

CONFERENCE PROCEEDINGS

CASABLANCA CLIMATE LEADERSHIP FORUM 2024

Global Challenges, Local Solutions: Adapting International Climate Strategies for Africa’s Business Landscape

Scientific Day - October 24th, 2024

Scientific Tracks	Abstracts
<p style="text-align: center;">Track 1 Green Finance and Investment Strategies for Sustainable Development</p> <p style="text-align: center;">Track Chairs Anouar Hasbaoui Tariq Rachid</p>	<p style="text-align: center;">Assessing the Role of Islamic Finance Mechanisms in Supporting Renewable Energy Investments in Morocco <i>Kamal Tasi’u Abdullahi, Douniya Zeroual</i></p> <p>Climate change has spurred a global shift towards renewable energy, driven by the need to mitigate greenhouse gas emissions and their detrimental effects. Morocco, heavily reliant on imported fossil fuels, has embarked on an ambitious renewable energy agenda to enhance its energy security and reduce carbon emissions. This paper examines the role of Islamic finance mechanisms in supporting renewable energy investments in Morocco, highlighting the compatibility between Shariah-compliant financial principles and sustainable energy initiatives. Morocco's strategic renewable projects, such as the Noor Solar Complex and various wind farms, underscore the country's commitment to sustainable energy. The study delves into the unique attributes of Islamic finance, such as risk-sharing and asset-backed transactions, and their applicability to renewable energy projects through instruments like sukuk and mudarabah. It also discusses the potential economic, environmental, and social impacts of integrating Islamic finance into Morocco's renewable energy landscape. Despite significant progress, challenges such as high initial capital costs and regulatory hurdles persist. The paper concludes with recommendations to enhance collaboration, awareness, regulatory frameworks, capacity building, and innovation in Islamic finance to foster a conducive environment for renewable energy investments. By leveraging Islamic finance, Morocco can advance its sustainable development goals, reduce its dependence on fossil fuels, and contribute to global climate change mitigation efforts.</p> <hr/> <p style="text-align: center;">In Search of Safe Haven: Responsible Investments and Conventional Markets <i>Foday Joof</i></p> <p>Despite the recent growth in Sukuk and green bond markets driven by the desire for socially responsible investments, the literature is still limited. Thus, we investigated the volatility and returns spillover between socially responsible investments (Sukuk and green bonds) and conventional markets (bonds, equity, and natural gas). We applied the Diebold and Yilmaz (2012) approach to capture the time-in-varying and time-varying spillovers from December 28, 2012, to December 13, 2022. Our analysis indicated low connectedness between Sukuk and green bonds, the low volatility and</p>

	<p>return spillover between Sukuk and green bonds suggest a potential hedging benefit between the two assets. Moreover, Sukuk and green bonds exhibited high connectedness with bonds but low with the equity markets and fossil fuel energy markets. Furthermore, Sukuk and green bonds are the net receivers of return and volatility spillovers, whereas the bond market is a net transmitter. On the other hand, the time-varying results also revealed that return and volatility spillover in these markets reached their highest level during the COVID-19 episode, followed by the war in Ukraine and the negative oil price in April 2020.</p> <p>The Impact of Coal Balance Sheet Publication on Stock Market Performance in an Emerging Context <i>Yahya Anouar, Anouar Hasbaoui</i></p> <p>This paper is written with the aim of exploring the impact of environmental performance, particularly the reduction of CO₂ emissions, on the stock market performance of listed companies in Morocco. The carbon footprint concept is a measure adopted to quantify greenhouse gas emissions by companies and consequently assess the impact on climate change. Following a literature review on carbon footprint calculation methodologies and their relationship with share prices, a statistical study was carried out on three Moroccan companies: HIKMA, MARSAMAROC, and La Compagnie Minière Touissit (CMT). The results show that there is no statistically significant relationship between CO₂ emissions reduction and share price variation for these companies, suggesting that other factors could influence stock market performance more than environmental efforts. In the Moroccan context, the absence of binding regulations could explain these results.</p> <p>Sustainable Solutions: Tackling Pharmaceuticals Household Waste in the United Arab Emirates <i>Duaa Suliman, Rafa Al Khalifa, Mohamed Babiker Musa, Immanuel Azaad Moonesar</i></p> <p>The pharmaceutical industry is a major player in human health and well-being. However, a considerable amount of waste is generated in the pharmaceutical industry. Pharmaceutical waste management has emerged as a critical issue for regulators, and environmental agencies worldwide. Large amounts of expired and unused medications accumulate in households. Unused/expired pharmaceuticals are disposed of to the municipal sewage system or waste disposal. There is evidence that pharmaceutical active ingredients reach the environment, however, the risk to public health from low-level exposure to pharmaceuticals in the environment is currently unknown. Several countries have implemented different initiatives to decrease pharmaceutical household waste. In many countries, there is legislation to address the issue of household medical waste, and this waste is collected in hospitals, clinics, law enforcement agencies, and pharmacies. Moreover, the published work on household waste lacks an in-depth analysis. The primary challenges associated with the lack of post-purchase involvement in the life cycle of unused medicines include patients' insufficient awareness of proper disposal methods, issues in medication distribution, legislative gaps, and the absence of an incentivized sustainable system for widespread reduction of medication waste. Therefore, there is a need to establish guidelines based on global best practices provided by leading global health agencies such as the World Health Organization. Although the Pharmaceutical sector in the UAE is highly regulated, the issue of</p>
--	---

	<p>pharmaceutical waste persists. In the UAE, there is no legislation regarding household medication waste disposal. This policy brief highlights the issue of household medication waste in the UAE. Through this paper, there are several policy options suggested to aid in the reduction of pharmaceutical household waste in the UAE. Moreover, our analysis reveals promising solutions for addressing these issues by developing novel services based on a circular innovation model.</p>
<p style="text-align: center;">Track 2 Corporate Responsibility, Consumer Engagement, and Climate Action</p> <p style="text-align: center;">Track Chairs Kenza El Badia Jako Volschenk</p>	<div style="background-color: #e0f2f1; padding: 10px;"> <p style="text-align: center;">Climate Driving Change: The Role of Financial and Behavioral Factors in Household Waste Management <i>Kaoutar Jamaï</i></p> <p>The increasing global challenges related to environmental degradation and urbanization have driven the need for effective waste management solutions, particularly in emerging markets. Household waste management (HWM) has become a critical aspect of sustainable urban development, as improper waste disposal contributes to pollution, greenhouse gas emissions, and biodiversity loss. In response, researchers have explored various strategies to incentivize households to adopt sustainable waste management practices. Financial incentives, such as Pay-As-You-Throw (PAYT) and Save-As-You-Throw (SAYT), have been identified as potential drivers for behavior change, encouraging households to either reduce waste or improve sorting behaviors. However, existing research indicates that financial mechanisms alone may not be sufficient to ensure long-term behavior change, especially without considering psychological factors like empowerment and pro-environmental behavior (PEB). This study investigates the role of financial incentives, psychological empowerment, and PEB in promoting the adoption and use of waste management systems (WMS) in emerging markets. Based on data from 320 respondents in Casablanca, Morocco, these dynamics were examined by using the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis. The research highlights the differential impacts of SAYT and PAYT schemes and explores the moderating role of PEB. The findings suggest that while SAYT schemes significantly enhance system usage, PAYT schemes show limited influence on behavioral intentions. Empowerment significantly increases behavioral intentions, and PEB is a strong predictor of both behavioral intentions and actual system use. The study provides insights for policymakers aiming to design integrated waste management strategies that combine financial, psychological, and educational interventions to foster sustainable household waste practices.</p> </div> <div style="padding: 10px;"> <p style="text-align: center;">The Commitment of Moroccan SMEs to CSR: Assessing Attitudes, Practices, and Community Impact <i>El Mehdi Es-sbaa</i></p> <p>This study examines the adoption of Corporate Social Responsibility (CSR) among Moroccan SMEs and its impact on local sustainable development. Using a quantitative survey complemented by a literature review, the research evaluates SMEs' engagement with CSR, focusing on their pursuit of CSR labels from the Confédération Générale des Entreprises du Maroc (CGEM) and adherence to ISO 26000 standards. Results show varied engagement levels, with financial constraints, lack of information, and time limitations as major barriers. Despite this, many SMEs recognize the value of CSR for community development. The study highlights the need for increased awareness and support to enhance CSR adoption. Future research should explore qualitative insights to deepen understanding and compare</p> </div>

	<p>findings with other regions. This research offers practical recommendations for policymakers, academics, and managers aiming to foster CSR practices among SMEs.</p> <p>Influence of Multinational Corporations on Consumer Attitudes, Motivation, and Behavior Towards Waste Management: A Case Study of Coca-Cola in Morocco <i>Kenza El Badia, Sara Hathout, Chaimaa Hathout</i></p> <p>Pollution from waste has become a global crisis, threatening to cause detrimental, irreversible damage to ecosystems and the environment. Multinational corporations (MNCs) have a direct responsibility, as their manufacturing, production, distribution, and operational practices often imply a detrimental environmental impact. Despite having made engagements to reduce their impact on the environment, many MNCs face different regulations, environmental management systems and consumer attitudes all around the world. This article aims to present a comprehensive conceptual framework that elucidates the mechanisms through which MNCs can drive positive changes in consumer waste management behaviors. By synthesizing existing literature and incorporating relevant theories such as the Theory of Planned Behavior, the 3rs and Self- Determination Theory, this study establishes a theoretical foundation for the proposed model. It also emphasizes the need for a strategic approach to encourage sustainable waste management practices at the consumer level. Through a theoretical framework, this article introduces a model designed to explore the dynamic relationship between multinational corporations and consumer behavior and motivation in the context of waste management practices.</p> <p>Exploring Consumer’s Perception of Green Products: An Empirical Research <i>Ahmed Iraqi, El Mehdi Driouche, Karim Khalifi, Boisse Traoré</i></p> <p>This study investigates the complex factors influencing the adoption of green products, focusing on psychological, economic, and informational barriers. The research is set against a backdrop of growing environmental concerns and the increasing presence of green products in the market. A structured questionnaire was distributed online to a diverse group of primarily young adults with higher education levels. The survey captured data on demographic information, purchasing behavior, perceptions of green products, and factors influencing consumer trust. The results revealed that while environmental concerns and personal norms are significant motivators for adopting green products, barriers such as habit strength, skepticism due to greenwashing, and economic concerns significantly hinder adoption. Many respondents expressed doubts about the authenticity of green claims and were reluctant to pay a premium for products perceived as less convenient or lower in quality. The study concludes that companies need to commit to transparent and honest sustainability practices, improve the affordability and convenience of green products, and educate consumers about the real benefits and limitations of these products. By addressing these issues, it is possible to bridge the gap between consumer intentions and actual behavior, aligning market dynamics with the broader goals of sustainability.</p> <p>The Impact of ESG Initiatives on Organizational Performance: The Case of PATAGONIA <i>Imane Dalta, Anouar Hasbaoui, Tariq Rachid</i></p>
--	--

	<p>This article explores the impact of Environmental, Social, and Governance (ESG) practices on the organizational performance of Patagonia, a company recognized for its commitment to sustainability. Based on data from Patagonia's annual and ESG reports for the years 2018 to 2021, this study examines the correlations between several key variables: the use of recycled materials, the Net Promoter Score (NPS), employee retention rate, CO2 emissions, and revenue. The results show that the increased use of recycled materials is strongly correlated with an improvement in NPS, suggesting that environmental initiatives are perceived very positively by consumers. In contrast, social initiatives, although positively correlated with NPS, show a complex relationship with employee retention, indicating that other factors influence these results. Additionally, the reduction in CO2 emissions presents a moderately negative correlation with revenue growth, revealing nuanced dynamics between environmental sustainability and financial performance. These findings underscore the importance of ESG practices in enhancing customer satisfaction and corporate competitiveness. However, they also highlight the complexity of these relationships, requiring careful management and continuous evaluation. This study contributes to the understanding of the effects of ESG practices on overall corporate performance and offers recommendations for maximizing the benefits of these initiatives.</p>
	<p style="text-align: center;">The In-Between of Saying and Doing: Stakeholder Perspective on Ethical Intention, SDG Adoption, and ESG Realization in MENA MNEs' <i>Hicham Nachit, Miguel Matos Torres, João Bento, El Mehdi Es-sbaa</i></p> <p>Multinational Enterprises (MNEs) face rising pressure to balance profitability with sustainable practices, particularly in regions like the Middle East and North Africa (MENA), where regulatory frameworks are underdeveloped. This study investigates how ethical practices (EP), Sustainable Development Goals (SDGs) adoption, and Environmental Management Practices (EMP) influence sustainability performance (SP), focusing on the "intention-realization" gap between ethical intentions and actual outcomes. Grounded in stakeholder theory, we analyze data from 560 MNEs to examine the relationships among EP, EMP, SDGs, and SP. Results indicate that while EP alone negatively impacts SP, it positively affects EMP, which in turn enhances SP, showing that EMP operationalizes ethical commitments into measurable outcomes. Conversely, SDG adoption has a complex influence: it directly reduces SP yet positively moderates the effect of EP on SP, suggesting that while SDGs offer a strategic framework, their effective integration into corporate strategy remains challenging in the MENA context. These findings highlight that MNEs cannot rely on ethical intentions alone but must operationalize them through robust environmental practices to achieve SP, while also navigating the complex role of SDGs. This study advances stakeholder theory by illustrating the importance of aligning ethical commitments with practical strategies for sustainability, offering insights for MNEs to address both local and global sustainability challenges.</p>
<p style="text-align: center;">Track 3 Climate Change Regulation, Economic Growth, and Policy Impact</p>	<p style="text-align: center;">Climate Change Threatens the Health of Human Societies <i>Reza F. Saidi</i></p> <p>Today, climate and weather changes have affected all aspects of human life. The average global temperature has increased by about one degree. The concentration of carbon dioxide in the earth's atmosphere is increasing. The increase in temperature and greenhouse gases, in addition to bad environmental effects, has</p>

<p>Track Chairs Ahmed Iraqi Hossein Varamini</p>	<p>directly and indirectly endangered human health. The increase in carbon dioxide concentration on agricultural products also has negative effects such as the reduction of protein and vitamins. These changes have adverse effects on the human body and lead to an increase in non-communicable diseases. An increase in temperature, especially in the elderly, can lead to an increase in various diseases such as diarrhea and malaria. It is estimated that climate change can lead to the death of about 500 thousand people in the world every year. Climate change is also associated with an increase in pollutants in the air, which can be associated with an increase in non-communicable diseases such as heart and lung diseases. Chronic kidney diseases are also increasing due to climate change and temperature rise. This issue is especially prominent in hot and dry regions of the world such as the Middle East and Central America. In scientific studies, global warming and climate change have been associated with increased mortality, need to be hospitalized, heart-pulmonary diseases, childbirth problems, various cancers and mental illnesses. The increase of these diseases is associated with a decrease in people's productivity and an increase in poverty, especially in vulnerable groups. Policymakers in the field of health and treatment should also prevent the adverse effects of this phenomenon on the health of the society by making the right decisions. Encouraging correct health behaviors such as not using tobacco or increasing movement can be very helpful in this regard.</p>
	<p style="text-align: center;">Designing the Green Agenda for Africa's Built Environment <i>Chinwe Ajene-Sagna, Michael Ivenso, Emmanuel Falude</i></p> <p>This paper addresses the urgent need for sustainable development in Africa's built environment amid a rapidly growing population and infrastructure boom that will result in a significant increase in activities within the construction industry – the single largest sector-contributors of greenhouse gas emissions and resource consumption. It highlights a critical "knowledge disconnect" between scientific and economic communities, who recognize the climate crisis's urgency, and on-the-ground practitioners in Africa, who prioritize immediate socio-economic concerns. As a solution, it proposes radical leadership that can serve as the "interconnectors" and proposes key execution approaches including the establishment of a Green Policy Handbook for Africa's built environment that incorporates green building certification standards, embraces carbon markets and tax incentives to encourage green innovation. Capacity-building initiatives are highly recommended to educate stakeholders on the benefits of sustainable development and to mobilize grassroots support. Additionally, the paper underscores the potential for partnerships with development finance institutions to secure funding for green projects. Through a collaborative, policy-driven approach, Africa can leapfrog current development models, ensuring resilient infrastructure that aligns with global climate goals while fostering economic growth and social equity.</p>
	<p style="text-align: center;">Antecedents of the Willingness of South African Fashion Retailers to Pay for Climate Services <i>Jako Volschenk, Lauren Barre, Adriana Fumi Chim Miki</i></p> <p>Climate Services (CS) have emerged to provide tailored climate information for decision-making, helping businesses and governments mitigate risks and adapt to climate change. The extant literature lack research relating to factors influencing the willingness of businesses to pay for CS. This research evaluated the willingness of</p>

	<p>South African fashion retailers to pay (WTP) for CS by exploring six hypothesized antecedents of WTP. Structural equation modelling (PLS-SEM) was applied to data obtained from a sample of 147 key retail industry respondents to identify the antecedents of WTP CS and demonstrate the model's explanatory power, reliability, and validity of the results. Our results show a high level of WTP for CS among fashion retailers, motivated by 1) social influence from stakeholders, 2) financial capacity to pay for CS, 3) environmental concerns. The capacity of CS to generate competitive advantage is not a motivator yet. For now, CS should be targeted at firms that are financially stronger as WTP rely on the financial capacity to pay. To develop the market, efforts should be directed at raising awareness about CS and its benefits on the firm performance. The contribution of this study lays mainly at the theoretical and the empirical levels. Little is known about willingness to pay CS among retail companies, what should become a major market for CS. The paper fits with the aims of this journal in that it describes the WTP for a key cog in the ability of Africa to adapt to climate change.</p> <p>The Impact of Climate Change Regulation on Economic Growth: A Comparative Analysis Between South Africa and Morocco <i>Zineb Fares, Anouar Hasbaoui, Tariq Rachid</i></p> <p>This study examines the relationship between economic growth and carbon emissions over the last ten years in South Africa and Morocco. The need for more insights on how environmental factors influence economic performance is very important to many stakeholders. The research aims to measure the impact of CO2 emissions on GDP growth using linear regression model. The finding results reveal a strong positive correlation between CO2 emissions and GDP growth in South Africa, highlighting the challenges faced by a carbon-intensive economy in transitioning to a low-carbon future. Conversely, Morocco exhibits a weak and non-significant relationship between emissions and economic growth, reflecting its successful efforts to decouple economic development from carbon intensity through substantial investments in renewable energy. These contrasting results highlight the importance of tailoring climate policies to the specific economy.</p> <p>The impact of Economic Growth on the Environment: Evidence from Emerging Economies <i>Hossein Varamini, Saad Laraoui, Hicham Nachit, Kaoutar Jamai</i></p> <p>This study, "The Role of Economic Growth on the Environment: Is the Trend Reversible?", explores the relationship between GDP growth per capita and CO2 emissions, focusing on Morocco. Increased economic activities have led to higher fossil fuel use and CO2 emissions, causing significant environmental degradation. Using data from emerging and developed economies, the study examines these trends and highlights the need for policies to decouple economic growth from emissions. Key findings show a strong positive correlation between GDP growth and CO2 emissions in Morocco from 1990 to 2021. Successful cases in other countries demonstrate that strategic policies, green technologies, and public awareness can mitigate environmental impacts while promoting growth. The study calls for a comprehensive approach involving policy reform, corporate responsibility, and education to achieve sustainable economic development and reduce carbon emissions.</p>
--	--

<p style="text-align: center;">Track 4 Societal Transformation and Social Innovation</p> <p style="text-align: center;">Track Chairs Majid Kaissar El Ghaib Nada Naufal</p>	<p style="text-align: center;">Bridging Hearts and Bottom Lines: Unraveling the Socio-Emotional Tapestry of Family Businesses for a Socially Committed Tomorrow <i>Azzeddine Alliou, Hicham Nachit, Rachid Hachad</i></p> <p>The current research endeavors to examine the fundamental tenets of accountability within the context of small and medium-sized family enterprises. This approach recognizes the many objectives of family-owned businesses and suggests a method for integrating them into a structure that represents the owners' desire to increase the social and emotional advantages they get from doing business. Consideration is given to the application of this conceptual framework to the study of social responsibility in small and medium-sized businesses. We illustrate the distinction between non-family organizations and big family enterprises about the foundations of accountability in small and medium-sized family businesses by comparing several theoretical approaches that are the result of interdisciplinary study.</p>
	<p style="text-align: center;">Business Model Innovation as a Vector of Sustainable Performance: The BioDrive Case <i>Fabrice Shurweryimana, Majid Kaissar El Ghaib</i></p> <p>Sustainable development's importance is widely recognized yet achieving the Global Sustainable Development Goals (SDGs), particularly in Southern countries, remains challenging. Despite some progress in certain nations, others in the South lag behind, facing significant barriers. Limited energy access or high energy costs are key obstacles, hindering these countries' capacity to support growing logistical and production demands. Reliance on expensive fossil fuels diminishes economic competitiveness, reduces social development opportunities, and exacerbates environmental harm. Governments are actively seeking alternative energy solutions that foster economic, social, and environmental progress in line with the SDGs. At a microeconomic level, innovative companies also play an essential role, offering sustainable solutions with substantial impacts. BioDrive, a South-based startup, exemplifies this approach by providing efficient biofuel through an innovative, sustainable business model. Our qualitative case study reveals BioDrive's process—transforming used domestic oils into biodiesel that is cheaper, less polluting, and generates social impact by involving local entrepreneurs. Each stage of BioDrive's value chain—from supply to distribution—achieves significant economic, social, and environmental performance. This research underscores how Southern startups can drive sustainable development, contributing to SDGs through affordable, impactful innovations. It also prompts discussion on replicating these models across sectors, adapting to Southern contexts and constraints for broader sustainable progress.</p>
	<p style="text-align: center;">Cultural Tourism and Historic Survivals: The Impact of Boom-and-Bust Cycles <i>Alf H. Walle</i></p> <p>Boom-and-Bust cycles that result from variations in economic activities (including those associated with extractive industries, ecological factors, and other causes of social and economic growth and disruption) can create cultural and architectural “time capsules” capable of being redeveloped into tourism destination. A comparison of Antigua in Guatemala, Dawson City in the Yukon of Canada, and Marrakech in Morocco, North Africa, demonstrates this tendency and is discussed</p>

	<p>from strategic and tactical perspectives involving the development and promotion of tourism destinations.</p> <p>The Role of Digital Skills in Universities: Addressing Climate Change and Fostering Leadership in Moroccan Universities <i>Houda Kaa, Ilham Oumaira, Hanane Alloui</i></p> <p>As climate change poses unprecedented obstacles, universities bear a pivotal responsibility in equipping future leaders with the essential skills to address these challenges. This paper examines the significance of incorporating digital competencies into university curricula to respond to climate change and nurture leadership. Through an exploration of current educational frameworks, technological advancements, and case studies, the paper underscores how digital proficiencies can enhance climate change education and foster the development of effective leaders in the global fight against warming. The paper includes robust numerical data from various programs and initiatives to provide a comprehensive understanding of the impact of digital education. Emphasis is placed on the initiatives undertaken by Moroccan universities to integrate digital skills into their educational systems.</p> <p>Broadening organizational learning models to Yin-Yang logics <i>Marc Idelson</i></p> <p>Past organizational learning agent-based simulations of exploration and exploitation addressed diverse community of learners in uncertain and dynamic, albeit not volatile, environments, with some measure of complexity but neither agents, nor organizational code, nor environment was awarded any degree of ambiguity in past papers. We broaden the framework beyond its parochial origins in Western, specifically Aristotelian, epistemological tradition. Our novel simulations extend collective formal and tacit learning algorithms to embrace volatility, Yin-Yang thinking, and immanence. Embrace of volatility is embedded into none, some or all agents and, when populations are mixed, these agents are distributed evenly or segregated in a tacit, social learning network. Optimal formal learning performance is shown to depend on a conjunction of environmental ambiguity, agent and organizational code embrace of volatility. Optimal tacit learning performance is shown to depend on environmental ambiguity, agent embrace of volatility and the structural distribution of the latter in settings of cognitive diversity. Our paper also offers future exploratory paths and contextual variations, including uncertain goals and varying degrees of formal and tacit knowledge diffusion, Sino-Western hybridization of learning heuristics, as well as knowledge creation from Sino-Western lesson sharing, and a call to explore what complementary logics frameworks emerged beyond China and the West. Our paper concludes on a call to acknowledge the benefits of cognitive (logics) diversity in addressing wicked problems, such as combating Climate Change, and prescribes practical approaches to both stem its effects and convert deniers into champions among its stakeholders.</p>
<p>Track 5</p>	<p>Climate Change, Climate Challenges, and a Pathway for Climate Innovation in Africa <i>Alexander Kolker</i></p>

<p>Inclusive Climate Action and Sustainable Lifestyles</p> <p>Track Chairs Alexander Kolker Amanuel G. Tekleab</p>	<p>Climate change, driven by the accumulation of greenhouse gases in Earth’s atmosphere, poses diverse risks, challenges, and opportunities across Africa. The impacts will be broad and varied, reflecting the continent’s expanse, with climate change affecting temperature patterns, precipitation, ocean currents, and sea levels. Warming will intensify in many regions, particularly in North Africa, where extreme heat days will become more common, while glaciers in East African mountains will continue to deteriorate. Shifting rainfall patterns are expected to increase droughts in northern and southern Africa, stressing water and agricultural systems, while tropical regions may face intensified flooding. Climate change will also increase the frequency of extreme weather events, impacting bio-ecological systems that are essential for agriculture, health, and social well-being. Nonetheless, Africa’s youth, expanding universities, and tech hubs are well-positioned to develop innovative climate solutions.</p> <p>Sustainable Organic Urban Lifestyles (SOUL): Local Bio-Circular Solutions to Tackle Climate Challenge <i>Neissan Besharati, Kelly Alexander</i></p> <p>The paper presents a case study on Sustainable Organic Urban Lifestyles (SOUL), a climate tech and social-ecological start up, founded in Johannesburg which has been piloting innovative approaches and bio-circular systems for urban agriculture, waste management, energy and food security in Africa and beyond. Some of the solutions developed by SOUL have potential to be replicated and upscaled to promote circular economies to help businesses and local communities with rising challenges of climate change.</p> <p>Institutional Enactment by Firms and Organizations in Emerging markets: A Review and Research Agenda <i>Emmanuel Ekpenyong, Rob Blomme, Yasmina Khadir-Poggi</i></p> <p>Studies on institutional voids (IVs) have mainly focused on strategies for minimizing their impacts on firm performances. Despite the growing recognition of IVs as an opportunity for enacting a more inclusive market institution, the process of institutional enactment by firms is not fully understood. We conducted a systematic review of the literature on IVs to understand the micro-processes for institutional enactment. We unpacked the institutional enactment process and its implication on the firms and the local communities. This paper argues that firms can enact institutions by recombining practices from different contexts, leveraging critical skills such as social capital to create a more inclusive market system. Institutional enactment can boost firms’ performances but can also increase the participation of vulnerable groups like women in the market economy in context with challenging institutional context, thereby contributing towards the achievement of united nations sustainable development goal number five, which seeks to promote gender equality.</p>
<p>Track 6 Innovation, Technology, and Climate Resilience</p> <p>Track Chairs</p>	<p>Analyzing the Topological Features for the Prediction of the Climate Change Tendency: Case of the Global Land and Ocean Temperature <i>Anouar Hasbaoui, Tariq Rachid, Youssef Saida</i></p> <p>The climate change (CC) issues are more alarming. Governments, businesses, and other entities have to have more insights on these issues. The average land and</p>

<p>El Mehdi Es-sbaa Hanane Alliou</p>	<p>ocean temperature is one of the prominent indicators of CC, its evolution should be well tracked and monitored. This paper proposes new method to precisely identify the occurrence of CC and its evolution over time using topological data analysis. The purpose is to identify the change of the structure of the temperature series. The analysis of land and ocean anomalies change is highly very useful especially to countries and international institutions that are more concerned to CC issues. The study period will be from 1880 to 2024. The results show that the temperature has been increased due to the industrialization and the emergence of economies following the financial crash of 1929.</p> <p style="text-align: center;">The Impact of Artificial Intelligence on Investment Strategies of Moroccan Enterprises to Strengthen Climate Resilience and Promote Sustainability <i>Hanane Alliou, Mohamed Beraich</i></p> <p>Climate change represents a major challenge for businesses, particularly in emerging economies like Morocco, where extreme weather events can disrupt economic activities and undermine the sustainability of enterprises. This paper examines how the integration of artificial intelligence into the investment strategies of Moroccan companies can strengthen their resilience to climate risks while promoting sustainable practices. Through in-depth analysis, this work explores the various applications of AI, including predictive risk analysis, resource optimization, sustainable innovation, real-time decision-making, and the reinforcement of climate governance. Drawing on a literature review and concrete case studies, this paper demonstrates that AI can play a crucial role in improving the climate resilience of businesses while enabling them to seize the opportunities offered by the transition to a more sustainable economy. The results show that AI can help companies anticipate climate risks, optimize their operations, and develop more robust investment strategies, thus contributing to building a sustainable and resilient future.</p> <p style="text-align: center;">The Challenges of Organizational Sustainability with Social and Economic Development <i>Ilmar Polary Pereira</i></p> <p>Objective: to analyze the challenges of organizational sustainability and technologies in social and economic development. Problem: how do organizational sustainability and technologies impact sustainable social and economic development? Relevance/originality: organizational sustainability combined with management technologies, such as Integrated Sustainability Management and the dimensions of technological capacity, point to development prospects in emerging economies. Methodology/approach: literary and field research in the universe of micro, small and medium-sized industrial and service companies, and public organizations, from 2012 to 2021. Results: literary analyses and empirical findings suggest that organizational sustainability and technologies are relevant for socioeconomic development, raising the Human Development Index and reducing inequalities. Theoretical/methodological contributions: indicates to the academy evidence of findings on themes of organizational sustainability and management technologies that broaden the empirical debates in academia, organizations and society, focused on social and economic development.</p>
---	--

	<p>Social/management contributions: the sustainability of the organizational sustainability of productive sectors and management technologies indicate significant advances in the development of emerging economies and favoring climate issues.</p> <hr/> <p>A Strategic Perspective on Climate Resilience and Sustainability: Using Artificial Intelligence to Revolutionize Succession Planning in Moroccan Family Businesses <i>Hanane Alloui, Youssef Mourdi</i></p> <p>Moroccan family enterprises must adapt their business strategies to ensure long-term resilience and continuity, responding to the growing demands of sustainable practices and climate challenges. This paper examines the innovative potential of artificial intelligence to revolutionize succession planning within these enterprises. Moroccan family businesses can leverage AI-driven insights to enhance leadership transitions and integrate climate resilience and sustainability into their core strategies. The study employs qualitative and quantitative research, including case studies of Moroccan enterprises, to demonstrate how AI can address the challenges of succession planning while fostering a culture of environmental stewardship and innovation. The findings highlight AI's capacity to anticipate future leadership requirements, identify suitable successors, and facilitate decision-making aligned with sustainability objectives. This paper provides practical recommendations for Moroccan family enterprises interested in utilizing AI to improve their succession planning, cultivating a more sustainable and resilient business future.</p> <hr/> <p>Harnessing the Power of Artificial Intelligence for Climate-Resilient Investment Strategies in Morocco's Stock Market <i>Mohamed Beraich, Hanane Alloui</i></p> <p>Morocco is facing many climate-related difficulties, which require creative methods to guarantee economic stability and sustainability. Utilizing the capabilities of Artificial Intelligence (AI) in this particular situation offers a highly favorable opportunity to improve investment techniques. This research explores the capacity of AI to enhance investing strategies in Morocco's stock market by improving climate resilience. With the increasing climate-related difficulties faced by Morocco, using AI-driven analytics becomes crucial for evaluating and reducing climate risks. The study thoroughly investigates the capacity of AI technologies to assess climate data, forecast market effects, and provide guidance for investment decisions, thus promoting sustainability and economic stability. This research initiative seeks to offer practical insights to investors and policymakers by examining the intersection of AI, stock market dynamics, and climate change. The goal is to enhance market resilience and encourage sustainable investment habits.</p> <hr/> <p>Building Climate Resilience through Technological Innovation and Social Enterprise in Africa <i>Subash Bijlani, Saad Laraqui</i></p> <p>This paper examines Africa's approach to addressing the intertwined challenges of economic growth and environmental sustainability. It highlights the continent's vulnerability to climate change and explores how innovations in technology and social enterprise can mitigate these risks. It explores key technological advancements, such as renewable energy, climate-smart agriculture, and efficient</p>
--	---

	<p>water management, which have the potential to significantly reduce greenhouse gas emissions while promoting resilience. Additionally, the role of social enterprises is highlighted in promoting community-based projects that contribute to both environmental stewardship and socio-economic development. The paper also discusses the challenges to adoption, including regulatory barriers, infrastructure deficits, and the need for significant financial investment. It underscores the importance of public-private partnerships and regulatory frameworks in scaling these innovations. Through the integration of technological innovations with social enterprise initiatives, the paper advocates integrated approaches combining technological and social innovation to build climate resilience and achieve sustainable development across the African continent.</p> <p style="text-align: center;">Data for Global Goals: A Systematic Exploration of AI's Role in Meeting the UN SDGs</p> <p style="text-align: center;"><i>El Mehdi Driouche, Kaoutar Jamai, Hicham Nachit</i></p> <p>Sustainability, as a global priority, necessitates balancing economic growth, environmental protection, and social well-being, aligning with the United Nations' 2030 Agenda and its 17 Sustainable Development Goals (SDGs) addressing issues like climate change, inequality, and environmental degradation. Despite global efforts, gaps remain in leveraging advanced technologies, particularly artificial intelligence (AI), to accelerate SDG achievement. This systematic review of 447 studies (2010-2024) from Science Direct explores AI's impact on SDGs across sectors, focusing on challenges, opportunities, and regional variations. Findings indicate significant AI applications in environmental sustainability, climate action, and innovation, with prominent AI indicators—information management, machine learning, neural networks, and algorithms. Regional analyses highlight varied priorities, from climate resilience and energy efficiency to social inclusion. This review underscores AI's growing role in sustainability and points to future research needs and policy implications for AI-driven solutions to global challenges.</p>
--	---