEMBRANE APPLICATIONS FOR SUSTAINABILITY AND CIRCULAR ECONOMY</i>
	OLESEA PLOTNIC, DAVIDOV ALEXANDRINA, OLGA COJOCARU MOLDOVA STATE UNIVERSITY, MOLDOVA <i>THE IMPACT OF JUSTICE DIGITALIZATION ON CONSUMER PROTECTION IN THE CIRCULAR ECONOMY: CHALLENGES FOR THE REPUBLIC OF MOLDOVA</i>
	ISAAK TRAJKOVIC INNOVATION CENTER OF THE FACULTY OF MECHANICAL ENGINEERING, BELGRADE, SERBIA <i>SUSTAINABLE INNOVATION IN PACKAGING DESIGN: 3 D- PRINTED BIODEGRADABLE SOLUTIONS FOR CIRCULAR ECONOMY</i>
	MEHMET YAŞAR KASTAMONU UNIVERSITY, TURKEY <i>THE IMPACT OF SUSTAINABLE ALTERNATIVES ON THE PASSENGER EXPERIENCE</i>
	EMÍLIA CSISZÁR BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS, HUNGARY <i>TECHNOLOGICAL SOLUTIONS FOR RECYCLING POST- CONSUMER TEXTILE RESIDUES</i>
	EMEL YONTAR DEPARTMENT OF INDUSTRIAL ENGINEERING, FACULTY OF ENGINEERING, TARSUS UNIVERSITY, TURKEY <i>TRANSITION TO CIRCULAR ECONOMY MODEL IN TEXTILE SUPPLY CHAIN: CHALLENGES, PRIORITIES AND STRATEGIC SOLUTION PROPOSALS</i>
	EROL YILMAZ RECEP TAYYIP ERDOGAN UNIVERSITY, TURKEY <i>CIRCULAR USE OF PROCESSING TAILINGS TO UNDERGROUND MINED- OUT VOIDS</i>

10:45 AM – 11:00 AM	COFFEE BREAK
11:00 AM – 12:30 PM	CONFERENCE PAPER PRESENTATIONS: IN PERSON AND ONLINE PRESENTATIONS DIVIDED IN 4 PARALLEL SESSIONS
	SESSION 5: CIRCULAR ECONOMY AND CLIMATE CHANGE
	HOUSE OF ACADEMICS, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.9, FLOOR 1, ROOM „ION SIMIONESCU”
	MODERATOR: JELENA TADIĆ CEGNAR WG 1 MEMBER COST ACTION CA22124 ECO4ALL
	EVGHENIA GUGULAN “ȘTEFAN CEL MARE” ACADEMY OF THE MINISTRY OF INTERNAL AFFAIRS, MOLDOVA <i>CROSS- BORDER ENVIRONMENTAL EXPERTISE - AN INSTRUMENT FOR ENVIRONMENTAL IMPACT ASSESSMENT</i>
	DORINA CIMIL UNIVERSITY OF BUCHAREST, ROMANIA <i>REPAIRING ECONOMIC DAMAGES: PERSPECTIVES AND AMBIGUITIES</i>
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	CARLOS CUNHA LISBON UNIVERSITY INSTITUTE, PORTUGAL <i>REPAIR CAFE'</i>
	ARIOLA DEVOLLI AGRICULTURAL UNIVERSITY OF TIRANA, ALBANIA <i>SUSTAINABLE WATER MANAGEMENT FOR FOOD PRODUCTION AND ENVIRONMENTAL PROTECTION</i>
	LUMINITSA DIACONU ACADEMY OF ECONOMIC STUDIES OF MOLDOVA, MOLDOVA <i>THE INTERPLAY BETWEEN ENVIRONMENTAL REGULATION, CLIMATE NEGOTIATIONS, AND ECONOMIC DEVELOPMENT IN MOLDOVA: A PATHWAY TO SUSTAINABLE GROWTH</i>
	JULIJANA ANGELOVSKA UNIVERSITY OF SKOPJE, NORTH MACEDONIA <i>PACKAGING WASTE GENERATION AND RECYCLING IN THE EU:</i>

	<i>TRENDS, TARGETS, AND INSIGHTS FOR A CIRCULAR ECONOMY</i>
11:00 AM – 12:30 PM	SESSION 6: SUSTAINABILITY AND URBAN DEVELOPMENT
	HOUSE OF ACADEMICS, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.9, FLOOR 1, ROOM „VESPASIAN PELLA”
	MODERATOR: DZINTRA ATSTAJA WG 2 MEMBER COST ACTION CA22124 ECO4ALL
	ERMIRA KALAJ UNIVERSITY OF SHKODRA "LUIGJ GURAKUQI", ALBANIA <i>TRANSFORMING CITIES: THE POWER OF BEHAVIORAL INTERVENTIONS FOR URBAN SUSTAINABILITY</i>
	ALEKSANDAR PETROVSKI FACULTY OF ARCHITECTURE IN SKOPJE, NORTH MACEDONIA <i>INNOVATIONS IN CIRCULAR ECONOMY DESIGN STRATEGIES FOR BUILDINGS</i>
	JELENA TITKO EKA UNIVERSITY OF APPLIED SCIENCES, LATVIA <i>CONSUMER CHALLENGES WITH WASTE SORTING AT LATVIAN HOUSEHOLDS</i>
	SNEŽANA RADUKIĆ UNIVERSITY OF NIŠ, SERBIA <i>TOURISM COMPETITIVENESS, ENVIRONMENTAL QUALITY AND CIRCULAR ECONOMY: A PANEL APPROACH</i>
	ATAKAN DURMAZ SAMSUN UNIVERSITY, TURKEY <i>SUSTAINABLE CONSUMPTION HABITS OF MIGRANT COMMUNITIES IN TURKEY: OPPORTUNITIES AND CHALLENGES IN THE TRANSITION TO CIRCULAR ECONOMY</i>
	RADU MIRZA NGO NETWORK FOR THE DEVELOPMENT OF RURAL COMMUNITIES IN MOLDOVA <i>SUSTAINABILITY AND HUMAN RIGHTS VIA CONSUMER PROTECTION</i>
	ANA MARIA CRISTISOR MOLDOVA STATE UNIVERSITY, MOLDOVA <i>THE PERSPECTIVE OF LEGAL REGULATIONS IN THE FIELD OF LIABILITY FOR CONSULTANCY SERVICES</i>
	TARLAN AHMADOV

	TALLINN UNIVERSITY OF TECHNOLOGY, ESTONIA THE CONSUMER PRISM IN CIRCULAR ECOSYSTEMS: NAVIGATING THE MULTI- LEVEL MAZE OF CIRCULAR ECONOMY TRANSITIONS
11:00 AM – 12:30 PM	CONFERENCE PAPER PRESENTATIONS: IN PERSON AND ONLINE PRESENTATIONS DIVIDED IN 4 PARALLEL SESSIONS
	SESSION 7: CIRCULAR ECONOMY IN EMERGING ECONOMIES
	HOUSE OF ACADEMICS, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.9, FLOOR 1, ROOM „IRINEU MIHĂLCESCU”
	MODERATOR: MARIA MENSHIKOVA WG 3 LEADER COST ACTION CA22124 ECO4ALL
	RAME LIKAJ KOSOVO, PRISHTINA, KOSOVO <i>ADVANCING DUAL VET FOR THE GREEN ECONOMY: STRENGTHENING SUSTAINABILITY AND INDUSTRY ALIGNMENT IN THE VET SYSTEM OF KOSOVO</i>
	SERGHEI SPRINCEAN MOLDOVA STATE UNIVERSITY, MOLDOVA <i>SECURITY OF DEVELOPMENT INTO A KNOWLEDGE- BASED SOCIETY: EASTERN EUROPEAN CASE</i>
	LLESH LLESHAJ UNIVERSITY OF TIRANA, ALBANIA <i>BARRIERS, CHALLENGES AND AWARENESS IN INDUSTRIAL SYMBIOSIS IMPLEMENTATION IN CONTEXT OF CIRCULAR ECONOMY</i>
	MERAL ALTAN YILDIZ TECHNICAL UNIVERSITY, TURKEY <i>SUSTAINABLE GREEN CONSUMPTION NEXUS CIRCULAR ECONOMY: THE CONCEPT, POLICIES AND CHALLENGES</i>
	ANA KITIĆ UNIVERSITY OF NIS, SERBIA <i>FINANCING INNOVATIVE COMPANIES WITH CIRCULAR BUSINESS MODELS: INSTRUMENTS, CHALLENGES, AND POLICIES</i>
	SAKDIRAT KAEWUNRUEN UNIVERSITY OF BIRMINGHAM, UK <i>EXTERNALITIES FOR BUSINESS DECISION MAKING OF CIRCULAR ECONOMY IMPLEMENTATION IN SMART CITIES</i>
	ACMA BULENT

	ESKISEHIR ANADOLU UNIVERSITY, TURKEY <i>CIRCULAR ECONOMY APPLICATIONS WITHIN THE FRAMEWORK OF SUSTAINABILITY IN TURKEY</i>
11:00 AM – 12:30 PM	SESSION 8: LEADERSHIP AND GOVERNANCE IN CIRCULAR ECONOMY
	HOUSE OF ACADEMICS, UNIVERSITY ALEXANDRU IOAN CUZA OF IASI, CAROL I BOULEVARD NO.9, FLOOR 1, ROOM „VASILE ARVINTE”
	MODERATOR: ESMA NUR CINICIOGLU WG 3 MEMBER
	VIOLETA COJOCARU MOLDOVA STATE UNIVERSITY, MOLDOVA <i>AWARENESS OF THE ROLE OF EDUCATIONAL INSTITUTIONS IN PROMOTING THE CIRCULAR ECONOMY</i>
	OLIANA SULA ALEKSANDER MOISIU UNIVERSITY OF DURRES, ALBANIA <i>COMPARING SUSTAINABLE CONSUMPTION BEHAVIOUR BETWEEN UNIVERSITY STUDENTS AND HIGH SCHOOL PUPILS: THE CASE OF ALBANIA</i>
	EVA ŠVEJDAROVÁ ŠKODA AUTO UNIVERSITY, CZECH REPUBLIC <i>ADVANCING LEADERSHIP FOR A CIRCULAR ECONOMY: INSIGHTS FROM THE SUSTAINABILITY INNOVATION MINDSET TRAINING</i>
	MILENA RAJIĆ UNIVERSITY OF NIS, SERBIA <i>TRANSFORMATIVE POLICIES FOR CONSUMER ENGAGEMENT IN CIRCULAR SYSTEMS</i>
	RODICA CRUDU ACADEMY OF ECONOMIC STUDIES OF MOLDOVA, MOLDOVA <i>MOLDOVA' S ACHIEVEMENTS AND PERSPECTIVES IN ALIGNING TO THE EU STANDARDS IN THE FIELD OF CONSUMER PROTECTION</i>
	ASLI AYDIN KADIR HAS UNIVERSITY, TURKEY <i>GUIDING GREEN INVESTMENTS BY BANKING SECTOR: AN OF PROFITABILITY, FINANCIAL STABILITY AND CREDIT POLICIES</i>
	VALENTINA DIANA RUSU ALEXANDRU IOAN CUZA UNIVERSITY OF IASI, ROMANIA <i>FINANCIAL INCENTIVES TO SUPPORT CIRCULAR ECONOMY</i>

	<i>PRACTICES IN ROMANIAN SMES: A COMPARATIVE ANALYSIS</i>
	ESMA NUR CINICIOGLU ISTANBUL UNIVERSITY, TURKEY <i>UNRAVELING CIRCULAR ECONOMY DYNAMICS IN THE EU: A BAYESIAN NETWORK ANALYSIS</i>

ABSTRACTS

Keynote Abstracts

EMPOWERING CONSUMERS THROUGH CIRCULAR ECONOMY: BENEFITS AND CHALLENGES

Isidora Milošević, Anđelka Stojanović

University of Belgrade, Serbia

Zorana Stanković

University of Niš, Serbia

Sorin Gabriel Anton

University Alexandru Ioan Cuza of Iasi, Romania

Abstract

In Society 5.0, the circular economy concept is crucial in shaping sustainable consumer practices. As technology advances and consumer demands grow, understanding their role in the circular economy is becoming increasingly important. Consumers not only use products but also influence market sustainability through their choices. Their rights include access to environmentally responsible products, transparent sustainability information, and the ability to return, repair, or exchange products. This paper analyses how consumers can exercise their rights, the benefits of a circular economy, and what obligations and challenges they must overcome. The research includes data collected through surveys in 31 countries and members of the ECO4ALL COST action. The results obtained will be analyzed using statistical methods to identify the benefits and challenges of customers in these countries face within the circular economy framework. Through analysis, the paper provides recommendations for improving circular mechanisms that benefit consumers and contribute to a sustainable future.

Keywords: circular economy, consumer, benefits, challenges

THE ROLE OF EMPLOYEES IN ADVANCING THE CIRCULAR ECONOMY AND CREATING BENEFITS FOR CONSUMERS

Maria Menshikova

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Abstract

Recent studies on stakeholder engagement have predominantly taken a broad perspective, examining how various external and internal actors contribute to the transition towards a circular economy (CE). While this approach has provided valuable insights, limited attention has been devoted to the specific role of employees as key drivers of CE principles promotion within organisations and beyond. This study focuses on the role of employees in promoting and developing CE principles both internally, within the companies they work for, and externally, by influencing other stakeholders, including consumers. Our research is based on a systematic literature review conducted on Scopus database, covering academic contributions from the last decade. This analysis includes bibliometric review and keyword network analysis to identify key areas of employee impact and main benefits they bring to CE promotion. Additionally, a content analysis of the most cited contributions sheds light on the strategic role employees play in embedding CE principles within organisational culture and operational practices, creating benefits not only for the organisation but also for its customers. The analysed literature highlights the potential of employee engagement as a critical strategy for advancing CE goals. Veleva et al. (2017) emphasise the importance of engaging employees in innovative sustainability initiatives, while Salvioni&Almici (2020) underscore how employees can reshape corporate values and align them with CE objectives. Employees, as internal stakeholders, can drive organisational behaviour towards best practices in environmental protection, facilitating the implementation of CE objectives, and acting as ambassadors for CE values by promoting reuse, recycling, and sustainability practices among external stakeholders. Fobbe&Hilletoft (2023) further stress that employees, through their active participation, foster trust and collaboration in stakeholder engagement processes critical for CE transformation. This study advances the understanding of employees' roles in CE, providing important insights for both academic community and practitioners.

Keywords: circular economy, employees' role, systematic literature review

FOOD WASTE AND CIRCULAR PRACTICES IN THE HOSPITALITY SECTOR

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Abstract

The global consumption of commodities is anticipated to quadruple in the next forty years, while annual waste production is anticipated to rise by 70% by 2050 (Cesaro and Klontza, 2023). The demand for food by 2050 requires the agricultural global production to increase by 70% (5.1 billion tons) and at the same time, it is strongly affected by severe climate events (droughts, floods, tropical storms, heat waves, and wildfires). Moreover, each year, a third of global food production (around 1.3 10⁹ tons) exits the food supply chain as waste (FAO, 2019). To this extent, the linear economic models based on production-consumption-disposal schemes tend to be replaced by circular and resource-efficient economic models, which focus on the whole material cycle to promote reuse as well as to reduce waste and utilize resources as efficiently as possible. Hotel sector contributes significantly to the global environmental footprint, since they utilize significant single use materials and produce large quantities of food waste (Klontza et al., 2016). Reduction of food loss and waste contributes to food security for all, to the reduction of greenhouse gas emissions as well as water and energy saving along with increased production and economic development at global level (Coudard et al. 2021; Skawińska E., Zalewski, 2022).

The main objective of this study is to map food loss and waste during hotel operation. Data were collected and analyzed from three 5-star hotels. On-site measurements were combined with interviews, and questionnaires. Key performance indicators were calculated; water and energy consumption per guest night and food waste per night and reduction scenarios were evaluated. Food waste was characterized as avoidable and non-avoidable and the unconsumed food was characterized as edible and non-edible. Breakfast buffet seems to be the major source of food waste and the biggest percentage (76%) is unconsumed and non- edible.

Keywords: Food Waste, Hospitality Sector, Tourism, Circular Solutions

THE IMPACT OF FAST FASHION ON GLOBAL POLLUTION AND CIRCULAR PRACTICES PROMOTING SUSTAINABLE SOLUTIONS

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Abstract

The main components of humanity include energy, food and clothing. Each of us, individually and collectively, contributes to climate change and CO₂ emissions, natural resource consumption, and social attitudes and behaviour. The fashion industry has a strict relationship to waste, as waste production is central to the operation of it. According to the Ellen MacArthur Foundation (2017) and Voukkali et al., (2024) stated that the fashion industry releases 5000 million tons of carbon dioxide (CO₂) each year and is responsible for 9% of Greenhouse gasses (GHGs) emissions worldwide, and more than third of the accumulation of microplastics in marine environments. 20% of industrial wastewater contamination is again due to the industry while 98 million tons of non-renewable sources, 93 billion cubic meters of water and more than 70 million barrels of oil are being consumed. In 2017 alone, 1.3 tons of raw materials and 104 cubic meters of water were consumed in the EU alone, resulting in 654 kg of CO₂ eq. in emissions. However, Fashion in today's world is based on everlasting stylistic change while operating within the boundaries of an aesthetic market which replaces the old with a new. Between 2000-2014, more than 150 billion garments were produced on a yearly basis around the globe while in Europe (EU), 2 million tons/year were discarded and furthermore, \$400 billion worth of fashion products are wasted globally each year while 13 kg/capita are consumed (Papamichael et al., 2023a). However, fashion trends are expected to increase in value from 1.5 trillion dollars in 2020 to around 2.25 trillion dollars by 2025, indicating that the fashion demand is on the rise (Papamichael et al., 2023b). Circular Economy constitutes one of the main objectives in the reduction of the environmental burden of the fashion industry. Consumer behavior also plays a crucial role in the success of circular fashion initiatives. Circular fashion aims to reduce the environmental impact of the fashion industry by creating a closed-loop system where waste is minimized, and materials are reused, recycled, refurbished, remanufactured etc. Consumers can support this movement by making conscious choices, such as buying second-hand or upcycled clothes, repairing and maintaining their clothing, and recycling or donating items they no longer use. Additionally, consumers can support brands that incorporate circular principles in their design and production processes, such as using sustainable materials and minimizing waste (Papamichael et al., 2024). Several circular models will be presented reflection to R strategies and the new ISO 59000 series to face the impact from fast fashion end of clothings.

Keywords: fast fashion; fashion waste; environmental footprint; circular economy; new business model

REGULATORY FLEXIBILITY AND EXPERIMENTATION IN THE CIRCULAR ECONOMY TO PROMOTE EFFECTIVE COMPETITION FOR THE BENEFIT OF CONSUMERS

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Abstract

The lack of an accelerated innovation process is more relevant than ever for the development of the global economy, which has been characterised by a low level of innovation in recent decades. The ability to develop innovative products, services and business models creates social value and is essential for maintaining competitiveness, which ultimately benefits consumers. Given that almost half of the CO₂ emission reductions required by 2050 will have to come from technologies that are not yet available on the market, a significant innovation effort will have to be launched within this decade. Regulatory flexibility and experimentation in the circular economy will be essential to encourage the development, testing and deployment of breakthrough solutions and ensure that the EU remains at the forefront of sustainable innovation and global competitiveness. The article provides a basis for in-depth discussions on the development and implementation of transformative strategies in the circular economy sector. Key transformations such as digitalisation, decentralisation, decarbonisation, sustainability, consumer empowerment, innovative financing, low-carbon gases, circularity, sustainable raw material supply and carbon removal require extensive research, regulatory experimentation and innovation to drive effective and sustainable solutions.

Keywords: regulatory flexibility, circular economy, policy experimentation, market competition

THE CIRCULAR ECONOMY IN THE EUROPEAN UNION: EXAMINING THE LEGAL FOUNDATIONS AND REGULATORY FRAMEWORKS

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Abstract

The European Union is a global leader in environmental policy, demonstrating a strong commitment to sustainable development and circular economy principles. This paper examines the comprehensive legal framework established by the EU to address environmental challenges and transition towards a circular economy. It analyses the key directives, regulations, and policy instruments that underpin the EU's approach, focusing on their legal foundations and practical implications. The EU's circular economy framework is built upon a complex interplay of legislative acts and policy initiatives. Key instruments include the Circular Economy Action Plan, the European Green Deal, and numerous directives addressing specific aspects of waste management, product design, and resource efficiency. This paper delves into the legal basis of these instruments, exploring their scope, objectives, and enforcement mechanisms. It also analyses the challenges and opportunities of implementing these regulations across diverse member states. A core element of the EU's circular economy strategy is reducing waste by promoting reuse and recycling. Recent directives have strengthened the legal framework governing these areas, setting ambitious targets and promoting innovative approaches to waste management. This paper examines the legal implications of these directives, focusing on their impact on businesses, consumers, and the environment. It also explores the interplay between EU waste management legislation and international legal frameworks. The EU's commitment to environmental protection extends beyond waste management, encompassing broader aspects of sustainable development. The European Green Deal, the EU's flagship initiative, sets ambitious targets for climate neutrality and resource efficiency. This paper analyzes the Green Deal's legal underpinnings, exploring its potential to drive the transition towards a circular economy. It also examines the legal challenges and opportunities of implementing such a transformative agenda. This paper provides a comprehensive legal analysis of the EU's circular economy framework, offering insights into its strengths, weaknesses, and potential future developments. It is intended for legal scholars, policymakers, and anyone interested in understanding the legal complexities of the circular economy in the EU.

Keywords: circular economy, European Union law, regulatory framework, environmental legislation, sustainability governance

LATVIAN CONSUMER PERSPECTIVES AND INDUSTRY INSIGHTS ON SUSTAINABLE PACKAGING

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Abstract

Each EU citizen generates an average of 190 kg of packaging waste annually, with projections indicating an increase to 209 kg by 2030. In 2022, the European Commission proposed a regulation to reduce packaging waste, promote reuse, and encourage sustainability across all packaging. This study explores Latvian consumers' and industry representatives experiences and opinions on sustainable packaging using qualitative and quantitative methods. A literature review provided insights into the packaging industry and its sustainability, while six interviews with industry experts revealed views on sustainable packaging criteria, costs, alternative materials, and the potential impacts of the proposed EU regulation. Experts also discussed industry challenges and market trends. To assess consumer perspectives, a survey of 145 participants from various age groups was conducted. Results show that while many consumers understand the environmental impact of non-ecological packaging, a significant portion is not concerned with the issue and unwilling to pay more for sustainable options. The findings highlight the need for greater consumer awareness and the importance of industry adaptation to balance sustainability goals with economic feasibility.

Keywords: sustainable packaging, consumers, perspectives, Latvia

CONSUMER-ORIENTED CIRCULAR ECONOMY POLICY – CASE OF GEORGIA

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Abstract

The EU's new Circular Economy Action Plan for a Cleaner and More Competitive Europe states that "There is only one planet Earth, yet by 2050, the world will be consuming as if there were three". This initiative is strongly connected to 2030 Sustainable Development Goals. The EU considers the question at global level; thus EU policy approach extends to neighbouring and enlargement countries. The EU Enlargement Package 2024 refers circular economy developments in the Progress Reports of 10 candidate countries, including Georgia. European Commission's assessment of Georgia addresses the circular economy under Chapter 27 (Environment and Climate Change) of Cluster 4, and consumer rights protection under Chapter 28 of Cluster 2. In the section on Environment and Climate Change, the EU reviews Georgia's situation not positively stating: "Alignment with the EU waste management and circular economy legislation is at an early stage and significant investment is needed". In the section on Consumer and Health Protection, Georgia's assessment is relatively better: "Consumer protection On cross-cutting aspects, the institutional framework on consumer protection is in place and the legal framework is partially in line with the EU acquis". A comprehensive review of Georgia's policy and regulatory framework for a consumer-oriented circular economy is essential examining the interplay between waste management and consumer protection, thereby fostering synchronisation between these areas as highlighted in the Commission's assessment. The study will explore Georgia's current laws and policies in greater depth, emphasising the potential of the circular economy to benefit consumers. The research will utilize a range of official and reliable sources, including EU and Georgian legal acts, government reports, civil sector studies, academic research, and statistical data. The methodological framework will integrate legal-formal, descriptive, review, and comparative approaches to provide a thorough and structured analysis.

Keywords: Georgia, EU, consumer, circular economy

ADAPTING GREEN PUBLIC PROCUREMENT FOR A CIRCULAR ECONOMY: CHALLENGES, PROCESSES, AND POLICIES IN PORTUGAL

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Abstract

Green public procurement (GPP) is a strategic approach that enables government entities to acquire goods and services while prioritizing sustainability and minimizing environmental impact. By integrating environmental and social criteria into procurement processes, GPP fosters responsible consumption and production patterns, essential for advancing a circular economy.

This paper examines the evolution and implementation of GPP in Portugal, analyzing the extent to which environmental criteria are embedded in procurement strategies. It explores the key challenges and opportunities associated with the transition to a circular economy through public procurement, identifying gaps and potential improvements in policy and practice. A critical assessment of current legislation and policy frameworks is provided, evaluating their effectiveness in driving sustainability, resource efficiency, and waste reduction.

The study offers an overview of the current state of GPP in Portugal and its long-term implications for circular economy objectives. It concludes with policy recommendations to enhance the effectiveness of green procurement practices, ensuring they contribute to a more resource-efficient and consumer-friendly circular economy.

Keywords: green public procurement, circular economy, sustainable procurement, environmental policy

INNOVATIONS IN FOOD PRODUCT DESIGN: LIFE CYCLE OPTIMIZATION FOR SUSTAINABLE CONSUMPTION IN THE REPUBLIC OF NORTH MACEDONIA

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Abstract

The increasing global challenges associated with sustainability in the food sector necessitate innovative approaches to mitigate environmental impact and enhance production and consumption efficiency. This study examines innovations in food product design in the Republic of North Macedonia through the optimization of their life cycle, with a particular emphasis on sustainability and resource efficiency. The research provides a comprehensive analysis of the current practices in North Macedonia's food industry, focusing on key stages such as raw material selection, processing, packaging, distribution, and waste management. Special attention is given to the integration of locally sourced and organic ingredients, eco-friendly packaging solutions, and strategies aimed at reducing food waste. Utilizing Life Cycle Assessment (LCA) methodologies and environmental impact analyses, this study identifies critical challenges and opportunities for advancing circular economy principles within the sector. Findings indicate that while there is a growing interest in sustainable food practices in North Macedonia, several obstacles persist, including the limited availability of eco-materials for packaging, insufficient consumer awareness, and the inadequate implementation of waste reduction strategies. The study provides evidence-based recommendations to enhance sustainability in the sector, advocating for greater support for domestic producers, investments in green technologies, and consumer education initiatives aimed at fostering environmentally conscious consumption patterns. Keywords: innovations, life cycle assessment, sustainable consumption, food industry.

Keywords: food product innovation, life cycle optimization, sustainable consumption, circular economy in food systems

CONSUMER AWARENESS AND BEHAVIORAL DYNAMICS IN THE CIRCULAR ECONOMY

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Abstract

Sustainable consumption is the use of products and services to minimise the impact on the environment. Sustainable consumption can be undertaken in a way that meets the needs of today's people as well as future generations. Sustainable consumption is the foundation of our prosperity. In this article, we will look opportunities of sustainable consumption at the municipal level. In 2024, the first scientifically led survey was conducted across Latvian municipalities to evaluate the level of circularity or readiness for transitioning from a linear to a circular economy. Through self-assessment, all 43 municipalities provided their perspectives on key dimensions of the new economic paradigm. These insights were integrated with feedback from citizens, collected via a separate nationwide survey, to derive a composite index value for each municipality. In addition to the initial survey, this article aims to explore key areas of sustainable consumption, such as energy and water use, heat consumption, green public procurement, and selected social measures, through rigorous statistical data analysis and comparative assessment. By integrating these measurable indicators with earlier findings, this research aims to deepen the understanding of how municipalities and their citizens contribute to and perceive sustainable consumption and welfare practices, and to review their alignment with relevant United Nations Sustainable Development Goals. Initial analysis reveals a complex relationship between municipal self-assessments, citizens' perceptions, and objective statistical data. While emerging patterns are noted, statistical data may highlight discrepancies that suggest a need for closer alignment between governance efforts and public expectations, offering valuable insights for future policy development and advancement of sustainability efforts.

Keywords: circular economy, municipalities, circularity self-assessment, sustainable consumption, Sustainable Development Goals

THE CHALLENGE OF RAISING PUBLIC AWARENESS FOR THE DEVELOPMENT OF A CIRCULAR ECONOMY IN GEORGIA

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Abstract

In recent decades, the issue of human economic activity, which involves the consumption of natural resources on an annual basis whilst reducing the resources available for future use, has become increasingly salient. This dynamic is detrimental to the environment, ecology, and the economy, and consequently raises the issue of transitioning from a linear economy to a circular economy.

The paper discusses the policy developed for the development of the circular economy in the European Union, the action plan based on this policy, and its significance not only for the EU Member States, but also for the countries on the way to rapprochement with the EU, including Georgia.

Since signing the Association Agreement with the European Union in 2014, Georgia has taken steps in a number of areas to bring its country in line with European standards and legislation in the areas of environmental protection, climate change, and others. Georgia is embarking on an accelerated path of transition to a circular economy, which requires the joint participation of many stakeholders - government agencies at all levels, the business sector, academia, investors, and consumers.

Based on official documents of the European Union and Georgia, as well as studies conducted by different sectors, the article discusses several examples of the legislative framework necessary for the development of the circular economy in order to raise public awareness, different measures taken in response to the existing needs in this direction, their results and recommendations for further actions.

Keywords: Georgia, circular economy, raising awareness, regulatory framework

CIRCULAR TOWARDS INDUSTRY 5.0: CIRCULAR ECONOMY AND THE ROLE OF CONSUMER BEHAVIOR

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Abstract

Circular economy has been increasingly seen to counter this crisis, further scaled-up by operationalising Industry 5.0 disruptions around the triple bottom line. As a core pillar of circular economy, this study addresses material recycling and explores its key drivers. The drivers are identified and evaluated using multi-criteria decision-making methods. The proposed integrated methodological framework is further tested with data involving multiple stakeholders. The findings underscore the most profound causal drivers: institutional incentives supporting consumer plastic and electronics recycling, availability of reliable technology, and strengthening coordination among actors in a supply chain using Industry 5.0. Interestingly, the highest-ranking causal drivers of material recycling were retrieved not from the existing literature but from the expert pool. The findings also reveal some counterintuitive results, such as practitioners prioritizing environmental factors over economic ones instead of the widespread convention of their preferences toward economic goals. The study thereby offered some helpful policy levers for consumers, which when empirically integrated with Industry 5.0 should enable stakeholders make more informed decisions in shaping an emerging industry.

Keywords: circular economy, consumer behaviour, industry 5.0, material recycling

EMPOWERING SUSTAINABLE CONSUMPTION: THE ROLE OF THE RIGHT-TO-REPAIR DIRECTIVE IN ADVANCING THE EU CIRCULAR ECONOMY

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Abstract

With the adoption of the Right to Repair Directive (R2RD), the EU is focusing on fostering sustainability through the circular economy, a key objective of the European Green Deal. This plan aims to reduce CO2 emissions, use resources more efficiently, and transition to a cleaner economy, with product lifespan extension playing a crucial role in this transition.

Although extending product lifecycles could reduce waste and emissions, according to the European Commission, many consumers opt for replacing products rather than repairing them. This is often due to a lack of transparency regarding repair availability, high repair costs, and complicated conditions for repairs.

In response to citizens' demands expressed during the Conference on the Future of Europe, the Right to Repair Directive was adopted in June 2024. The directive aims to make repair services more accessible and encourage sustainable consumption.

The analysis of the R2RD highlights three main conclusions:

1. Strengthening consumer protection: The directive enhances consumer rights by providing better access to repair services.
2. Revitalizing the repair market: The implementation of the directive has significant potential to revitalize and strengthen the EU's repair market, creating quality job opportunities in the process.
3. Raising public awareness: The directive emphasizes the importance of informing citizens, which is essential to encouraging more sustainable consumption patterns and contributing to the development of a circular economy.

Ultimately, whether a defective but repairable product gets repaired depends largely on consumer behaviour and decision-making. In this way, the R2RD reflects the EU's commitment to empowering consumers in the fight against climate change.

Keywords: right to repair, sustainability, circular economy, green deal, consumer protection

LEGAL AND ECONOMIC DIMENSIONS OF THE EU CIRCULAR ECONOMY ACTION PLAN: STRATEGIES FOR HARMONIZATION AND MARKET TRANSFORMATION

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Abstract

This paper provides a comprehensive examination of the EU Circular Economy Action Plan (CEAP), with an emphasis on its legal and economic implications within the framework of sustainable development. As the CEAP seeks to drive systemic change in resource management across the European Union, it is imperative to explore the necessity for a harmonized legal framework. Such alignment ensures uniform implementation and expedition across member states, reducing variability in application and promoting a level playing field for businesses. The analysis delves into the potential competitive advantages engendered by the CEAP's directives, alongside challenges in balancing national interests with overarching EU goals. Economically, the CEAP offers unique opportunities for market expansion through the innovation of circular business models, the creation of green jobs, and the revitalization of manufacturing practices that prioritize sustainability and efficiency. The study also considers the economic resilience this transition promises, offering a vital buffer against resource scarcity and fluctuating market dynamics by fostering a self-sustaining, circular economy. Insights derived aim to equip policymakers with strategies to optimize legal coherence and economic benefits at both national and EU levels. Furthermore, this paper contributes to ongoing discourses concerning the role of international and EU legal frameworks in achieving sustainable development objectives. By situating the CEAP within a broader context, this study provides valuable perspectives on optimizing the intersection of law, economics, and environmental stewardship, thereby enhancing the resilience and sustainability of the EU economy.

Keywords: circular economy, EU policy, legal framework, economic impact, sustainability, resource management, sustainable development

TOWARDS A SUSTAINABLE FUTURE: THE ROLE OF TRANSNATIONAL COOPERATION IN THE CIRCULAR ECONOMY

Elif Korkmaz Tumer, Erol Türker Tümer

Ege University, Turkey

Abstract

A large body of literature indicates that countries tend to adopt policies that provide competitive advantages or to enhance their international reputation, particularly when such policies are adopted by peers with whom they share strong trade ties or common values. This dynamic is especially evident in the European Union, given its significant market size, regulatory influence, and global standing. The EU's capacity to shape third-country policies and disseminate sustainable practices highlights its central role in advancing circular economy (CE) initiatives. This study emphasizes the necessity of a multilateral approach to achieving CE objectives and analyzes the EU's role in facilitating cross-border cooperation and policy diffusion. By examining these interactions, this study provides insights essential for designing tailored policies and enhancing their implementation across the EU, emphasizing the importance of a multilateral approach to achieving CE objectives.

Keywords: circular economy, international economics, spillover effect, comparative policy, European countries

FOSTERING THE CIRCULAR ECONOMY THROUGH FISCAL POLICY: INSIGHTS FROM ALBANIA AND THE WESTERN BALKANS

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Abstract

The circular economy (CE) provides a revolutionary economic model for sustainable development by reducing waste, reusing resources, and encouraging eco-friendly practices. Fiscal policy plays a crucial role in shaping consumer behaviour within the circular economy by using taxes, subsidies, and incentives to stimulate sustainable consumption. This study examines the relationship between fiscal tools and circular economy principles, focusing on their implementation in the Western Balkans, with a main focus on Albania.

Fiscal policy tools, such as environmental taxes, subsidies for green innovations, and incentives for reducing waste, can potentially shape consumer behaviour by promoting sustainable consumption and production practices. However, the Western Balkans region faces distinct socio-economic and institutional obstacles that hinder the adoption of circular practices.

In Albania, recent initiatives, such as waste management reforms and tax incentives for eco-friendly businesses, demonstrate initial efforts toward CE integration. Despite these efforts, limited public awareness, fragile institutional structures, and lack of enforcement mechanisms remain significant barriers to progress. In this context, this paper points out major challenges in Albania in promoting circular practices. By addressing these challenges, Albania and its neighbouring countries can accelerate their transition to a circular economy, paving the way for sustainable economic development and increased environmental resilience.

In conclusion, the main recommendations of this paper involve implementing a more integrated fiscal policy framework aimed at both producers and consumers, enhancing public awareness initiatives to advance circular economy principles, and fostering stronger collaboration between government, businesses, and civil society. Additionally, it is recommended that coordinated regional strategies be developed in the Western Balkans to ensure alignment with European Union objectives and global sustainability goals.

Keywords: circular economy, fiscal policy, consumer behaviour, Western Balkans, Albania, sustainability.

PUBLIC PROCUREMENT FOR CIRCULAR ECONOMY

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Abstract

This article explores the role of public procurement in fostering a circular economy by focusing on the principles of reducing, reusing, and repairing. With governments and public institutions as significant market players, integrating circular economy practices in procurement policies has the potential to drive systemic change toward sustainable consumption and production. The article also highlights the critical link between public procurement strategies and consumer protection, arguing that public contracts can prioritize goods and services that promote long-term use and minimize environmental impact.

Keywords: public procurement, circular economy, sustainable consumption, consumer protection

LEGAL FRAMEWORKS FOR AN INCLUSIVE GREEN TRANSITION: CHALLENGES AND OPPORTUNITIES IN THE REPUBLIC OF MOLDOVA

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Abstract

As the Republic of Moldova navigates the complexities of sustainable development, legal frameworks play a critical role in ensuring an inclusive green transition. This conference aims to explore the legal and regulatory challenges that Moldova faces in implementing environmental policies aligned with European and international standards. Key discussions will include the harmonisation of national legislation with EU Green Deal objectives, the role of public and private actors in enforcing environmental law, and the impact of legal reforms on economic and social sustainability. Special attention will be given to climate justice, environmental governance, and the legal mechanisms needed to support green innovation and equitable development. The event will bring together legal scholars, policymakers, and practitioners to foster a dialogue on strengthening Moldova's legal infrastructure for a greener future.

Keywords: green transition, environmental law, climate justice, sustainable development, legal harmonisation, Moldova, EU Green Deal, environmental governance, innovation and law, public-private partnerships

CHALLENGES AND POLICIES FOR A CONSUMER CIRCULAR ECONOMY IN ALBANIA'S AGRICULTURAL SECTOR

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Abstract

Agriculture remains a cornerstone of developing economies, providing livelihoods and sustaining rural communities. In Albania, the sector accounts for over 18.5% of the national GDP (INSTAT, 2023), yet it faces structural challenges including low productivity, inefficient resource utilization, environmental degradation, and vulnerability to climate change. These persistent issues underscore the urgency of transitioning from a linear to a circular economic model—one that emphasizes sustainability, resource efficiency, and closed-loop systems. This study investigates the alignment between Albania's regional development policies and the adoption of circular economy (CE) principles in the agricultural sector. Particular attention is paid to the integration of CE in national subsidy schemes and legal frameworks, reflecting Albania's commitment to sustainable development and European Union accession objectives. Findings reveal that while significant strides have been made—such as the introduction of targeted subsidy schemes in 2024 and alignment with the European Green Deal—implementation remains fragmented and constrained by institutional, financial, and technical barriers. The study advocates for a comprehensive and integrated policy framework that synergizes CE goals with regional development priorities, enhanced stakeholder engagement, and capacity-building initiatives. Accelerating Albania's transition to a circular agriculture economy will not only foster environmental sustainability but also improve economic resilience and regional equity.

Keywords: circular economy, agriculture subsidies, policy impact, sustainable development, Albania.

CONSUMER AWARENESS AND BEHAVIORAL DYNAMICS IN THE CIRCULAR ECONOMY OF THE REPUBLIC OF MOLDOVA IN THE CONTEXT OF SUSTAINABLE TRANSITION

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Abstract

The circular economy is a crucial model for transitioning towards sustainability, yet its success largely depends on consumer awareness and behavioural dynamics. This study examines consumer behaviour in the Republic of Moldova regarding circular economy principles, focusing on awareness levels, motivations, and barriers to adopting circular practices. The research employs a quantitative methodology, utilizing a structured questionnaire administered to a representative sample, combined with an advanced analysis of psychological and behavioural factors. To introduce an innovative dimension, the study integrates psychometric models such as perceived behavioural control and proposes a circular economy readiness index to assess consumer preparedness for sustainable behaviour. Additionally, an A/B testing experiment is conducted to evaluate the effectiveness of different behavioural messages (environmental, economic, social) in influencing consumer attitudes. Complementary to this, behavioural clustering analysis is applied to segment Moldovan consumers based on their engagement in circular economy practices, thus identifying distinct consumer profiles. The findings reveal that, while there is an increasing openness towards the circular economy, significant discrepancies exist between declared intentions and actual behaviours. These gaps are influenced by factors such as insufficient infrastructure, the high costs of sustainable alternatives, and the limited impact of awareness campaigns. The study also highlights the importance of a tailored approach in promoting circular economy principles through messages adapted to the socio-cultural context of the Republic of Moldova. The conclusions provide valuable insights for developing more effective public policies, designing evidence-based awareness campaigns, and refining circular marketing strategies. This research contributes to the existing literature by combining advanced quantitative methods and behavioral psychology to deepen the understanding of the transition towards a sustainable economic model.

Keywords: circular economy, consumer behavior, behavioral models, sustainable transition.

BRIDGING THE KNOWLEDGE GAP: CONSUMER EDUCATION AS A CATALYST FOR SUSTAINABLE TEXTILE CONSUMPTION

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Abstract

While EU policies advance sustainable textile initiatives, consumer awareness and engagement remain critical barriers to circular economy implementation. This study investigates how targeted educational interventions can transform consumer behaviour in textile consumption through an innovative pedagogical approach. The research examines the effectiveness of combining theoretical knowledge with hands-on industry exposure to enhance consumer understanding of textile sustainability. Through a case study at a Turkish university, we developed and implemented an educational framework that connects environmental awareness with practical decision-making in textile consumption. The approach uniquely integrates local industry partnerships, allowing students to witness sustainable production processes firsthand and understand their role as conscious consumers. By focusing on the consumer perspective in sustainable textile transitions, this study reveals how education can bridge the gap between EU environmental policies and consumer behavior. The findings demonstrate that experiential learning through industry collaboration effectively transforms students' understanding of their role in the textile value chain, leading to more conscious consumption decisions. This research provides valuable insights for developing educational strategies that empower consumers to participate actively in circular economy initiatives.

Keywords: consumer empowerment, sustainable consumption, environmental education, industry-academia collaboration, circular economy implementation, consumer decision-making, textile value chain, environmental awareness, experiential learning, sustainable development

A SYSTEMATIC REVIEW OF THE LITERATURE ON SUSTAINABLE BUSINESS MODELS IN RESTAURANTS, ZERO FOOD WASTE PRACTICES, AND CONSUMER AWARENESS

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Abstract

The study uses a systematic literature review technique to examine prior studies on sustainable restaurant business models and consumer behavior. We searched the Web of Science database using terms such as "sustainable restaurant models," "consumer awareness," "zero food waste," and "sustainable dining." The inclusion criteria focused on articles published during the last decade to ensure that the review covered the latest advancements and trends in the area. We located, analyzed, and categorized publications on our topic into themes related to sustainable business practices, zero-waste restaurant policies, and consumer behavior.

The studies compiled in the review, also highlight recurring trends, difficulties, and how consumer awareness affects sustainable restaurant decisions. Numerous studies indicate that consumer education together with effective marketing must exist to promote zero-food waste behaviors. Furthermore, restaurants that emphasize sustainability by efficiently utilizing resources and serving eco-friendly food, tend to attract more ecologically sensitive customers. The results of the study show that raising consumer awareness through focused instruction and transparent marketing can have a substantial effect on consumer behavior, thus increasing demand for environmentally friendly restaurants and helping the sector minimize food waste.

Keywords: sustainable restaurant models; consumer awareness; consumer behavior; zero food waste; prisma; literature review; sustainability marketing.

ANALYZING CIRCULAR ECONOMY VALUE CHAINS WITH A FOCUS ON STAKEHOLDER ENGAGEMENT AND COLLABORATION DYNAMIC

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Abstract

This article explores the transformation of traditional linear value chains into circular value chains, emphasizing the role of stakeholder engagement and the dynamics of collaboration among diverse actors. Building on the concept of the circular economy as a sustainable development strategy, the study analyzes how circular design and collaborative management contribute to resource efficiency and waste reduction. It highlights the essential involvement of all relevant stakeholders—governments, firms, civil society, and local communities—in co-creating circular solutions, with a focus on Romania and the Republic of Moldova. The article argues that the success of the circular economy depends on effective collaboration mechanisms, network leadership, transparent communication, as well as appropriate economic incentives and public policies. The conclusions underscore that only through collective and adaptive efforts can a resilient and inclusive circular economy be achieved.

Keywords: circular economy, value chains, inter-organizational collaboration, stakeholder engagement, sustainability

THE BEHAVIOR OF CZECH CONSUMERS IN THE AREA OF RECYCLING

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Abstract

This paper explores the behavior of Czech consumers in the context of sustainability, with a particular focus on recycling practices. The study draws upon a series of surveys conducted between 2018 and 2023, encompassing responses from 1,000 Czech consumers. The research is framed by the Triple Bottom Line concept—Planet, People, and Profit—and supported by internal grant-funded desk research. First, based on desk research, the most frequently reported sustainable activities in automotive companies were defined.

The findings from surveys highlight growing consumer interest in sustainable products and practices. Respondents demonstrated varying emotional responses toward companies committed to sustainability, with many expressing positive emotions such as love and happiness, while others reported feelings of indifference or even frustration. Key behavioral trends include increased attention to packaging reduction, the proper disposal of food scraps, and hesitation around discarding broken items.

Overall, the study reveals a nuanced picture of consumer behavior, where environmental awareness intersects with emotional engagement and practical habits, emphasizing the role of sustainability in modern purchasing decisions.

Keywords: consumer behavior, recycling, sustainability, Triple Bottom Line

EXPLORING CONSUMER AWARENESS AND BEHAVIORAL DYNAMICS IN CIRCULAR SYSTEMS THROUGH THE LENS OF HUMAN SCALE DEVELOPMENT (H-SD) THEORY

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Abstract

The theoretical concepts underpinning Human Scale Development (H-SD) theory provide multidisciplinary framework for studying the challenges of the circular economy in the context of consumer awareness and behaviour. The social foundations of sustainability encompass the essential conditions required to attain a fulfilling and meaningful life, including health, food, water, energy, social networks, housing, social equity, participation, justice, and education. These dimensions of social sustainability are interconnected with social justice, which ensures the fulfilment of Fundamental Human Needs (FHN) essential for a good life, as well as the imperative for behavioural and socio-cultural transformations required to meet the environmental and climate objectives outlined in the European Green Deal.

In the context of local circular economy, social sustainability and justice are fundamental principles that seek to ensure that the benefits of sustainability are shared equitably among all members of the community. Individuals play a critical role in this process by taking active roles in local initiatives, supporting inclusive decision-making, , and making conscious consumer choices. Through individual and collective action, local circular economy practices can contribute to the creation of more resilient, equitable, and socially sustainable communities. As ethical consumers, individuals also play a key role by making informed decisions, thereby driving systemic change.

The research aims to assess the prerequisites for promoting the social sustainability of the circular economy in Latvia through the H-SD approach. Early findings suggest that there are systemic gaps in human-centred approaches to circular economy implementation at local level. These challenges encompass technical and infrastructural deficiencies, inadequate support for initiatives and local businesses, and a lack of effective stewardship. Furthermore, social networks remain underdeveloped. This highlights the need for innovative models of collaborative governance focused on sustainability, as well as a broader dialogue involving diverse stakeholders.

Keywords: circular economy, consumer behaviour, human scale development, social sustainability, stakeholders

DETERMINANTS OF INDIVIDUAL WILLINGNES TO REDUCE, REUSE, AND RECYCLE AMONG ARMENIAN STUDENTS

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Abstract

The study investigates the predictors of individual willingness to reduce, reuse, and recycle among university students in Armenia. By distributing a comprehensive survey among students at both public and private universities, the study captures a wide array of variables, including economic preferences and demographic factors. Preliminary findings suggest that a higher willingness to take risks and patience is associated with a significant increase in the likelihood of reducing the use of electricity, while gender significantly influences several behaviors, with males less likely than females to engage in water-saving and using both sides of the paper, as indicated by negative and significant coefficients. It is also interesting that students from public universities are more likely to engage in repairing their damaged belongings. For the rest of reduce, reuse, and recycle behaviour, we found mixed results. Overall, this study contributes to the understanding of how individual factors interact to shape attitudes towards circular economy and actions among youth, providing insights for policymakers and educators to foster a more sustainable future.

Keywords: Reduce-Reuse-Recycle (3Rs), environmental behaviour, sustainability awareness, youth engagement, Armenia

CLIMATE VULNERABILITY AND RENEWABLE ENERGY CONSUMPTION: NEW EMPIRICAL EVIDENCE

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Abstract

This study investigates the relationship between climate vulnerability (VUL) and renewable energy consumption (REC) on a dataset comprising 162 countries over the period 1995-2022. Employing a quantile regression (QR) methodology, a positive relationship between VUL and REC has been found across all quantiles. The QR findings reveal variations in the impact of VUL on REC across different quantiles. The findings remain robust across various econometric methodologies as well as across different country sub-samples. The findings highlight the critical role of climate vulnerability in designing renewable energy policies.

Keywords: renewable energy consumption; climate vulnerability; Sustainable Development Goals (SDGs); quantile regression.

UNDERSTANDING THE CONSUMER'S ROLE TO CREATE SERVITIZED CIRCULAR BUSINESS MODELS

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Abstract

In response to the changing business environment, expanding the product portfolio and the dynamic demands of customers, and attracting their attention, in recent years manufacturing companies have developed service-focused business models (Vandermerwe and Rada, 1988; Lee, 2024). As a result, the share of services in the final output of manufacturing companies increases, opening on the other hand large horizons to innovation and to increase their competitiveness. Consequently, the interest towards servitization and scientific research in this field has grown significantly in the last few years, especially with the intensification of digitalization processes. At the same time, negative environmental processes have led to the creation of policies and undertaking of strategic actions to transform production and consumption dominated by linear flows of resources to restorative circular models (Hysa, 2020). These new models are an opportunity for businesses to innovate to overcome environmental problems, to create new products and services along the entire value chain, but also to change the consumer behaviour of the end user, but also in the business sector. Both types of users should strive to use resources sustainably and sparingly, extracting maximum benefit from them and striving to return them to production in a recycled form. On the other hand, there is an increase in the awareness of the modern consumer about sustainable consumption patterns and an increasing demand for products and services that respect the principles of the circular economy. These market situations and competition require companies to implement servitized circular business models (Stabler et al, 2024). This article, which has a conceptual nature, aims to outline the framework in which the consumers can passively or actively influence the achievement of servitized circular design business models with focus on textile and fashion industries.

Keywords: circular economy, circular business model, servitization, consumers, textile industry

STRENGTHENING LEGAL AND POLICY FRAMEWORKS FOR A CONSUMER-CENTRIC CIRCULAR ECONOMY IN MOLDOVA'S GREEN TRANSITION

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Abstract

As Moldova advances toward an inclusive green transition, aligning legal and policy frameworks with circular economy principles is essential to ensure both environmental sustainability and consumer protection. This intervention will explore the role of legal instruments and policy mechanisms in fostering a consumer-centric circular economy, addressing regulatory gaps, and promoting systemic change.

The presentation will cover:

The integration of circular economy principles into Moldova's legal and policy landscape, in line with EU accession commitments.

Strengthening consumer rights and responsibilities in circular economy models, ensuring access to sustainable products and services.

The role of legal instruments in promoting extended producer responsibility (EPR), waste reduction, and resource efficiency.

Regulatory mechanisms to incentivise innovation, green business models, and sustainable consumption patterns.

Comparative legal approaches and best practices from EU member states for Moldova's policy alignment.

By enhancing legal and policy coherence, Moldova can accelerate its transition to a sustainable, consumer-driven circular economy, balancing economic growth with environmental responsibility.

Keywords: circular economy, legal framework, consumer protection, green transition, Moldova

COMPETITIVENESS AND INNOVATION IN THE EU CIRCULAR ECONOMY

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Abstract

The transition to a circular economy is a priority for sustainable development and economic competitiveness in the European Union (EU). The aim of the paper is to analyze the competitiveness and innovation in circular economy across EU countries. Circular economy indicators such as private investment and gross added value related to circular economy sectors, employment in the sector, and patents related to recycling and secondary raw materials from 2005 to 2020 were used for 27 EU countries. A cluster analysis was conducted to group these countries based on their circular economy indicators. Analysis of variance (ANOVA) was used to identify differences in circular economy indicators between groups of countries and within each group. The results revealed significantly higher values of circular economy indicators in EU founding members compared to other EU countries. Therefore, policymakers should focus on increasing investment in circular economy sectors, particularly in newer EU member states, to foster a more innovative and competitive circular economy across all EU countries.

Keywords: competitiveness, innovation, circular economy, European Union

ENABLING CIRCULAR SUPPLY CHAINS: THE ROLE OF DIGITAL SOLUTIONS AND CONSUMER PARTICIPATION IN SUSTAINABLE TRANSITIONS

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Abstract

The transition to a circular economy demands coordinated efforts across supply chains, focusing on resource optimization, product lifecycle management, and closed-loop systems. Aligning circular economy principles with consumer-oriented policies and business processes offers a strategic opportunity to minimize environmental impacts while enhancing economic benefits.

A multicriteria decision-making framework was applied to evaluate circular economy challenges, assess key policy interventions, and rank digital solutions that support circular supply chains. A case study demonstrates the application of the analytical hierarchy process in evaluating six distinct consumer-focused circular economy strategies. Among the criteria analyzed, consumer participation in reuse and recycling emerged as the most critical factor for success.

This article underscores the role of digital innovation in advancing circular economy practices that benefit consumers. By integrating digital platforms, businesses and policymakers can improve resource efficiency, and optimize cost allocation within circular supply chains. Strengthening these processes not only benefits industries but also empowers consumers, driving broader environmental sustainability.

Keywords: circular supply chains, digital technologies, consumer engagement, sustainable transition, circular economy innovation

ENVIRONMENTAL REGULATIONS AND CONTRACTUAL RISK: WHEN CAN NON-PERFORMANCE BE JUSTIFIED?

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Abstract

In a global context marked by the intensification of environmental regulations and the transition to a circular economy, contractual relationships are increasingly subject to legal challenges related to the impossibility of fulfilling assumed obligations. Legislative changes driven by environmental policies can lead to situations where contracts become excessively onerous or even impossible to perform, raising the issue of invoking justifiable impediments. This topic is particularly important as it reflects current economic realities, where companies and consumers must adapt to a continuously evolving regulatory framework.

This study aims to analyze how environmental regulations can constitute a justifiable impediment in contract law, providing insights into how current legislation allows for exemption from liability in such cases. Furthermore, it investigates the differences between international legal systems regarding the applicability of hardship and force majeure clauses, as well as their implications for contractual security.

The methodology employed combines doctrinal and comparative legal analysis, the study of environmental protection regulations, and an examination of relevant case law. Special attention is given to contracts in strategic sectors, such as sustainable industries and green supply chains. The research findings highlight the need for a proactive approach in drafting commercial contracts, incorporating mechanisms for adjusting and renegotiating obligations in response to major legislative changes. Solutions are proposed to mitigate contractual risk, including the introduction of flexible adaptability clauses and clear delineation of circumstances in which justifiable impediments may be invoked.

We consider that the impact of environmental regulations on contractual relationships is an increasingly relevant topic, with significant implications for both economic and legal stability.

To prevent contractual deadlocks and commercial disputes, it is essential that both economic operators and legislators adopt a balanced perspective that ensures environmental protection and compliance with contract law principles.

Keywords: environmental regulations, contractual risk, force majeure, hardship, legal security

REPAIR, DON'T REPLACE: HOW BRAND COMMUNICATION OF REPARABILITY CAN CHANGE CONSUMER FASHION CHOICES

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Abstract

Circular economy, reparability, Digital Product Passport, conjoint analysis, responsible consumption

The fashion industry contributes to environmental degradation, largely due to consumer overconsumption and frequent disposal of low-quality fast-fashion items. Many initiatives encourage more sustainable behavior, including the EU's Digital Product Passport, which discloses product lifecycles and highlights reparability. Yet high perceived repair costs, difficulty, and lack of repair information deter consumers from prioritizing reparability in fashion. While sustainability marketing (e.g., eco-materials or recycling) can shape behavior, the impact of communicating reparability remains underexplored.

This study explores how reparability-focused marketing may foster circular purchasing decisions. It examines how consumers interpret and value reparability information, offering guidance to brands and policymakers on effective communication while advancing theoretical understanding of how these signals shape choice.

The research comprises two studies. Study 1 features semi-structured interviews with 20 fashion consumers and professionals to assess drivers and barriers to repair-oriented purchase decisions. Building on these insights, Study 2 employs a conjoint analysis with 300 fashion consumers to determine how specific repair-related attributes (e.g., brand-provided services, turnaround time, cost transparency) affect choice and willingness to pay. By experimentally varying repair guarantees and sustainability messaging, we test whether framing a product as "readily repairable" boosts perceived value, encourages purchase, and supports a price premium.

Preliminary findings indicate that consumers value brand-provided repair services and are willing to pay extra for reparability assurances. However, purely technical information often falls short; emotional storytelling, like a brand artisan's repair process, proves critical for sparking consumer interest. Further analysis will clarify how repair messaging affects both product choice and willingness to pay premium. From a theoretical standpoint, these results extend sustainability marketing theory by illuminating how specific repair cues shift consumer attitudes. Practically, integrating reparability into marketing strategies can more effectively engage consumers, promoting sustainable consumption in the fashion sector.

Keywords: reparability, brand communication, consumer behavior, sustainable fashion, circular economy

VALORIZATION OF OAK BARK AS A SUSTAINABLE SOLUTION FOR PRODUCING CHEMICALS AND BIOCHAR DERIVED MATERIALS

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Abstract

Bark is typically regarded as a by-product of the wood industry and is often utilized as a horticultural substrate or incinerated for energy production due to its heterogeneous composition and high impurity content. However, its high ash content limits its efficiency as an energy source, as ash elements decrease heating value and cause fouling in combustors. Bark, however, contains a significant fraction of extractives and lignin (up to 50% on a dry basis), offering potential as a renewable source of aromatic chemicals for applications such as panels, tannins, resins, foams, and bio-oils.

In this study, oak bark (*Quercus robur*) was valorized through ultrasonic cavitation extraction and alkaline extraction processes to maximize yields and characterize antioxidant properties and phenolic content. Solid residues from these extractions were further processed via slow pyrolysis, yielding biochar alongside condensable and noncondensable gases. The resulting biochar was characterized in terms of surface area, pore volume, and surface functional groups. Pretreatment through extraction significantly enhanced the biochar's adsorption efficiency, making it a promising material for environmental remediation applications.

The integrated valorization of bark biomass into chemicals and biochar-derived materials demonstrates a sustainable approach to waste management. This process contributes to circular economy goals by optimizing resource utilization and promoting the development of bio-based materials.

Keywords: oak bark, biochar, waste valorization, aromatic chemicals, environmental remediation

ENHANCING WATER RECOVERY IN ROSE OIL PRODUCTION: CERAMIC MEMBRANE APPLICATIONS FOR SUSTAINABILITY AND CIRCULAR ECONOMY

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Abstract

Rose oil is produced via distillation, which is a highly water intensive process. It creates significant environmental challenges in terms of water usage and wastewater management. Ceramic membranes have high chemical and thermal resistance, which are essential properties for rose oil distillation water filtration because of high organic load and relatively high temperature. Ceramic membrane filtration is a promising technology for water recovery and wastewater treatment. This study explores the potential application of ceramic membranes for water recovery in rose oil production through lab-scale tests. In addition, broader implications of scaling up ceramic membrane use are investigated.

Our findings suggest that ceramic membranes have the potential to be used for polyphenol recovery and wastewater filtration in the rose oil production industry. These membranes have potential for recovery of water used in distillation during rose oil production, thus reducing freshwater demand and wastewater discharge. Therefore, ceramic membrane filtration supports the circular and sustainable practices in the rose oil production industry. The wider ramifications of scaling up ceramic membranes are also examined by taking into account the potential for integration into existing production systems, energy requirements, and operational costs. As a result, this study supports sustainability goals and circular economy by highlighting the potential of ceramic membranes usage for water recovery in rose oil production.

This paper is based upon work from COST Action CA22124 - ECO4ALL "EU Circular Economy Network for All: Consumer Protection through reducing, reusing, repairing", supported by COST (European Cooperation in Science and Technology - www.cost.eu). This research was partially supported by a grant (120Y135) from Scientific and Technological Research Council of Turkey.

Keywords: water recovery, circular economy, sustainability, rose oil distillation wastewater

THE IMPACT OF JUSTICE DIGITALIZATION ON CONSUMER PROTECTION IN THE CIRCULAR ECONOMY: CHALLENGES AND OPPORTUNITIES FOR THE REPUBLIC OF MOLDOVA

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Abstract.

The digital transformation of justice systems has emerged as a crucial catalyst for enhancing consumer protection in the context of the circular economy. This paper explores the intersection between e-justice tools and sustainable consumption, analyzing how digitalized legal processes can support the enforcement of consumer rights and promote trust in circular business models. Focusing on the Republic of Moldova, a country in the process of EU alignment, the study investigates how justice digitalization can reinforce circular economy objectives such as reduction, reuse, and repair.

The research assesses Moldova's legal and institutional readiness for integrating consumer protection and digital justice reform, drawing on recent legislative developments, policy strategies, and European best practices. It highlights the potential of digital tools, such as online dispute resolution, electronic case management, and consumer information platforms, to overcome traditional barriers to justice and enable equitable participation in circular value chains.

Through a comparative analysis of EU frameworks and Moldovan practices, the paper identifies both challenges and opportunities for advancing a sustainable and rights-based economic model. The findings show that digital justice systems, when designed inclusively and transparently, can empower consumers, strengthen regulatory enforcement, and accelerate the transition toward a green, resilient economy.

This paper contributes to current debates on sustainable governance and digital innovation, providing actionable recommendations for policymakers, legal practitioners, and civil society actors aiming to align justice reforms with the goals of the circular economy.

Keywords: circular economy, consumer protection, e-justice, digital justice, policy alignment, sustainable governance.

THE IMPACT OF COMPETITION LAW ON CONSUMER RIGHTS: THE REGIONAL PERSPECTIVE ON MOLDOVA AND IN SOUTHERN AND EASTERN EUROPE

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Abstract

Protecting consumer rights by promoting fair market conditions, preventing anti-competitive practices, and ensuring that consumers benefit from competitive prices, quality products and innovation is the area of competition law regulation that is a significant compliment to consumer protection. In this article, we aim to explore the interaction between the EU competition legal framework and the field of consumer protection, highlighting their collective role in promoting market balance and protecting consumer rights. Fundamental trends in EU legal law, including recent trends in competition and the consumer protection legal framework, are examined in order to assess their broader implications from the perspective of judicial practice in this area. Particular emphasis is placed on the Republic of Moldova, a non-EU country that is striving to harmonize its legislation to European standards as part of its integration process. Referring to the analysis of practical cases in the field, the paper assesses the progress of the Republic of Moldova in harmonizing the legal framework in the field, highlighting the challenges and opportunities resulting from this alignment. The results of the research incorporate a comparative legal methodology, referring to the EU legal framework, the decisions of the Court of Justice of the European Union, and best practices from other countries in South-Eastern Europe. This article contributes to legal research on legal reforms, providing insights into how EU trends influence national legal systems and proposing strategies for Moldova to improve its regulatory alignment with EU requirements.

Keywords: competition law, consumer protection, EU integration, market balance, market dominance, Southern and Eastern Europe.

SUSTAINABLE INNOVATION IN PACKAGING DESIGN: 3 D- PRINTED BIODEGRADABLE SOLUTIONS FOR CIRCULAR ECONOMY

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Abstract

The transition towards a circular economy demands innovative approaches in material development and design practices. This study presents the development of 3D-printed biodegradable packaging solutions using polylactic acid (PLA), aligned with sustainability and circular life cycle principles. The packaging is tailored for a novel cosmetic serum, enriched with bioactive compounds derived from blackberry by-products through advanced extraction and encapsulation technologies.

The research explores the optimization of material properties for 3D printing, focusing on mechanical performance, biodegradability, and ecological compatibility. By integrating material science, 3D printing technologies, and sustainable design, the project demonstrates a comprehensive framework for reducing waste, promoting resource efficiency, and enhancing product functionality.

The outcomes not only address the pressing need for sustainable packaging in the cosmetics industry but also provide a scalable model for broader applications across sectors. This initiative reflects the core objectives of COST Action CA22124, fostering innovative design methods that extend material and structural functionality throughout their circular lifecycle.

Keywords: sustainable packaging, 3D printing, biodegradable materials, circular economy, eco-design innovation

THE IMPACT OF SUSTAINABLE ALTERNATIVES ON THE PASSENGER EXPERIENCE

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Abstract

In today's world where the concept of environmental sustainability is becoming increasingly important, the factors affecting airline preferences have also started to diversify. In addition to tariff and price-based components, consumers are now also considering more environmentally friendly options when selecting an airline. This study investigates the effects of airline companies' utilisation of sustainable (recyclable) alternatives in lieu of disposable options in the product service delivery process on passenger experiences. To this end, a sample of passengers who travel by airline at least once a year will be selected for the collection of data, and the hypotheses will be tested and results interpreted within the model created. It is anticipated that the research will contribute to the existing literature on the circular economy.

Keywords: circular economy, reusable materials, airline experience, sustainability.

TECHNOLOGICAL SOLUTIONS FOR RECYCLING POST-CONSUMER TEXTILE RESIDUES

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Abstract

On average, Europeans buy around 26 kg of textiles annually and throw away around 11 kg. Most used clothing (87%) is incinerated or landfilled, with a smaller proportion exported outside the EU (e.g., Africa). Currently, only 1% of the post-consumer textile residues are recycled.

According to EU legislation, 50 percent of textile waste should be partially recyclable by 2030, and a quarter should be fully recyclable. By 2050, however, full recyclability is required. Cotton waste - and other natural fiber-based textile waste (e.g., flax, hemp, wool) - must be recycled to achieve a sustainable economy. This process is not straightforward for natural fibers, including cotton, as there is currently no technology to transform waste textiles into valuable products. Intense research and technological innovation are needed to convert waste textiles containing vegetable fibers into reliable raw material feedstocks for producing valuable materials.

The main component of plant fibers is cellulose, a valuable biopolymer. In our research, we investigated the extraction of cellulose from waste cotton and its conversion into useful products - nanocellulose. In a multi-step process, first, we concentrated on removing the accompanying materials of waste textiles - dyes, resins, and textile auxiliaries - and extracting cellulose nanocrystals from the pure cellulose obtained. Then, these cellulosic nanomaterials produce transparent thin films that can be used as packaging materials. These films are biodegradable, meaning that in a short amount of time they are able to decompose in nature. Recycling cotton textiles into valuable nanocellulosic materials gives environmental benefits compared to incineration energy recovery.

Keywords: textile recycling, post-consumer waste, recycling technologies, sustainable textiles, circular economy

TRANSITION TO CIRCULAR ECONOMY MODEL IN TEXTILE SUPPLY CHAIN: CHALLENGES, PRIORITIES AND STRATEGIC SOLUTION PROPOSALS

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Abstract

The textile sector is a critical area in terms of environmental and economic sustainability due to intensive resource use. The circular economy model can provide significant benefits in this sector with the aim of reducing resource consumption, recycling waste, and minimizing environmental impacts. However, the transition process to circular economy applications faces various obstacles. This study evaluated the challenges encountered in the transition to circular economy in the textile supply chain by combining the Technology-Organization-Environment (TOE) and Triple Bottom Line (TBL) frameworks. The aim of the study is to investigate possible circular economy challenges in textile supply chain management by considering Technology, Organization, Environment, Social, and Economic factors. Within the scope of the research, the criteria were classified according to TOE-TBL dimensions and ranked and evaluated using the MCDM technique. While providing strategic guidance to textile sector stakeholders, the study emphasizes that circular economy models are a necessity for sustainable production. Strengthening legal regulations, adopting digital technologies, and raising awareness through training are recommended as key strategies in the transition process.

Keywords: circular economy; challenges; TOE; TBL; textile supply chain; sustainability; MCDM

CROSS-BORDER ENVIRONMENTAL EXPERTISE - AN INSTRUMENT FOR ENVIRONMENTAL IMPACT ASSESSMENT

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Abstract

At the beginning of the new millennium, balancing the need for economic and social development, on the one hand, and environmental protection, on the other, is a crucial priority in the international climate. This involves the promotion of sustainable development, which must embrace economic growth, improvement of the quality of life, health, education, social development, and environmental protection.

Environmental problems are particularly complex, as the causes are interrelated, requiring action at all levels: local, national, and regional authorities, as well as the European Union, each with its role in increasing responsibility for environmental protection.

In order to help Member State authorities and developers better manage the environmental consequences of construction projects, the Commission has brought together all existing EU legislation governing environmental impact assessment (hereafter EIA).

In this study we intend to approach transboundary environmental expertise as an essential mechanism in the context of infrastructure projects, exploitation of natural resources, construction of hydropower plants, transportation of hazardous substances, and other activities that may have a wide-ranging environmental impact across borders.

Keywords: environment, environmental expertise, cross-border, impact, natural resources, liability, infrastructure.

REPAIRING ECONOMIC DAMAGES: PERSPECTIVES AND AMBIGUITIES

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Abstract

The study of the category of purely economic losses indicates that they should be considered as damage, even in the absence of a primary or initial injury to a person or their property. In this context, the term "pure" or "exclusive" in the legal formula used by courts to assess these types of losses plays a determining role, as it exclusively refers to the financial losses suffered by the injured party.

It should be taken into account that in cases where economic losses are linked to a minor injury to health or property, the legal qualification and compensation criteria may differ accordingly.

Keywords: economic damages, legal remedies, compensation mechanisms, judicial ambiguities, economic justice

GOOD PRACTICE IN TAXATION FOR ENHANCING CONSUMERS PROTECTION AND CIRCULARITY

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Abstract

The paper analyzes the regulations regarding the relationship regulation – circular economy mechanisms and instruments, addressing the tools developed for stimulating the action towards real and sustainable application of circular economy instruments by everyone.

The research starts from the assumption that the consumers will dedicate much of their attention and develop their conduct towards enhancing and supporting circularity when such conduct is rewarded in a significant or at least notable manner. Based on the 2023 revision of the Commission of the circular economy monitoring framework, previously adopted in 2018, new indicators such as material footprint and resource productivity (to monitor material efficiency) and consumption footprint (to monitor if EU consumption fits within planetary boundaries) are used. The fiscal perspective of the possibility to have significant incentives is the most realist one and the research looks for the most efficient ways to be set in place by regulatory tools. This means enhancing the actions for the support of circular economy, from the consumer's perspective. The research investigates the contradictions that appear between the obligation to respect fiscal liability and the possibility to use taxation as a support mechanism for enforcing the conduct beneficial for circular economy. The schemes set up in various countries within the EU are compared, and the most efficient features are merged to propose the most efficient regulatory framework for this type of incentives.

The interest for further research emerges for establishing the ranking of legal norms that support circularity, against the higher interest of protecting the new framework for climate neutrality ambitions under the European Green Deal.

Keywords: consumers protection, circularity, EU taxation policy

ORGANIZING REPAIR CAFÉS FROM AFAR: SUCCESS AND FAILURE

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Abstract

This paper deals with the trials and tribulations of trying to set up Repair Cafés from afar from the perspective and experiences of one person, the author. It begins by presenting how the author began focusing on the organization of Repair Cafés. It next examines what a Repair Café is (as well as some alternatives to the Repair Café). It then discusses a brief history of Repair Cafés. The following section is on attempts to organize Repair Cafés (successes and failures that often led to organizing alternative, sustainable events). The concluding section wraps up the Repair Café experience.

Keywords: repair café, sustainability, crypto party

SUSTAINABLE WATER MANAGEMENT FOR FOOD PRODUCTION AND ENVIRONMENTAL PROTECTION

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Abstract

Sustainable food production involves the sustained availability of resources, such as water and energy for agriculture. Food production is one of the main industrial sectors in Albania, having one of the highest water consumption, and being one of the biggest producers of wastewater and sludge per unit of production which substantially impacts the quality of water resources. The inefficient management of discharges often results in significant problems that necessitate prompt action to reduce their harmful impact on the environment and human health.

This study aims to develop cost-effective approaches to sustainable water cycle management in Albania's food production sector, enable optimization of water consumption and wastewater discharge per unit of production, and reduce environmental pollution from wastewater discharge.

The establishment of a methodology for the evaluation of water cycle management in the food industry and the application of efficient water use strategies were the main focus of this research.

Wastewater discharges from the food industry were characterized by high carbon content (chemical and biological oxygen demand), nutrients, and other organic and inorganic pollutants. If discharged without proper treatment, these wastewaters can severely pollute receiving water bodies and disrupt the ecosystems.

The application of efficient water cycle management strategies, implementation of good manufacturing practices, reduction of water volume used for production, reuse of water generated from some production processes in other processes, recycling of water used for cleaning and sanitation, recovery of valuable nutrients and treatment of wastewater effluent before discharging to water bodies in three different food production industries, demonstrated the potential of those tools for water resource management bringing down the production cost of processed foods and minimize environmental pollution risk.

Keywords: sustainable water management, food production, environmental protection, water-efficient agriculture, resource sustainability

THE INTERPLAY BETWEEN ENVIRONMENTAL REGULATION, CLIMATE NEGOTIATIONS, AND ECONOMIC DEVELOPMENT IN MOLDOVA: A PATHWAY TO SUSTAINABLE GROWTH

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Abstract

This article critically examines the dynamic interplay between environmental regulation, climate negotiations, and economic development in Moldova, with a focus on the role of legal frameworks in steering the country as a catalyst toward sustainable growth. Positioned at the intersection of environmental law and economic policy, this study aims to evaluate whether Moldova's legislative alignment with European Union environmental standards has effectively addressed ecological challenges while fostering economic resilience. Utilizing a qualitative methodology, the research adopts a juridical approach, employing a doctrinal analysis of Moldova's environmental legislation, including the Climate Law and the Environmental Liability Directive, complemented by case studies to assess implementation efficacy.

The findings reveal that Moldova's proactive approach to environmental legislation, inspired by EU standards, has established a robust foundation for integrating climate considerations into economic planning. However, systemic gaps in enforcement, public awareness, institutional capacity, and public participation undermine the transformative potential of these laws. The discussion highlights the dual role of environmental regulations: as a driver of innovation in green technologies and as a safeguard against unsustainable exploitation of natural resources. Moreover, the article underscores the importance of international cooperation in climate negotiations as a means to enhance Moldova's adaptive capacity and access to green financing. By aligning national policies with global climate goals, Moldova can leverage its regulatory framework to attract investment in green technologies and foster innovation.

This study concludes that Moldova must adopt a more adaptive regulatory framework that balances stringent environmental protections with economic flexibility. Strengthening compliance assurance mechanisms, enhancing inter-agency coordination, and fostering public-private partnerships are essential steps toward achieving Moldova's sustainable development goals. By embedding environmental law into its economic strategy, Moldova can position itself as a regional model for harmonizing ecological integrity with economic progress.

Keywords: environmental regulation, climate negotiations, economic development, sustainable growth, Moldova, EU Standards, compliance assurance, climate law

PACKAGING WASTE GENERATION AND RECYCLING IN THE EU: TRENDS, TARGETS, AND INSIGHTS FOR A CIRCULAR ECONOMY

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Abstract

Economic development, modern lifestyles, and the surge in online deliveries have significantly fueled the rise in packaging waste, posing a critical environmental challenge in the European Union (EU). In 2022, the EU generated an average of 186.5 kg of packaging waste per capita, an 18.7% increase compared to 2011, equating to 29.3 kg more per person. Packaging production consumes substantial primary raw materials, with 40% of plastics and 50% of the paper used for packaging in the EU. Furthermore, packaging waste constitutes 36% of municipal solid waste. This growing volume, low reuse rates, inadequate collection, and insufficient recycling hinder progress toward a low-carbon circular economy. The EU has adopted the Packaging and Packaging Waste Regulation (PPWR), a more comprehensive framework that replaces the Packaging Directive 94/62/EC. The PPWR seeks to harmonize national measures, enhance market efficiency, and mitigate environmental and health impacts, aligning with circular economy principles.

This article aims to examine the state of packaging waste generation and recycling in the EU by each category in the period 2011 to 2022 using Eurostat data: Packaging waste by waste management operations and Recycling rates of packaging waste for monitoring compliance with policy targets, by type of packaging. Quantitative methods explore trends, targets, and disparities within EU, with a focus on packaging waste prevention and recycling rates to evaluate compliance with PPWR targets. Cluster analysis categorizes EU member states based on their performance in managing and recycling packaging waste, uncovering regional patterns and common challenges. The findings offer valuable insights into the effectiveness of current policies and identify areas needing improvement to achieve sustainability goals.

Keywords: packaging waste, recycling rates, EU environmental policy, PPWR compliance, circular economy, waste prevention, cluster analysis

TRANSFORMING CITIES: THE POWER OF BEHAVIORAL INTERVENTIONS FOR URBAN SUSTAINABILITY

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Abstract

This research explores the behavioural dimensions influencing circular practices in Albanian cities, aiming to uncover barriers, motivators, and interventions for designing the proper strategies to foster sustainable behaviours. This study contributes to discussions on how emerging economies, where circular economy principles are not much explored, can adopt and adapt circular economy principles through behavioural change, reinforcing the importance of social and cultural contexts.

A mixed-methods approach was adopted. Quantitative data are gathered through structured surveys targeting urban residents across key cities, including Tirana, Shkoder, and Durrës. The survey captures demographic data, recycling behaviours, reuse habits, and awareness level. Qualitative data were collected via in-depth interviews with stakeholders, including community leaders and local businesses. The data are analyzed using thematic coding for qualitative responses and statistical methods, including regression analysis to predict behaviours based on education level, access to facilities, and incentives. Descriptive and inferential statistics provide a summary of the data and give an overview of the relationship between variables.

The research provides quantitative and qualitative insights into urban recycling and reuse behaviours, highlighting different barriers like cultural resistance or lack of infrastructure. The findings can inform experimental strategies to foster circular behaviors, proposing actionable interventions that can serve as prototypes for circular economy models in other contexts.

Keywords: urban sustainability, behavioural interventions, sustainable cities, environmental behaviour change, urban transformation

INNOVATIONS IN CIRCULAR ECONOMY DESIGN STRATEGIES FOR BUILDINGS

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Abstract

The construction industry faces increasing demands to reduce resource consumption and waste production while simultaneously supporting socio-economic growth. The concept of the Circular Economy (CE) offers a framework to establish new paradigms within the construction sector, enabling the achievement of goals related to environmental preservation and sustainable human habitats. However, this paradigm shift necessitates innovative approaches to building design. Although the application of CE principles to building design is still in its early stages, research on CE implementation and innovative design strategies is rapidly expanding within the scientific community. This research aims to explore innovative circular design strategies for buildings. This paper provides a comprehensive literature review of Circular Economy theories, design strategies, and implementation practices. The findings identify commonly applied design strategies and highlight those with significant potential that require further development. Strategies such as adaptability, prefabrication, cradle-to-cradle design, and others can substantially reduce the environmental impact of buildings. Additionally, this paper discusses future possibilities for advancing the development of circular buildings.

Keywords: circular economy, building design, innovative design, construction industry.

CONSUMER CHALLENGES WITH WASTE SORTING AT LATVIAN HOUSEHOLDS

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Abstract

According to the EU targets aligned with the Green Deal, 60% of everyday waste collected and treated by municipalities must be reused or recycled by 2030. By 2035, EU countries must reduce the amount of municipal waste sent to landfills to 10% or less of the total generated municipal waste. To achieve these goals, sustainable and effective waste management practices should be implemented. The goal of the research is to evaluate the challenges of waste management at Latvian households. Latvian citizens were surveyed using the authors' developed questionnaire. Test for internal consistency using Cronbach alpha was performed to evaluate the quality of the questionnaire's scales. Data was analysed applying the methods of frequency analysis, rank correlation (Spearman rho coefficient), Mann Whitney U test. The main identified problem for Latvian consumers was a limited availability of waste sorting containers. Besides, the research revealed a low motivation of Latvian consumers. Data analysis allowed to confirm the hypothesis about the positive relationship between consumer green values and attitude towards waste sorting.

Keywords: waste sorting, Latvian households, motivation, challenges, survey

TOURISM COMPETITIVENESS, ENVIRONMENTAL QUALITY AND CIRCULAR ECONOMY: A PANEL APPROACH

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Abstract

Tourism as an important sector of the economy has significant impact on the GDP in certain countries. Tourism expenditure is a generator of employment and wealth in the whole economy, not only in tourism. Tourism has a positive impact on economic growth and development, but it can have a negative impact on the environment. With the increasing competition in the global tourism market, research on sustainability and competitiveness in tourism is attracting increasing attention. Environmental protection is one of the essential prerequisites for improving tourism competitiveness. Tourists are more likely to visit tourism destinations of high environmental quality. Circularity can be essential in increasing environmental protection. The aim of this paper is to analyze the impact of Sustainable Development Goals (SDGs) and circular economy on tourism competitiveness. The analysis was conducted for 27 European Union countries during the period 2014-2023.

Keywords: tourism, competitiveness, circular economy, environment, SDGs, EU-27

SUSTAINABLE CONSUMPTION HABITS OF MIGRANT COMMUNITIES IN TURKEY: OPPORTUNITIES AND CHALLENGES IN THE TRANSITION TO CIRCULAR ECONOMY

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Abstract

The transformation of consumer behavior is critical in the transition to a circular economy. This study examines the sustainable consumption habits and circular economy practices of migrant communities living in four major cities of Turkey (Istanbul, Ankara, Izmir, and Gaziantep). The research analyzes survey data collected from migrant households (n=768) of different socio-economic profiles and in-depth interviews (n=16). Using a mixed-method approach, the study examines migrants' food waste prevention practices, textile reuse habits, second-hand product usage, participation in the sharing economy, and inter-household solidarity networks. The findings show that migrant communities' traditional saving practices and community-based sharing networks significantly align with circular economy objectives. In particular, they have developed sustainable practices in food sharing, household goods reuse, and textile waste utilization. The research results offer policy recommendations for local governments to support and expand the existing sustainable consumption practices of migrant communities. In this context, the study reveals the potential contribution of migrant communities to achieving Turkey's circular economy goals.

Keywords: sustainable consumption, migrant communities, circular economy, consumer behavior

SUSTAINABILITY AND HUMAN RIGHTS VIA CONSUMER PROTECTION

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Abstract

Approaching the 2030 deadline for achieving sustainable development goals progressively intensifies the need to evaluate the relationship between sustainability objectives, competition policy, and consumer protection. Thus, the examination on the possibilities of alignment and cooperation between these three pillars towards a more sustainable, competitive, and consumer-friendly economy comes to the fore.

An analysis of the foundational principles underlying sustainability, competition, and consumer protection, reveals inherent tensions but also synergies among them, as an efficient economy driven by competition can either complement or conflict with broader sustainability goals and consumer protection objectives. The focus of EU institutions on environmental and competitive elements of the circular economy, with barely a mention of the social and consumer-related aspects being an expressive negative example of this interaction.

Achieving sustainability goals relies significantly on the understanding of the role of competition policy in promoting sustainability. However, a narrow focus on this aspect, without due consideration of the consumer's role, risks violating their rights and interests, undermining as such the very core of our political systems – the protection and promotion of human rights and freedoms.

Therefore, this research analyses the current state of competition policy in Europe, assessing its compatibility with sustainability and consumer protection objectives. It explores opportunities to integrate the regulations addressing practices like abuse of dominant position, anti-competitive agreements, mergers, or state aid, and aiming for a greener and more sustainable economy - into a framework that incorporates consumer perspectives. Moreover, an analysis of potential conflicting cases of such a regulation and consumers' rights would benefit to underscore the aspects in need of further attention from the regulators in order to prevent or resolve conflicts effectively.

In conclusion, this paper contributes to the ongoing discourse on sustainability, competition, and consumer protection by providing insights into the challenges, opportunities, and policy options for achieving a harmonious balance between these imperatives in the European context.

Keywords: sustainable consumption, competition policy, circular economy, consumer behavior

THE PERSPECTIVE OF LEGAL REGULATIONS IN THE FIELD OF LIABILITY FOR CONSULTANCY SERVICES

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Abstract

The paper analyzes the legal and economic implications of financial and consulting services under Articles 1391-1399 of the Civil Code, highlighting that third parties may use professional information for their own purposes. The presentation of false information or inadequate services can lead to economic damages for contracting parties and material losses for third parties. The concept of patrimonial and non-patrimonial damages (Article 19 of the Civil Code) is explored, emphasizing the role of the "rule of exceptions" in limiting compensation for purely economic damages. The paper also discusses the professional liability of notaries and lawyers, as well as the impact of audit and expert services, where third parties benefit from information without having the right to compensation, thereby avoiding increased costs for direct beneficiaries. The "rule of exceptions" is presented as an efficient mechanism for protecting the professional services market.

Keywords: legal liability, consultancy services, professional responsibility, regulatory framework, legal compliance

THE CONSUMER PRISM IN CIRCULAR ECOSYSTEMS: NAVIGATING THE MULTI-LEVEL MAZE OF CIRCULAR ECONOMY TRANSITIONS

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Abstract

The global economy faces unprecedented challenges due to environmental degradation, resource scarcity, and economic instability. The traditional linear economic model has proven unsustainable, necessitating a shift towards Circular Economy (CE). However, this transition is hindered by systemic barriers and complex stakeholder interactions. This research aims to address a critical gap in understanding consumer roles within CE ecosystems, examining how consumers both influence and are influenced by various stakeholders in the transition process. The study integrates the Multi-Level Perspective (MLP) and Stakeholder Theory to provide a comprehensive framework for analysing consumer engagement in CE transitions. This integration allows for a nuanced examination of consumer interactions at macro (landscape), meso (regime), and micro (niche) levels, while highlighting their impact on systemic changes. A Systematic Literature Review (SLR) methodology is employed to synthesize existing knowledge, identify patterns, and develop conceptual frameworks that elucidate consumer roles in CE ecosystems. The research utilizes bibliometric analysis and thematic synthesis techniques to ensure a rigorous and transparent review process. Expected contributions include enhancing theoretical understanding of consumer roles within CE ecosystems, providing a detailed mapping of consumer interactions with other ecosystem actors across different levels, informing strategies for engaging consumers in circular practices, and offering actionable recommendations for policymakers. By centring consumers in the CE transition and examining their interactions from an ecosystem perspective, this research aims to identify key leverage points for accelerating the shift towards a more sustainable and circular economy.

Keywords: circular economy, consumer role, circular ecosystems, sustainability transitions, multi-level governance

ADVANCING DUAL VET FOR THE GREEN ECONOMY: STRENGTHENING SUSTAINABILITY AND INDUSTRY ALIGNMENT IN THE VET SYSTEM OF KOSOVO

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Abstract

The shift to a green economy necessitates a qualified workforce capable of adopting sustainable practices. Vocational Education and Training (VET) system in Kosovo, has difficulties in aligning curricula with industry specific sustainability requirements. This article investigates the integration of sustainability and circular economy ideas into Dual VET system, focusing on three main sectors: renewable energy/energy efficiency (RE/EE), ICT, and wood processing.

The research suggests that while some VET institutions have adopted green initiatives, such as the installation of solar panels, recycling programs, and eco-clubs, the progress remains unsatisfactory due to limited financial and technical resources, outdated curricula, and a lack of alignment with environmental standards (ISO 14001:2015, etc.). Many businesses struggle to engage with the Dual VET system due to unclear legal frameworks and administrative burdens, further hindering the development of sustainability skills.

To overcome these gaps, this study suggests greater coordination among VET institutions, the commercial sector, and policymakers, as well as increased investment in contemporary training facilities, curriculum revisions, and sustainability certifications. Establishing sectoral skills committees, incorporating green skills into all VET content and increasing awareness through media campaigns and business collaborations can help to guarantee that Kosovo's workforce is ready for the demands of the green and circular economy. Strengthening these efforts will help Kosovo's climate obligations, Smart Specialization Strategy and long-term economic sustainability.

Keywords: dual VET (Vocational Education and Training), green economy, sustainable skills development, industry alignment, Kosovo education system

SECURITY OF DEVELOPMENT INTO A KNOWLEDGE-BASED SOCIETY: EASTERN EUROPEAN CASE

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Abstract

The necessity to focus on the Eastern European states for identifying the transformation and development model for backward societies into a knowledge-based one is justified by the need to resolve the biggest discrepancies and deviations from ensuring human security, as a result of continuation of the war launched by Russia against Ukraine in February 2022. More especially this concern for the strengthening personal safety and human security will become actual for entire EU but especially in Eastern Europe in the context of the efforts to restore all spheres of social life in Ukraine and in its neighbouring countries in the post-war period. The transformed and renewed society will be grounded improving environmental and spiritual sustainability while simultaneously achieving security and geopolitical benefits. The process of transformation, reorganization and renewal of contemporary society must begin with concern for man and for his primary interests and needs, such as the need for safety and security. The central concern in the process of building national security as a state policy must converge to the strengthening of human security in the context of extending prefigurative politics with its new aspects at the regional level, in the context of the EU enlargement approach, to build a knowledge-based society in this area, a morally renovated community, rebuilt on the basis of noospheric and bioethical principles, starting with the states of Eastern Europe targeted by the prospects of EU enlargement, such as Ukraine and the Republic of Moldova, as well as a number of states from the Western Balkans. The process of transformation and development of society with the permanent concern of manage security risks is organically connected with bioethical and human security problematic, by defending social equity, human rights and pleading for eliminations of security risks for the human in the context of global changes.

Keywords: knowledge-based society, development security, Eastern Europe, socioeconomic transformation, innovation and education policy

BARRIERS, CHALLENGES AND AWARENESS IN INDUSTRIAL SYMBIOSIS IMPLEMENTATION IN CONTEXT OF CIRCULAR ECONOMY

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Abstract

Industrial symbiosis is a key strategy in advancing the circular economy by promoting resource sharing among industries to reduce waste and enhance sustainability. However, its implementation faces significant barriers, including low awareness, weak stakeholder collaboration, and restrictive regulations. Technical challenges, such as integrating technologies, data sharing, and infrastructure gaps, further hinder progress. This study analyzes these challenges, providing recommendations to implement industrial symbiosis with circular economy goals, ultimately maximizing economic and environmental benefits while fostering more sustainable industrial ecosystems. The study gathers 67 expert interviews from 16 EU and 15 non-EU countries. Data are collected using Likert scales, multiple-choice, and open-ended questions, combining quantitative and qualitative methods, by analyzing correlative and factorial statistical models, and providing insights into expert perspectives on industrial symbiosis challenges and opportunities. High technology costs, lack of innovation, outdated infrastructure, and limited access to advanced recycling technologies are key barriers to industrial symbiosis, significantly hindering its adoption and limiting industries' ability to embrace sustainable resource-sharing practices. Also, the absence of fiscal incentives, insufficient funding, high upfront costs, stakeholder integration challenges, and complex regulations significantly issue for industrial symbiosis adoption. Addressing these barriers through supportive policies, funding mechanisms, and collaborative frameworks is essential for advancing sustainable industrial practices. In this context, governments should provide clear policies, funding, and incentives to promote circular economy, while universities and research centers advance innovation and knowledge transfer. Educational programs must enable the workforce with skills to support industrial symbiosis initiatives effectively.

Keywords: industrial symbiosis, circular economy, implementation barriers, sustainability challenges, environmental awareness

SUSTAINABLE GREEN CONSUMPTION NEXUS CIRCULAR ECONOMY: THE CONCEPT, POLICIES AND CHALLENGES

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Abstract

Nowadays consumers have changed their habits rapidly because of the environmental challenges such as climate change, pollution, lack of water, food and energy. There have been seen new ways in purchasing to sustain the scarce resources all over the world. Green consumption (GC), one of the novelty, may reversed the deterioration in environment and become the incentive for consumers to improve their environmental awareness. The most recent researchers have just started to explore the factors that contribute to the green consumption behaviors. Circular economy (CE) is currently defined phenomenon for sustaining green consumption broadly as “oriented toward sustainable development”. Sustainable green consumption (SGC) puts forward the idea of aiming to leave the resources available for the products and services necessary for individuals to continue their lives to the future. It can be stated that the prerequisite in the process of ensuring “Sustainable Green Consumption” is to understand consumer behavior. In this context, sustainable consumption is perceived as a phenomenon that is seen as an important part of the global environmental practices that are reflected on the consumer. Sustainable Green Consumption can be defined as having the awareness of consuming recyclable and sustainable products that are sufficient for our needs. In this paper, green consumption is defined as purchasing and consumption behaviors nexus circular economy related to environmental problems. It is believed that this study contributes to the literature using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method associated with a bibliometric analysis on sustainable green consumption nexus circular economy. OpenRefine and VOSviewer software are used to support the bibliometric analysis.

Keywords: circular economy, green consumption, sustainability, sustainable economy

FINANCING INNOVATIVE COMPANIES WITH CIRCULAR BUSINESS MODELS: INSTRUMENTS, CHALLENGES, AND POLICIES

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Abstract

The transition to sustainability and the circular economy is transforming business models and investment strategies, increasing the focus on the financial aspects of circular economy businesses. Despite the growing interest in this field, research has yet to provide a comprehensive view of the financial drivers and barriers faced by companies adopting circular business models. This study explores the role of innovative financial instruments in supporting circular economy businesses, analyzing key financing sources, criteria, and challenges.

Building on existing theoretical frameworks and empirical insights from prior research, this paper examines how public and private financial sources assess circular business models based on valuation, profitability, investment costs, and market potential. The findings indicate that while certain financial mechanisms are designed to support circular initiatives, many perceived drivers also function as inhibitors due to risk aversion, regulatory uncertainty, and profitability concerns.

A particular focus is placed on the role of venture capital, green bonds, impact investing, and government subsidies in financing circular economy companies. The study highlights the challenges these businesses face in securing funding, including difficulties in proving long-term financial viability, the lack of standardized evaluation metrics, and the hesitation of traditional investors to support circular ventures. Additionally, the research explores the role of financial policies in creating a more favorable environment for circular economy investments.

As a theoretical contribution, this study develops a conceptual model identifying the key financial factors shaping the success of circular economy businesses and offers policy recommendations to enhance funding accessibility. The results provide valuable insights for entrepreneurs, investors, and policymakers aiming to advance circular economy financing and foster sustainable business growth. By addressing financial challenges and leveraging appropriate funding instruments, circular economy businesses can scale their impact, drive innovation, and contribute to a more sustainable economic system.

Keywords: innovative financing, circular business models, sustainable investment, financial instruments, policy challenges

EXTERNALITIES FOR BUSINESS DECISION MAKING OF CIRCULAR ECONOMY IMPLEMENTATION IN SMART CITIES

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Abstract

Externality is either an indirect cost or indirect benefit that is caused by one party but financially incurred or received by another. Externalities can be negative or positive. A negative externality is the indirect imposition of a cost by one party onto another. A positive externality, on the other hand, is when one party receives indirect benefit as a result of actions taken by another. For a successful business model of any publicly funded project, direct and indirect benefits and costs must be fully established to derive a positive business case (e.g. based on benefit over cost ratio). This paper contributes to Eco4All by deriving new insights into the stakeholders' challenges, consumers' value chain, business processes, and obstacles in the implementation of circular economy concepts within smart city environments. The main aim of the study is to determine externalities and enable the policies to implement a common circularity framework for inclusive application and assessment in smart cities to support decision-making for all value chain stakeholders and consumers enhancing the implementation level of the European Circular Economy Action Plan (ECEAP). Based on extensive industry expert interviews, our new findings reveal the lack of value transfer across stakeholders and consumers, and there is an urgent need for more actionable and pragmatic solutions for circularity (including technology enabler, social value enabler, circular business model, human capability & behavior, and standard & legislation).

Keywords: externality, business model, circular economy, smart cities

CIRCULAR ECONOMY APPLICATIONS WITHIN THE FRAMEWORK OF SUSTAINABILITY IN TURKEY

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Abstract

Circular economy is a major focus area at the EU level and in Turkey. The understanding of the circular economy concept is still developing, and more studies are being undertaken to apprise industry players in Turkey about the applications of circular economy in the industry for the maintenance of ecological balance. Turkey aims to create a new production model for the circular economy based on sustainability and innovation, in which all waste generated in a production system is re-evaluated, thus saving raw material costs, while providing maximum resource and energy efficiency and environmental benefits.

Circular economy and sustainable development goals are intertwined and sustainability management and assessment encompassing economic, social, and environmental dimensions are essential focus areas. Cities and municipalities are facing many challenges such as climate change, waste, emissions, and sustainability. Thus, industry practices and public applications to achieve circular economy goals can play a major role in addressing them.

This study addresses circular economy applications through a review of the industry and public practices applied in Turkey. This study evaluates circular economy practices in Turkey within the framework of sustainability and EU practices. In this context, it offers a series of policy and strategy recommendations for the future.

The most important future steps for the development of industry practices and public applications to achieve circular economy may include focusing on recycling, reuse, refurbishment, and remanufacturing of products, components, and materials, incorporation of sustainability and circular economy issues into local policy, strategy, and goals.

Keywords: sustainability, circular economy, innovation, ecological balance, Turkey, and EU

AWARENESS OF THE ROLE OF EDUCATIONAL INSTITUTIONS IN PROMOTING THE CIRCULAR ECONOMY

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Abstract

The basis of this article is the fact that information is one of the factors of high importance in the process of adoption and transition to the circular economy. On the other hand, in the educational sphere the education process takes place, or the training of students in the spirit of circularity will result in a responsible society. Innovation also takes place in the educational sphere, as a result of research, innovation being another condition of the circular economy. Open innovation, through partnerships between universities and companies would help not only to successfully implement the circular economy, but would propagate positive effects for both parties involved, or a successful transition requires the collaboration of all parties involved. We believe that the integration of the educational component regarding consumption and production based on the circular economy in educational institutions and curricula (schools and universities) can be addressed by introducing it into the curriculum, as a cross-cutting issue. The role of institutions in the educational sphere is to achieve the transfer of information, training in the spirit of the circular economy and its promotion. Stakeholder mobilization in the circular economy can be achieved through system and staff reform, partnerships, innovation, and the existence of replicable models. Adapting the curriculum and continuing training of staff are ways to encourage development in vocational training. Motivating decision-makers and stakeholders to create networks for the circular economy should be a priority for decision-makers. In conclusion, we can summarize the following: consumption and production based on the circular economy can be encouraged in educational institutions through integration into the curriculum and system and staff reform; partnerships and innovation are key factors in the context of the transition to the circular economy; the existence of replicable good practice models is also seen as a possible catalyst for circularity.

Keywords: circular economy, partnerships, innovation, institutions, reforms

COMPARING SUSTAINABLE CONSUMPTION BEHAVIOUR BETWEEN UNIVERSITY STUDENTS AND HIGH SCHOOL PUPILS: THE CASE OF ALBANIA

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Abstract

Climate change and the transformation of sustainable supply chains and living habits have impacted consumption awareness, especially among Generation Z and Generation Alpha. Compared to other generations, these groups have been exposed both to greater pressure and, on the other hand, to more choices that influence their consumer behaviour. Although education for sustainable development (ESD) and the integration of Sustainable Development Goals (SDGs) into high school and university curricula have increased, sustainable consumption remains an underdeveloped concept among Generation Z and Generation Alpha, particularly in developing countries like Albania.

The aim of this study is to explore the priorities of sustainable consumption behaviour among Generation Z and Generation Alpha, focusing on university students and high school pupils, who are expected to have received some form of sustainable consumption education during their time in the education system. This study used a mixed-methods approach, combining both qualitative and quantitative methods. Five mixed-focus groups were conducted with university students and high school pupils from the cities of Tirana and Durrës in Albania in May 2024. Additionally, a questionnaire was distributed to 400 university students and pupils in September 2024.

Exploratory factor analysis (EFA) was used to identify the priorities of sustainable consumption behaviour, which included integrating the 4Rs (reduce, reuse, recycle, and recover) of the circular economy, promoting a healthy lifestyle and well-being, ensuring safe spaces at home and in school/university, and developing sustainable consumption skills. High school students showed greater awareness of priorities such as the 4Rs of the circular economy and the importance of safe spaces at home and school/university. Meanwhile, the need to develop sustainable consumption skills is an area that should be addressed for both groups.

Recommendations are made for policymakers, the education system, and education providers in Albania.

Keywords: sustainable consumption behaviour, education, generation Z, generation Alpha

ADVANCING LEADERSHIP FOR A CIRCULAR ECONOMY: INSIGHTS FROM THE SUSTAINABILITY INNOVATION MINDSET TRAINING

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Abstract

The global transition to a circular economy requires a new generation of leaders equipped with the skills and mindset to navigate the complexities of sustainability. Over three years, the Sustainability Innovation Mindset course trained 117 future business leaders from 14 countries in circular economy principles, integrating 24 hours of onsite education with 12 hours of online learning. This research-based initiative emphasizes the critical role of education in aligning operational strategies with sustainability objectives.

Drawing from the framework of Wholeness Systems Thinking (WST) and an Understanding-based approach outlined in the 21st EWA Edu model (Holman & Švejdarová, 2023, 2024), the program addresses the limitations of traditional knowledge-based learning, which often prioritizes short-term efficiency over long-term effectiveness. By fostering a Purposeful Mindset - where participants explore the "why" behind systemic challenges - the course enables future leaders to design innovative, resource-efficient, and ethically aligned strategies.

The data from the course reinforce the necessity of integrating WST principles into leadership development to overcome organizational silos and misaligned priorities (Holman & Švejdarová, 2024). Participants demonstrated the capacity to balance efficiency and effectiveness by applying holistic thinking to align business goals with societal and environmental imperatives.

This paper presents key findings and methodological insights, showcasing how a systemic, Understanding-based educational approach enhances leadership competencies for the circular economy. In addition, the research focused on exploring actionable strategies for implementing these educational frameworks, enabling their organizations to thrive in a VUCA (volatility, uncertainty, complexity, ambiguity) world while contributing to global sustainability goals. The findings underscore the importance of transforming educational paradigms to foster leaders who can drive circular economy principles in practice.

Keywords: circular economy, sustainability leadership, Wholeness Systems Thinking (WST), sustainability innovation mindset, 21st EWA Edu model, ethical business practices

TRANSFORMATIVE POLICIES FOR CONSUMER ENGAGEMENT IN CIRCULAR SYSTEMS

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Abstract

The transition to a circular economy identifies the need for transformative policies that actively engage consumers in sustainable practices. However, implementing such policies presents challenges, including consumer awareness deficits, and regulatory inconsistencies. Recent studies highlight that only 8.6% of the global economy operates on circular principles, indicating a gap in consumer participation and systemic adoption. The important challenge is the lack of consumer awareness and engagement. Despite 73% of consumers expecting companies to lead the change towards circularity, only 32% are willing to cover extra costs for sustainable products, reflecting a disparity between consumer expectations and purchasing behaviours. Infrastructural limitations further impede circular economy implementation. Regulatory frameworks are important in supporting consumer engagement in the circular economy. The European Union's Circular Economy Action Plan emphasizes the need for comprehensive policies; however, reliance on soft legal measures has been critiqued for insufficiently driving systemic change. This action plan showed measurable progress in specific areas, including a 12% increase in the circular material use rate across member states and the development of extended producer responsibility schemes that have improved recycling efficiency by up to 30%. However, disparities in implementation remain significant, particularly in non-EU regions, where fragmented regulatory structures obstruct systemic adoption. The analysis shows the necessity of refining and scaling transformative policies to achieve equitable, consumer-driven circular systems globally.

This paper focuses on a review of circular economy policies aimed at addressing challenges in implementing circular systems. Despite growing global interest in the circular economy, significant barriers remain, including limited consumer awareness, infrastructural gaps, and inconsistent regulatory frameworks across regions. The article examines existing and emerging policies aimed at engaging consumers, promoting sustainable practices, and enhancing resource efficiency. Through a comparative legislative approach, the study identifies best practices and policy gaps while addressing the disparity between consumer expectations and purchasing behaviours. It proposes actionable recommendations to drive systemic change and bridge this misalignment. Transformative policies can overcome this gap by effectively engaging consumers and facilitating the transition to a sustainable circular economy.

Keywords: circular economy, sustainable consumption, transformative policies, regulatory frameworks, policy implementation

MOLDOVA' S ACHIEVEMENTS AND PERSPECTIVES IN ALIGNING TO THE EU STANDARDS IN THE FIELD OF CONSUMER PROTECTION

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Abstract

As a candidate country to the EU, Moldova has demonstrated a commitment to strengthening its consumer protection framework through legislative and institutional reforms. This study highlights key accomplishments in transposing the EU acquis, including the adoption of relevant directives and regulations, and the establishment of national authorities for consumer protection and market surveillance. It further explores the ongoing challenges and future perspectives, focusing on the effective implementation of adopted legislation, enhancing consumer awareness, and fostering cooperation with EU institutions. By analyzing Moldova's progress, this article aims to provide insights into the country's trajectory towards full alignment with EU consumer protection standards, emphasizing the potential benefits for consumers and the market alike. The analysis contributes to understanding Moldova's readiness for EU membership in this crucial area and identifies areas requiring continued focus and support.

Keywords: consumer protection, EU standards alignment, Moldova, regulatory compliance, consumer rights

GUIDING GREEN INVESTMENTS BY BANKING SECTOR: AN OF PROFITABILITY, FINANCIAL STABILITY, AND CREDIT POLICIES

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Abstract

Investing in renewable energy has emerged as a key tactic in support of the global sustainable development goals. Nonetheless, banks continue to take a risk when funding renewable energy projects. The size and type of investments made in renewable energy are directly impacted by the financial stability, profitability, and credit allocation policies of banks. In this regard, it is crucial to comprehend how the performance of the banking industry affects the use of renewable energy in order to promote green investments and create sustainable finance.

This study examines the impact of banking sector performance on renewable energy consumption using the General Moment Method (GMM). The findings reveal two main results: First, Return on Assets (ROA) has a positive effect on renewable energy consumption, while Z-Score, which measures banks' financial stability, has a negative effect. The positive relationship between ROA and renewable energy consumption suggests that banks with higher profitability are more inclined to encourage investments in renewable energy and have a greater ability to finance capital-intensive, long-term projects. Conversely, the Z-Score's negative impact suggests that banks with stronger financial stability behave more cautiously when dealing with high-risk industries like renewable energy. This situation may cause banks with more solid financial structures to avoid long-term and uncertain investments. The findings indicate that while green investments are boosted by the banking industry's profitability, these investments may be constrained by financial stability. Policy recommendations suggest developing strategies to encourage profitable banks to direct renewable energy investments and to increase the participation of financially stable banks in green financing mechanisms. Additionally, it is emphasized that banking regulations that support green loans and financial innovations can be extremely important in boosting funding for renewable energy.

Keywords: green investment, financial stability, profitability, GMM

FINANCIAL INCENTIVES TO SUPPORT CIRCULAR ECONOMY PRACTICES IN ROMANIAN SMEs: A COMPARATIVE ANALYSIS

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Abstract

Our study compares Romanian SMEs' (small and medium-sized enterprises) circular economy practices to those of the European Union. Additionally, we concentrate on the financial incentives that the decision-makers provide to SMEs who implement circular economy practices. Comparative data analysis between Romania and EU nations is the primary emphasis of our study, to find the best models and learn from them. The findings demonstrate the existence of great heterogeneity of circular economy policies among EU nations. Additionally, Romania falls short compared to the majority of the countries examined in terms of providing SMEs with financial incentives to embrace circular economy activities. Because the enterprises analysed are SMEs, the sector in which these circular economy measures are most needed to be improved, we consider our findings to have consequences for the creation of framework regulations in Romania on this issue.

Keywords: SMEs, comparative analysis, circular economy, financing incentives

UNRAVELING CIRCULAR ECONOMY DYNAMICS IN THE EU: A BAYESIAN NETWORK ANALYSIS

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Abstract

Monitoring the transition toward a circular economy (CE) requires a systematic approach that captures the complex relationships between resource use, waste generation, economic activity, and sustainability outcomes. The European Commission's CE monitoring framework provides a structured dataset to assess progress across EU member states.

This study applies a Bayesian network (BN) approach to analyze key CE indicators using Eurostat data from 27 EU countries over the period 2010–2021. The dataset includes indicators related to material footprint, resource productivity, waste generation, recycling rates, circular material use, greenhouse gas emissions, employment, investment, patents, and GDP per capita. Bayesian networks offer a probabilistic modelling framework capable of identifying dependencies among these variables and quantifying their interactions. Unlike conventional statistical techniques, BNs allow for scenario analysis and uncertainty quantification, making them particularly useful for sustainability assessments. Our results provide insights into how different CE indicators are interconnected. For instance, we examine how shifts in resource productivity relate to waste generation patterns and economic performance. The study highlights potential trade-offs and synergies between waste management strategies, economic growth, and environmental sustainability. By leveraging a data-driven BN model, we contribute to a better understanding of CE dynamics and offer a methodological framework that can be extended to other sustainability assessments.

This research advances CE evaluation by demonstrating the value of Bayesian networks in analyzing multidimensional datasets. The probabilistic nature of BNs enables a flexible and transparent approach to assessing CE performance, providing policymakers and researchers with a tool for data-driven decision-making. The findings offer insights into how key CE indicators interact, highlighting potential dependencies and systemic patterns that could inform future research and policy discussions.

Keywords: bayesian networks, circular economy, sustainability assessment, waste management, EU policy, probabilistic modelling

IMPACT OF EU LAW AND ECHR JURISPRUDENCE ON THE MEMBER STATES SYSTEM OF PROTECTION FOR TAXPAYERS' RIGHTS - ROMANIAN CASE

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Abstract

Public authorities endeavor to maximize income collection to the public budget collides with taxpayers' legitimate resistance, based on the protection of the fundamental rights and the rule of law. The paper addresses the state responsibility to insure legitimate and facile return of the sums collected by unjustified performance or based on the unfair regulation. The focus is the interference of the termination of rights in the tax law and the protection of property as a fundamental right, particularly in the Romanian recent experience concerning the return on the excise duties for vicious conduct. The perspective of the EU law fundamental hierarchy and the ECHR principles and jurisprudence for the protection of property supports the research hypothesis that the taxpayer right to return of the illegitimate collected tax lays within the scope of general protection of the property. The research validates this, based on the analysis of the opinion expressed both in doctrine and jurisprudence.

Keywords: tax return, termination of right, property protection, ECHR jurisprudence