



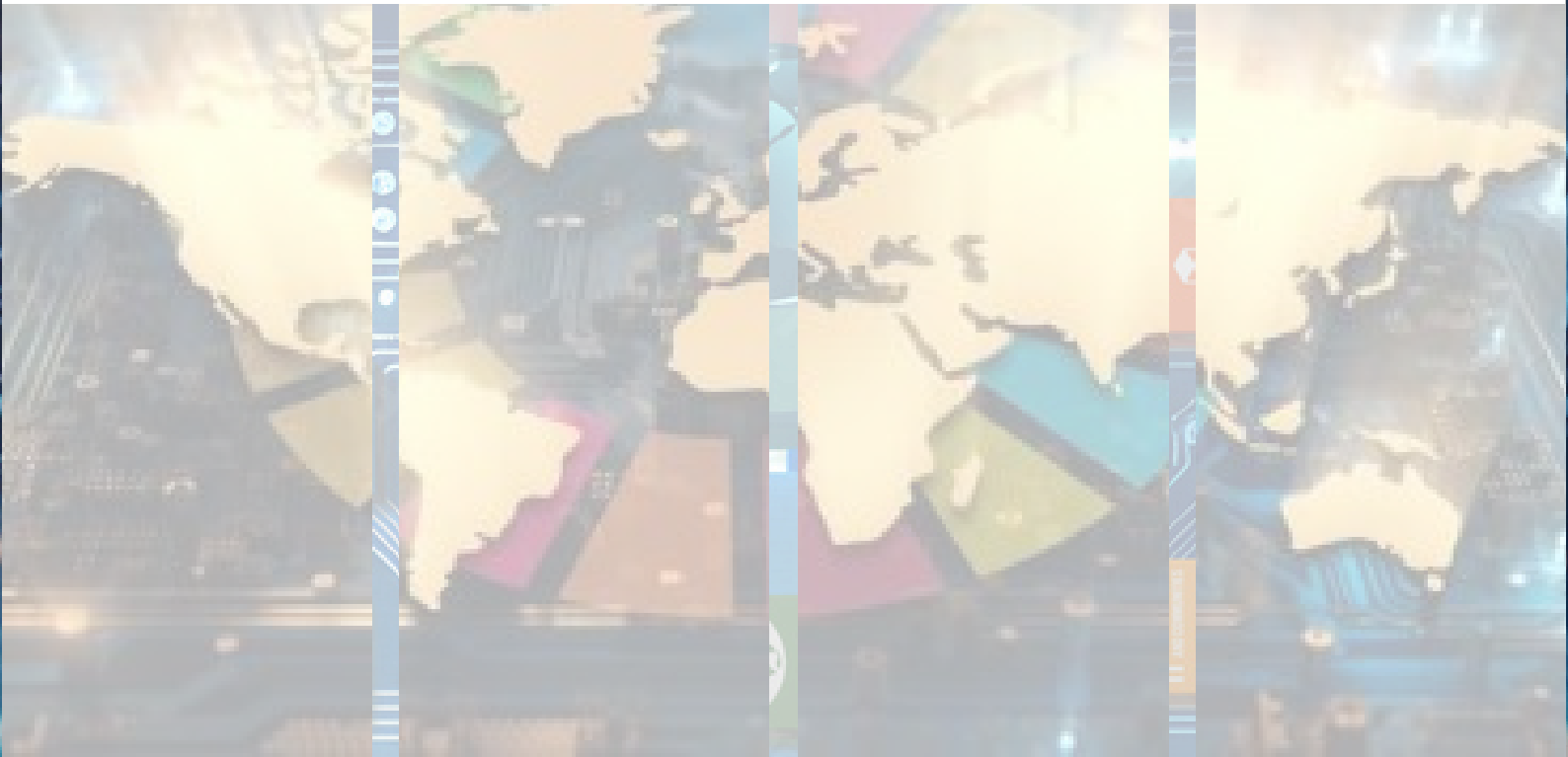
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**The Road to 2030:  
Accelerating Progress on the Sustainable Development Goals  
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**RISE 2025 BOOK OF ABSTRACTS**

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# **The Effect of Disease Diagnosis Using Artificial Intelligence on Sustainable Healthcare**

**Nergiz Özge Erdağı, Şaban Öztürk**

Artificial intelligence (AI) has emerged as a transformative technology in various domains, including healthcare. By leveraging machine learning, deep learning, and computer-aided diagnostic systems, AI facilitates disease diagnosis with greater speed and accuracy. Its ability to analyze large datasets enables the identification of complex patterns that may be challenging for human experts to detect. As AI technology continues to evolve, its role in medical applications is expanding, enhancing diagnostic capabilities and shaping the future of sustainable healthcare. Historically, AI applications in healthcare have been limited due to technological and computational constraints. Early AI models were primarily rule-based expert systems designed to assist clinicians in decision-making. These systems relied on predefined rules and logical reasoning to process medical data, but their effectiveness was restricted by the quality of manually encoded knowledge. With the advent of machine learning and statistical modeling, AI began to support radiological and pathological analyses. Early implementations focused on automating repetitive tasks such as detecting anomalies in medical images, yet these systems lacked the adaptability required for complex diagnostics. The reliance on structured datasets constrained their accuracy, limiting their impact on clinical practice. Recent advancements in AI have revolutionized medical diagnostics, particularly in image-based analyses. Modern AI-driven tools utilize deep learning algorithms to process large datasets, enhancing the precision of disease detection. In fields such as radiology, dermatology, and pathology, AI-powered systems can analyze medical images with accuracy comparable to that of experienced specialists. For instance, AI models can detect cancerous cells in histopathological images or identify early signs of neurological disorders through MRI scans. Additionally, AI supports clinical decision-making by providing risk assessments and predictive analytics. AI-driven algorithms analyze electronic health records to predict disease progression, personalize treatment plans, and recommend preventive measures. Such applications are particularly valuable in the diagnosis and management of rare diseases, where traditional methods may be inadequate due to limited case studies and complex symptomatology. Beyond imaging, AI is also used in microbiology and infectious disease diagnosis. Machine learning models assist in pathogen identification and antimicrobial susceptibility testing, expediting the detection of bacterial infections. AI-based natural language processing tools facilitate automated medical record analysis, enabling physicians to access critical patient data efficiently. Large Language Models (LLMs), a subcategory of AI, are increasingly being incorporated into healthcare systems to enhance diagnostic processes and medical decision-making. These models, trained on vast amounts of biomedical literature, clinical notes, and research data, enable advanced natural language processing capabilities. LLMs can assist clinicians by summarizing complex medical cases, extracting key insights from unstructured data and providing evidence-based

recommendations. Moreover, they facilitate patient interaction through AI-powered chatbots, answering medical queries, and offering preliminary guidance based on symptoms. Their ability to process and generate human-like text makes them valuable tools in streamlining administrative tasks, supporting clinical research, and improving patient education. However, ensuring their accuracy, mitigating biases, and addressing ethical concerns remain crucial challenges in their full-scale adoption within healthcare. The future of AI in medical diagnostics is expected to be driven by advancements in computational power, improved algorithms, and access to high-quality datasets. AI has the potential to further integrate with real-time monitoring devices, wearable sensors, and telemedicine platforms, providing continuous health assessments and early warning systems for patients.

Explainable AI is another promising direction, addressing concerns regarding the interpretability of AI-driven decisions. Future AI models will prioritize transparency, allowing healthcare professionals to understand and validate AI-generated diagnoses before clinical application. This approach is critical for increasing trust in AI-assisted medical systems and ensuring their safe deployment in clinical settings. Additionally, AI is expected to play a crucial role in the development of personalized medicine. By analyzing genetic information, lifestyle factors, and patient history, AI can tailor treatment plans to individual needs, optimizing therapeutic outcomes while minimizing adverse effects. The integration of AI with drug discovery and development processes may also accelerate the identification of new therapeutic agents, enhancing the overall efficiency of pharmaceutical research. In conclusion, the integration of AI into healthcare has the potential to significantly contribute to sustainable healthcare by improving efficiency, reducing diagnostic errors, and optimizing patient care. By minimizing unnecessary medical procedures and streamlining diagnostic workflows, AI can help allocate healthcare resources more effectively, leading to reduced costs and improved accessibility. However, achieving truly sustainable AI-driven healthcare requires ongoing advancements in algorithmic transparency, data quality, and ethical governance. Addressing these challenges will ensure that AI not only enhances medical diagnostics but also supports a more resilient, equitable, and efficient healthcare system for the future.

**Disaster Management and Local Governments:**  
**Community-Based Disaster Risk Reduction Strategies- A Case Study of Sendai City**  
**Adnan Söylemez**

**Topic:** The increasing frequency and severity of disasters, exacerbated by climate change and rapid urbanization, have underscored the critical role of local governments in disaster risk reduction (DRR) and sustainable development. This study examines the disaster management strategies of Sendai City, Japan, following the 2011 Great East Japan Earthquake and Tsunami. The research focuses on Sendai's community-based approaches, technological innovations, and post-disaster recovery efforts, offering valuable lessons for other local governments worldwide.

**Objectives:** The primary objective of this study is to analyze Sendai City's disaster management strategies as a case study for effective disaster risk reduction. Specifically, the study aims to:

1. Evaluate the role of community-based disaster risk reduction (CBDRR) in enhancing preparedness and resilience.
2. Assess the integration of technology in disaster management processes, including early warning systems, damage assessment, and resource allocation.
3. Explore Sendai's post-disaster recovery and reconstruction efforts, emphasizing sustainability and social cohesion.
4. Highlight the global contributions of Sendai's experiences through the Sendai Framework for Disaster Risk Reduction (SFDRR).

**Methodology:** This study employs a qualitative case study approach, drawing on secondary data from academic articles, reports, and policy documents. The analysis is structured around three key phases of disaster management: pre-disaster preparedness, during-disaster response, and post-disaster recovery. Data were synthesized to identify best practices, challenges, and lessons learned from Sendai's experiences. Additionally, references to international frameworks, such as the SFDRR and the Sustainable Development Goals (SDGs), were used to contextualize Sendai's contributions to global disaster risk reduction policies.

**Key Findings:** Sendai City's disaster management strategies provide a comprehensive model for integrating community participation and technological innovation into disaster risk reduction. Key findings include:

1. **Pre-Disaster Preparedness:** Sendai prioritized early warning systems, public education programs, and earthquake-resistant infrastructure. For example, the city implemented advanced seismic monitoring systems and conducted regular disaster drills in schools and

community centers. These initiatives significantly enhanced public awareness and readiness (Shaw & Goda, 2020).

2. **During-Disaster Response:** During the 2011 disaster, Sendai demonstrated the importance of rapid intervention teams and community-led volunteer groups. The use of drones, geographic information systems (GIS), and artificial intelligence facilitated efficient damage assessments and resource distribution (Alexander, 2020). These technologies played a crucial role in minimizing casualties and accelerating recovery efforts.
3. **Post-Disaster Recovery:** Sendai's recovery process emphasized sustainability and inclusivity. The city invested in green infrastructure projects, such as parks and water management systems, to build resilience against future disasters. Moreover, community engagement was central to rebuilding efforts, with initiatives like the "Resilient Greater Christchurch Plan" fostering social cohesion and psychological recovery (Manyena, 2016).
4. **Global Contributions:** Sendai's experiences informed the development of the Sendai Framework for Disaster Risk Reduction (SFDRR), which serves as a global guideline for reducing disaster risks. The framework aligns with SDGs, particularly Goal 11 (Sustainable Cities and Communities) and Goal 13 (Climate Action), highlighting the interconnectedness of disaster risk reduction and sustainable development (Kelman, 2019).

**Implications for Local Governments:** Sendai's case offers several practical recommendations for other local governments:

- Strengthen early warning systems and public education programs to enhance community preparedness.
- Invest in disaster-resistant infrastructure and sustainable urban planning.
- Leverage technology, such as drones and GIS, to improve disaster response and recovery.
- Foster community participation in all phases of disaster management to ensure inclusivity and resilience.

## **From Traditional Society to Digital Society:**

### **The Future of Society 5.0 in Turkish Society**

**Mustafa Doğukan Başalan**

Since the Industrial Revolution until today, the evolution of societies has undergone significant and radical transformations in line with technological advances. The transition from production systems based on steam power to the industrial society, in which electricity and automation technologies became widespread, has been regarded as one of the greatest ruptures in human history. Over time, the development of information and communication technologies has radically changed the production and management processes and paved the way for the industrial society to be replaced by the information society. In this process, the acceleration of information flow, the creation of digital databases and the widespread use of the Internet have greatly transformed the way individuals and organisations interact. Today, digitalisation is not only a result of technological developments, but has become one of the basic components of social structures. With the integration of digital technologies into daily life, individuals' social, cultural and economic practices have been reshaped; traditional social norms and values have gained new meanings and forms on digital platforms.

In this context, the concept of ‘Society 5.0’ refers to a model of society in which individuals and institutions are integrated with digital technologies and social, economic and political processes are largely carried out through digital networks. Traditional forms of communication and interaction have been replaced by instant data flow, artificial intelligence-supported algorithms and automated decision-making mechanisms. Individuals exist in the online world through digital identities; economic activities are shaped through e-commerce platforms and digital currencies; public debates are conducted on social media channels. In this new era in which information and communication technologies have penetrated all layers of society, almost every field from education to working life, from politics to daily life is being restructured under the influence of digital transformation. Therefore, ‘Society 3.0’ is not only a technological innovation, but also a multi-layered and dynamic process that expresses a holistic transformation of the social structure.

This study examines the current situation of the concept of ‘Society 5.0’ in Türkiye, the effects of this transformation process on the social structure, potential development areas and possible future reflections. The effects of digitalisation on individuals and institutions are not limited to the process of technological adaptation; it also creates a number of transformations on social values, social norms, economic relations and political structures. In this context, the study examines the digital transformation process in Türkiye from an interdisciplinary perspective and evaluates the

development of the concept of digital citizenship, the effectiveness of e-government applications, and the proliferation of artificial intelligence-supported services.

In addition, the study analyses how the traditional social structure interacts with the digital society and examines the effects of this transformation on individuals, institutions and social values. Topics such as how traditional cultural codes are reproduced or transformed in the digitalisation process, how individuals construct new identities in the digital environment, and how digital discourse production is shaped by social dynamics will also be discussed. In particular, the role of social media platforms and digital media in the identity formation processes of individuals, how these identities are reconstructed in terms of social belonging, and how they interact with traditional authorities and norms will be discussed within the scope of the research.

In the context of the effects of digitalisation on socio-political structure, the study focuses on the political participation of individuals, the ways in which they participate in public debates and how digital tools are used in democratic processes. While examining the effects of digitalisation in the public sphere, issues such as the rise of digital activism, new social movements shaped through social media and how digital public opinion affects political processes will also be evaluated within the scope of the study. In addition, the risks that arise with the opportunities brought by digitalisation are also addressed; the effects of factors such as information manipulation, disinformation, digital surveillance mechanisms and privacy violations on social structure and individual rights are also discussed.

In conclusion, ‘Society 5.0’ refers not only to a technological transformation process in Türkiye, but also to a paradigm shift that reshapes the social structure with its cultural, economic and political dimensions. In this context, the study provides a comprehensive framework to understand how Türkiye’s vision of a digital society will take shape and to predict the possible transformation dynamics that may be encountered in this process.

## **Innovative Pedagogical Approaches for Inclusive and Equitable Education: Addressing Gender Disparities And Socioeconomic Barriers in Achieving SDG 4**

**Chinaza Ironsi**

Guaranteeing inclusive and equitable quality education continues to be a worldwide problem, especially for marginalized populations confronting gender inequities and socioeconomic obstacles. The United Nations' Sustainable Development Goals (SDGs) rely on equitable and inclusive quality education, particularly SDG 4, which underscores the necessity for lifelong learning opportunities for all individuals.

Innovative educational methodologies have arisen as effective strategies to promote equity and inclusion in the classroom. Methods like inclusive curriculum, technology-enhanced education, and culturally responsive pedagogy have demonstrated effectiveness in improving engagement and learning results for diverse student populations. Incorporating students' cultural origins into the educational process enhances relevance and accessibility, hence augmenting academic performance. Furthermore, utilizing digital resources can provide tailored learning settings that address each student's distinct requirements and mitigate shortcomings in conventional teaching approaches.

Students from low-income homes may face obstacles to their academic achievement, such as restricted access to resources and support networks. Gender disparities manifest in several forms; women in some regions have challenges such as early marriage and cultural prejudices that limit their educational prospects. These structural issues require comprehensive policies that recognize and vigorously tackle the primary factors contributing to educational inequality.

Notwithstanding advancements in Sustainable Development Goal 4 (SDG 4), educational access continues to be inequitable due to structural obstacles like budgetary limitations, cultural conventions, and insufficient teacher ability. Notwithstanding these advancements, the execution and scalability of these methodologies continue to exhibit deficiencies. Numerous educational institutions continue to contend with entrenched preconceptions and systemic obstacles that hinder the widespread implementation of inclusive initiatives. Furthermore, there are no comprehensive research examining the long-term effects of these pedagogical practices across various contexts and demographics. Addressing these deficiencies is essential, as neglecting them perpetuates cycles of poverty and undermines initiatives aimed at global educational justice.

Although current research emphasizes the significance of inclusive education, there is a deficiency in comprehending how new pedagogical strategies—such as digital learning tools, gamification, and

culturally responsive teaching—can successfully address these gaps. This study examines the effect of creative teaching practices in fostering inclusive and equitable education. This study examines the effectiveness of novel pedagogical methods in fostering inclusive and equitable education, particularly in mitigating gender disparities and socioeconomic obstacles. The research employs a mixed-methods approach that integrates quantitative data analysis with qualitative feedback from educators and students to identify optimal practices and develop scalable implementation strategies. The results are anticipated to facilitate policy formulation and educational changes emphasizing equity and advancing the worldwide objective of ensuring quality education for everyone.

The study used a mixed-methods approach to examine primary data gathered from surveys and interviews with educators, students, and policymakers. Forty four participants in all—20 adolescents (ages 14–18) from varied socioeconomic backgrounds, 14 teachers from secondary schools with expertise in inclusive education, and 10 legislators were recruited for this study. Using a convergent parallel mixed-methods approach, the study examined quantitative and qualitative data on the objective of the study. Using SPSS v. 27, descriptive statistics—means, frequencies, and standard deviations—were generated for the quantitative analysis to evaluate trends in educational inclusiveness and opinions on pedagogical efficacy. Significant variations across demographic categories were obtained using ANOVA and chi-square testing. Interview and focus group transcript analysis for the qualitative analysis were conducted using thematic analysis. NVivo software was used for coding.

The results revealed optimal practices and scalable solutions that improve educational inclusiveness. The study's originality is attributed to its multidisciplinary methodology, combining technology, pedagogy, and policy to tackle educational disparities. This study enhances policy and practice by providing evidence-based recommendations and promoting inclusive learning settings that accommodate varied student needs.



# **Comparative Analysis of AI in Providing Personalizing Language Learning Experiences and The Teacher-Led Traditional Methods**

**Zainab Gulfaraz**

This research aims to compare the two distinct educational modes of language acquisition, namely AI-based language learning and the teacher-led traditional methods. As it has been observed that AI integration in language learning is increasing with each passing day, it is vital to understand how these innovations perform in correlation with long-established classroom practices. This study aims to provide insights into how these methods address differentiation and their capacity to achieve language proficiency, engagement, motivation, and satisfaction. It offers practical insights for educators and policymakers seeking effective pedagogical strategies and methods in a digital era.

A mixed-method approach has been selected to conduct this research. The quantitative method will be used to measure and compare the effectiveness of both the modes of acquiring the language. Test scores quantified improvements in language proficiency, and Likert-scale surveys measured engagement levels and satisfaction. In the qualitative method, semi-structured interviews with students and teachers will be conducted to explore their experiences with both language acquisition methods. The sample comprised A1 and A2 level students from English preparatory classes at the University, and the data collection will span over a month.

The expected results are that both educational methods, AI-driven and traditional methods, have their distinct strengths and limitations. AI-based tools provide personalized, flexible learning experiences and keep learners motivated. These systems allow learners to progress at their own pace, receive immediate feedback, and access authentic resources. The adaptability of AI tools caters to diverse learning needs and fosters a sense of autonomy that boosts motivation and engagement. Many learners appreciate the convenience and the non-judgmental space provided by AI, which encourages experimentation and reduces the anxiety typically associated with classroom-based learning. However, some students report feelings of isolation and a lack of emotional connection when learning through AI, highlighting its limitations in fostering interpersonal relationships.

On the other hand, teacher-led traditional methods excel in developing interpersonal relationships and critical thinking. The presence of a teacher allowed for real-time clarification of doubts, emotional support, and structured learning environments, which many students might find beneficial for their academic growth. Students might report feeling more connected and supported in a traditional setting, highlighting the motivational power of human interaction, which is largely absent in AI-based systems.

The expected results highlight a growing recognition among teachers about the effectiveness of AI in providing differentiated instruction and autonomy. Nevertheless, teachers express their concerns

regarding the inability of AI to provide human interaction and emotional intelligence. Teachers play a crucial role in creating a community of learning, where their feedback is not only immediate but also emotionally resonant and contextually rich. A hybrid approach bringing AI into teacher-led classrooms is highly recommended to be adopted in the future. By integrating AI tools into teacher-led classrooms, educators can offer a dynamic, personalized, and emotionally supportive learning environment. Such hybrid models could cater to the diverse needs of learners more effectively and foster better outcomes in language acquisition.

The sample size of this study will be limited and relied on self-reported data without interference from the researcher, which implicates chances of biases. It is recommended that future studies should aim to include large and diverse groups of people. Future researchers should examine a hybrid learning environment to determine the effectiveness of AI in classrooms.

This study contributes to the discourse related to technology-enhanced education and offers practical recommendations for future pedagogical strategies. It draws attention to the need for training teachers regarding the effective incorporation of AI tools in their language learning classrooms. Furthermore, it highlights the necessity of designing AI systems that are emotionally intelligent and encourage peer interaction.

The study's implications are multi-fold. The study suggests that educationists and policymakers should create a hybrid learning environment that focuses on interpersonal relations and collaborative skills and directs attention toward modern modes of learning. Policymakers need to devise inclusive, efficient, and emotionally intelligent language learning ecosystems in the digital era. The change in the language learning classrooms will lead to a more holistic and future-ready language education paradigm.

# **Investigation of Associations Between Turkiye And G-7 Countries' Stock Market Indices with Frequent Pattern Growth (Fp-Growth) Analysis from Machine Learning (ML) Algorithms**

## **Yasemin Keskin Benli, Ebru Nur Yoldaş**

With the advancement of technology and easier access to data, there has been great progress in data mining. ML algorithms are a successful and suitable method for analyzing large-scale data. The study aims to determine whether Turkiye and G-7 country stock market index prices move together by utilizing the high-performance ML algorithm Frequent Pattern Growth (FP-Growth). Thus, it can be said that ML can help individual and institutional investors determine their portfolio diversification strategies in the portfolio construction and management processes. The data set consists of 1305 observations, which are the weekly stock market index closing prices of Turkiye (BIST ALL) and the USA (NYSE Composite), Germany (DAX), France (CAC 40), England (FTSE 100), Italy (FTSE MIB), Japan (NIKKEI 225), and Canada (S&P TSX) between 02.01.2000 and 29.12.2024. The data has been transformed into '1' on the days when there was an increase, and '0' on the days when there was a decrease, based on the closing price of the previous week. Since the conversion to binary format was calculated over the previous week, the number of observations was 1304. Data compiled from investing.com. Waikato Environment for Knowledge Analysis (WEKA) software was used for the analysis. In this study, unsupervised learning, FP-Growth Algorithm, one of the ML algorithms, was used and the biggest advantage of this method is that it can run big data quickly and efficiently utilize the resources in the system (Kiraz and Deliismail, 2018, 30). FP-Tree keeps the entire database in a compressed tree structure and is an algorithm that scans the entire database only twice (Han, Pei, Yin and Mao, 2004, 54). The steps of the FP-Growth algorithm are shown as follows (Kiraz and Deliismail, 2018, 31). 1. The minimum support value is determined. 2. Frequency values are determined. 3. Products are ranked and determined according to their importance. 4. The selected products (confidence level/threshold value) are ranked according to their importance 5. FP-Tree is created.

In the study, the FP-Growth Algorithm was applied with a minimum confidence level of 0.90 and a support level of 0.10. In all detected rules, the coefficient of interest (Lift) values are  $>1$ , leverage (Lev.) values are  $>0$ , and conviction level (Conv.) values are  $>1$ . These values indicate that there are significant, positive and non-random relationships between the variables. With the FP-Growth algorithm, 42 association rules were determined at a minimum confidence level of 0.90 and a support level of 0.10.

According to the findings; out of 42 association rules, the CAC 40 France stock market index price has the highest number of associations (35 times), followed by DAX Germany stock market index price (31 times), FTSE MIB Italy stock market index price (22 times), NYSE Composite US stock

market index price (22 times), FTSE 100 UK stock market index price (17 times), S&P TSX Canada stock market index price (17 times), while NIKKEI 225 Japan stock market index price has been included in only two association rules. The BIST ALL Turkiye stock market index price is not included in the association rule with other stock market indices; the reason for this may be that the stock market index price data are used in the analysis on a weekly basis; it is thought that the results may be different with daily data.

Since there is no correlation between the stock market index prices of Turkiye and the G-7 countries, and since there are two correlation rules between the stock market index prices of Japan and the stock market index prices of the other G-7 countries, investing in Japan NIKKEI 225 and Turkiye BIST ALL stock market indices in a portfolio based on the G-7 countries can be used to reduce risk and generate gains. At the same time, investment opportunities can be evaluated in stock exchanges that move together, and investment strategies and decisions can be evaluated according to similar upward or downward movements. Thus, it can be said that individual and institutional investors can determine portfolio diversification strategies by utilizing ML in portfolio construction and management processes.

It is important for investors to evaluate stock markets together in terms of international portfolio strategies. By considering the price movements of stock markets, portfolio investors can make predictions about other stock markets and reduce their risks by generating returns. The co-movement of G-7 stock market index prices, excluding Turkiye, indicates the existence of integration among G-7 markets, suggesting the existence of information transmission and volatility spillovers across markets and opportunities for international portfolio diversification.

It is thought that the results obtained will help individual and institutional investors to better understand market dynamics, to create their portfolios in a more balanced way in terms of risk management, in other words, to diversify their international portfolios.

## **Examination of the Level of Knowledge of Mothers of Children with Autism Spectrum Disorder about Sexual Abuse**

**Ayşe Mortaş Kum, Alperen Özen**

The aim of this study was to investigate the level of knowledge of mothers of children with autism spectrum disorder about sexual abuse. Autism spectrum disorder emerges in the first years of life. Autism spectrum disorder manifests itself at an early age and manifests itself in the form of limited communication, interaction and difficulties in language development. In addition, individuals with autism spectrum disorder differ from person to person. In addition, they have difficulty in establishing eye contact in non-verbal communication, and the most prominent characteristics of individuals with ASD are repetitive behaviours, adherence to routine, unresponsiveness to sensory stimuli, and inability to understand what the other person says during speech. For these reasons, individuals with autism should avoid sexual abuse and be protected. This reveals the need for this research. Giving information about sexual education is the best way to avoid bullying related to sexuality. Sexual education should be given to individuals with special needs in terms of language, boundaries, safety, social aspects, by counsellors and professional educators.

Individuals with special needs need to recognise their own self and body. For this reason, the fact that individuals with special needs are emphasised more than individuals with normal development reveals the need for research. In this study, semi-structured interview questions were included using the phenomenology design, which is one of the qualitative research methods. In addition, in accordance with the general purpose of the study, the study was carried out with the purposeful sampling method in order to identify the mother participants to represent the universe. In this process, it is to determine the experiences and knowledge levels of mothers of children with autism spectrum disorder regarding sexual abuse. In order to determine the mother participants in the research process, preliminary interviews were conducted with teachers in public and private special education institutions. After the preliminary interviews with teachers, mothers of children with autism were included in the research process. The determined mother participants were given detailed information about the subject of the research, why this research was needed, the duration of the research and finally their rights about the research. The research process was carried out through face-to-face interviews with 10 participant mothers who voluntarily participated. In the data collection process of this research, semi-structured interview questions prepared by the researcher were sent by e-mail to 3 researchers who are experts in autism, sexual education and sexual abuse in the field of special education. Feedbacks regarding the interview questions sent from the experts were provided by e-mail. In line with the feedback received from the experts, the research questions were finalised and the data collection process started.

The data obtained from the interviews with the participants were collected by content analysis. The findings obtained from the mother participants were thematised as; (a) informing mothers about autism spectrum disorder, (b) informing mothers about sexual education, (c) raising awareness of mothers about how to protect their children against dangers from the environment, (d) conducting seminars and projects related to sexual education, (e) informing families about the concepts of neglect, abuse and sexuality, (f) the information that mothers obtain from wrong and different sources about their children causes them to turn to unwanted sexual behaviours. When the results of the research are examined, it is revealed that individuals with autism spectrum disorder and their families should be given necessary studies and information about sexual abuse, otherwise negative events are experienced in the social environment. Another result states that mothers are left alone in sexual education and the father factor needs more information and awareness about sexual abuse. It is seen that mothers of children with autism spectrum disorder are aware of their deficiencies related to sexual education. Mothers of individuals with autism spectrum disorder have limited knowledge about autism and sexual abuse. Since individuals with autism have a higher risk of sexual abuse and such situations are encountered more frequently, it is very important to provide sexual education. Considering these results, the level of awareness of mothers of children with autism about sexual abuse should be increased and programmes should be planned and carried out to provide sexual education, teaching about sexual abuse and improving the level of knowledge of mothers and fathers. In addition, more research can be done by taking into account the opinions and suggestions of families about sexual abuse.

## **Contributing to the Goal of Sustainable Consumption and Production Through Responsible Governance and Circular Economy**

**Müge Algan, Muzaffer Özen**

Responsible governance is defined as an approach in which policies are determined to ensure sustainable development, where social justice and social benefit are prioritized (Algan, 2023: 34). With responsible governance, it is expected that countries will produce solutions to the climate change problem and that factors such as reuse and recycling will be taken into account during management (Marcus&Adam, 2009: 16-17).

The concept and goals of sustainable development developed by the United Nations (UN) are among the most important global responsible governance initiatives. The idea, which gained recognition in the Environment and Development: Our Common Future Report by the UN in 1987, was transformed into a structure with 17 goals in 2015. These goals form a wide network from preventing hunger to climate change, from sustainable consumption and production to clean energy. The UN Sustainable Development Goals (UN SDGs) express meeting the needs of society and ensuring sustainability by considering future generations (UN, 2015).

Circular economy is an industrial term that refers to the transformation and recycling of industrial economy instead of production, usage and disposal processes. Profitability is measured by recycling resources as much as possible and transforming waste into new resources as much as possible. In these cycles, the transformation of synthetic material waste into materials that provide the same function or into another material that provides another function and is also recyclable; and the recycling of natural materials into biomass are the main principles. The adoption of these principles in industrial production aims to use the waste resulting from one production as a source of another production and to create cycles with them.

Goal 12 Responsible consumption and production is about ensuring sustainable consumption and production patterns that are key to sustaining the livelihoods of current and future generations. As the population grows, our world's resources are depleting. If the global population reaches 9.8 billion by 2050, the equivalent of almost three planets will be needed to provide the natural resources needed to sustain current lifestyles (UN, 2025). Therefore, sustainable production and consumption have to be implemented through national, regional and global policies.

Sustainable production is the design of an eco-production system in which the waste generated in production is used as input to another production process within the production ecosystem to be designed and the waste is used as a resource for another production process without creating negative environmental impacts. For sustainable production, sustainable materials should be selected in a way

that will not create environmental waste, and production processes should be designed, planned, implemented and integrated in a way that will optimize controls etc. While sustainable production is being carried out, the soil cover should be protected, plants that will provide carbon storage should be produced, biodiversity should be increased, small farms and organic agriculture should be implemented, and waste management should be made reusable using circular systems.

For example, the steam produced by the thermal power plant should be used for heating the surrounding greenhouses, fertilizer production using biomass and energy waste, chemical plastic waste should be used as raw material for plastic factories, carbon dioxide (CO<sub>2</sub>) gases should be converted into chemicals to be used in other industrial processes, wastes from greenhouses should be converted into organic fertilizers, soil produced as waste by the thermal power plant should be used in the casting industry. Sulfur and flue gas by-products from thermal power plants should be used in cement and gypsum production, excess heat from factory chimneys should be used to heat homes, and burnt coal ash from thermal power plants should be used in asphalt and concrete production.

Sustainable consumption is the consumption of individuals and societies with a concern for reducing environmental impact by using natural resources efficiently, reducing carbon footprint, minimizing waste, recycling and reusing during production and consumption processes. Consumer literacy should be ensured in terms of conscious purchasing, and consumers should be made aware of their consumption in a way that they will produce zero waste. Design practices should be implemented to ensure that the waste produced by consumers during consumption can be reused.

Responsible governance is important for developing sustainable and responsible production and consumption awareness and practices. The implementation of the circular economy by more businesses will contribute to the goal of responsible and sustainable production. It is important for the future of our world and future generations that not only countries but also businesses and individuals produce and consume responsibly.

The topic of the study is responsible governance and circular economy. The objective of the study is to investigate how to contribute to Goal 12 through these two important concepts. The key finding of the study is the implementation methods of responsible governance and circular economy and their role in increasing sustainable production and consumption practices.



# The Sustainability of Cross-Cultural Talent Acquisition

Alperen Kocsoy

This study examines the sustainability of cross-cultural talent acquisition in international labour markets, with particular focus on how gender and cultural distance interact to influence talent retention. International mobility has become increasingly common in globalised labour markets, yet organisations continue to face substantial challenges in retaining international talent. We conceptualise sustainable talent acquisition as the successful long-term retention of international workers, which reduces search costs, minimises productivity disruptions, and maximises returns on hiring investments. This paper investigates whether cultural similarity between origin and destination countries functions as a key determinant of sustainable international employment relationships, and whether these effects differ systematically by gender.

Our research objectives are threefold: (1) to quantify the relationship between cultural distance and international worker retention; (2) to identify gender-specific patterns in cross-cultural mobility and retention; and (3) to analyse how these patterns vary across different dimensions of cultural distance, including linguistic, religious, and broader societal value differences.

**Methodology:** We employ a unique dataset of international professional sports workers that offers several methodological advantages. First, the standardised nature of sporting performance allows for clear measurement of productivity and career longevity across cultural contexts. Second, the dataset contains detailed information on player origin, destination, and various cultural distance measures which enable nuanced analysis of cultural factors. Third, the inclusion of both male and female professionals permits gender-comparative analysis.

Our empirical strategy utilises a combination of survival analysis and fixed effects models. The dependent variables are a binary indicator for international mobility (defined as playing in a league outside one's country of origin) and duration of international mobility. Key independent variables include comprehensive measures of cultural distance: linguistic distance, religious distance, and a composite Spolaore-Wacziarg cultural distance index. We interact these cultural distance measures with gender to examine differential effects. Our models control for individual characteristics (position, skill level, age), and destination country characteristics.

**Key Findings:** Our analysis reveals several important patterns in the sustainability of cross-cultural talent acquisition. First, we find a negative relationship between cultural distance and worker retention. The probability of remaining in the international position decreases by the cultural differences between the origin and destination countries. This finding supports the notion that cultural compatibility enhances sustainable talent acquisition.

Second, we observe significant gender differences in the relationship between cultural distance and international mobility. This gender gap suggests that communication barriers may present a greater obstacle to sustainable international careers for women. Finally, our analysis indicates that the relationship between cultural distance and retention follows a non-linear pattern. This finding has important implications for optimal international recruitment strategies, suggesting potential "cultural distance thresholds" beyond which sustainable talent acquisition becomes significantly more challenging.

**Implications and Conclusion:** Our research contributes to understanding the economics of international talent mobility in several ways. By identifying gender-specific patterns in the relationship between cultural distance and worker retention, we highlight important heterogeneity in international labour market dynamics. These findings suggest that organisations seeking sustainable international talent acquisition should consider gender-specific approaches to cross-cultural integration. The identification of threshold effects in cultural distance provides practical guidance for optimising recruitment strategies to balance diversity goals with sustainability considerations.

The results have broader implications for policy, particularly regarding skilled migration and gender equality in global labour markets. Policymakers aiming to attract and retain international talent may benefit from considering how cultural integration programmes could be tailored to address gender-specific challenges. Future research should explore whether similar patterns exist across different sectors and skill levels, and investigate the effectiveness of targeted cultural integration initiatives in enhancing the sustainability of cross-cultural talent acquisition.

## **Gender Inequality in Health**

**Engin Çelebi**

Gender inequality in health stems from systemic disparities between women and men, shaped by social, cultural, and economic factors. While gender inequalities have long been debated, research specifically addressing gender-based health disparities remains limited. Existing evidence, though mixed, underscores how gender disparities in health perpetuate broader social inequalities, hindering overall development. Gender can powerfully shape all aspects of health and well-being. Socially and culturally constructed gender norms can influence health, risk behaviors, the social and structural determinants of access to and, quality of health and social services. Women in developed countries have better access to healthcare services. While in low- and middle-income countries (LMICs), systemic barriers frequently result in life-threatening health problems for women. According to a study conducted across 61 LMICs (2010-2023), two-thirds of women face barriers to accessing essential healthcare, with age, education, marital status, and wealth all playing important roles. For example, young women aged 15 to 24 face greater barriers due to cultural norms and permission-related restrictions, whereas those with higher education levels are more likely to seek care. Geographic location and national income levels create these inequalities, as women in rural and low-income countries frequently lack access to basic healthcare services.

Economic factors also increase gender inequalities in health. In many low- and middle-income countries, women earn less than men for equal work and face more job insecurity, which has a significant impact on their health. Unemployment affects both genders, causing physical and psychological problems such as stress, depression, and chronic diseases like hypertension and diabetes. However, men are more likely to suffer psychologically from prolonged unemployment. In addition, women's access to health care is often limited by social norms and expectations that are too strict for their gender. This reinforces patterns of isolation and discrimination. Data indicates that women's poverty levels are steadily rising each year, with a disproportionate impact on women from rising household poverty rates. For example, malnutrition among pregnant women and adolescent girls has surged by 25% since 2020 in regions hardest hit by the global food crisis, affecting millions of women and girls.

Health literacy is a key health determinant. Women with lower health literacy levels are more likely to experience higher rates of chronic diseases, as they often face challenges in comprehending medical instructions, managing medications, and identifying symptoms of conditions such as diabetes and hypertension. Low- and middle-income countries (LMICs) significantly show these problems since cultural standards and financial constraints limit women's access to health education. Studies have shown that women in LMICs are significantly less likely to understand basic health information

compared to men, contributing to higher rates of preventable diseases. Poor health literacy also increases the use of emergency services, hospitalizations, and reduces preventive care, thus exacerbating health inequalities.

Women have an important role in maintaining their health and their families. However, a lack of health literacy makes it difficult for them to make educated reproductive health decisions, such as contraception, safe sexual practices, and postpartum care. To address these issues, targeted measures are essential, such as implementing health education initiatives designed specifically for women and leveraging digital platforms to provide easily accessible health information. For example, well-designed educational resources, paired with effective communication strategies and personalized counseling, have proven effective in enhancing health literacy and enabling women to manage their health better.

The Sustainable Development Goals (SDGs) focus primarily on addressing health inequalities affecting adult women, acknowledging the considerable gaps they confront. These goals seek to reduce the negative impacts of gender-based health inequalities through focused interventions. However, little attention has been paid to how gender norms affect men and boys. The distinction between gender differences in social aspects is crucial, as gender inequalities in health are primarily socially produced rather than biologically determined. Therefore, they can be improved through targeted social change.

To address health inequalities, policymakers must adopt gender-sensitive health policies considering the broader social determinants of health. Effective strategies include increasing access to healthcare in rural and marginalized communities, enhancing transportation systems to improve healthcare accessibility, and providing financial support for health insurance to underserved groups. Additionally, increasing health knowledge through education programs and addressing restrictive social norms are also critical. Collecting and analyzing gender-disaggregated data will provide deeper insights into the barriers women face, allowing for more effective policy responses.

Gender inequalities in health are essentially social constructs that can be addressed by targeted policy. Promoting health equity requires a comprehensive approach that includes economic, social, and healthcare measures. Future studies should look into how gender norms affect health outcomes, in order to inform policies that build a more inclusive and equitable healthcare system for all.

## **Workplace Democracy in Promoting Decent Work**

**Çağla Erdoğan**

Ensuring decent working conditions for employees requires correctly identifying the underlying causes of the difficulty in achieving these conditions. Firstly, the hierarchical structure of the employment relationship makes employees vulnerable to abuses of their employment rights, even if these rights are stipulated by legislation. Secondly, there is an inherent conflict of interest between employees and employers regarding labour costs. The key to decent work is directly linked to social dialogue or workplace democracy.

Workplace democracy can overcome many issues caused by the hierarchy and can alleviate the issues caused by the conflict of interest. Limiting the employer's authority over employees or rendering the employment relationship less hierarchical by establishing social dialogue methods is crucial for both protecting employees' personalities and ensuring fair working conditions, as well as possibly limiting the infringement of labour rights. Although workplace democracy cannot eliminate the conflict of interest between the parties in the employment relationship, it might help reaching compromises regarding remuneration. Therefore, workplace democracy or social dialogue is not an end in itself, but serves as a guarantee for the protection and advancement of employment rights.

Employee participation in the decision-making process not only ensures decent working conditions but is also crucial in adapting businesses to the massive transformations in the world of work due to technological developments and the need for transition in the face of the climate crisis. Participation leads to better-designed policies, employee commitment to these policies, and ensuring their effectiveness.

The methods and levels of social dialogue vary in different countries according to the legal framework. Social dialogue can be achieved through trade union organization and collective bargaining agreements or by adopting mechanisms for workers' participation in management via employee representatives. While in dualist systems, employee representatives and trade union representatives coexist, in monist systems, trade union representatives take on all representative responsibilities. The intensity of employee participation in corporate decision-making may also occur at various levels. The least intense method of participation is the employees' right to be informed, where they cannot intervene in the content of business decisions. When employees are granted the right to be consulted, their opinions must be sought, but these are not binding. The right to be heard implies that if the views of employee representatives are not considered, the decision may be rendered invalid. In the case of genuine participation in management, the approval of employee representatives is required in business decisions.

While workplace democracy is crucial to achieving decent working conditions, participation mechanisms are virtually non-existent in Türkiye, which consistently ranks among the least safe places to work worldwide. In Türkiye, the unionisation level is low, and the coverage of collective labour agreements is even lower, partly due to the challenges posed by the legal framework. Although workplace union representation is regulated by law, union representatives only operate in workplaces where collective bargaining authority exists, and their powers are quite limited. The legal framework does not include provisions for employee representation in businesses, and mechanisms for participation in management are generally not regulated; the areas where workers can participate in management in a limited capacity are restricted to occupational health and safety committees and annual paid leave committees.

The legal framework must be amended to enable workplace democracy and ensure decent working conditions for employees in Türkiye. Considering the massive transformations in the world of work, this is even more crucial and urgent than ever. Firstly, rules limiting unionisation and collective bargaining must be amended to align with international standards, especially those set out by the International Labour Organisation. Secondly, a system enabling employee representation must be established, which is also an obligation undertaken under the Revised European Social Charter. To ensure meaningful participation, the system must not only include low-intensity forms of workplace democracy but also higher-intensity forms regarding business decisions like reorganization or mass dismissals. Therefore, the legislation should adopt the dualist approach to employee representation to ensure wide coverage without jeopardizing existing trade union structures. Both trade union and employee representation mechanisms also need to cover self-employed workers or platform workers whose employment status is contentious.

This paper consists of three parts; it firstly examines the role of workplace democracy in ensuring decent work for all. In the second part, it explains various levels and methods of participation, drawing upon comparative law. In the last part, the general features of a legal framework that can address the lack of workplace democracy in Türkiye are discussed.

# **The Effects of Advanced Technologies Aiming at Sustainable Development on the Labor Market**

**Ödülal Sönmez, Aziz Yıldız**

The concept of sustainable development establishes an equitable balance among its core components: economic growth, environmental protection, and social progress. To achieve this goal, technological advancements play a critical role in sustainable development. Parallel to technological progress, digitalization has emerged, bringing with it concepts such as robotic automation, renewable energy technologies, and artificial intelligence. These technologies create significant opportunities to achieve sustainable development goals while simultaneously driving changes and advancements in the labor market.

Although digitalization increases productivity in the labor market and is often perceived to raise costs during the investment phase, it clearly serves as a significant factor in reducing costs in the long term. In their 2017 study, Frey and Osborne examined the effects of automation on the labor market and concluded that nearly half of all workers are at risk (Frey & Osborne, 2017). Robots perform tasks that may be dangerous for humans, thereby reducing workplace accidents and ensuring employee safety. The reduction or elimination of workplace hazards by robots creates a positive impact and motivation among workers. However, alongside these benefits, the intensive use of robots in routine and repetitive tasks poses a threat to blue-collar workers and can increase unemployment rates (Bessen, 2019).

When technological advancements and innovations are evaluated from an environmental perspective, renewable energy technologies are seen to have positive effects on environmental sustainability. Integrating the most suitable technological tools into the labor market will enhance energy efficiency and reduce waste production. The inclusion of traceable robots in the labor market minimizes waste by preventing faulty production processes. Furthermore, the preference for renewable energy sources reduces fossil fuel consumption and carbon emissions, playing a critical role in environmental protection and combating climate change.

It is crucial to integrate technological tools and equipment that support the goals and objectives of sustainable development into the labor market to ensure that their positive contributions are sustained. Blue-collar workers must be equipped with new competencies and skills through in-service training programs to adapt to innovations and advancements (Acemoğlu & Restrepo, 2018). To eliminate the negative perception of technological advancements as a threat among blue-collar workers, continuous training programs that enable workers to acquire new skills. One of the primary reasons for blue-collar workers' bias against technological advancements is a lack of education. This educational gap

leads to hesitation in acquiring new skills, hindering their adaptation to the labor market. Blue-collar workers who will work alongside robots must be aware of the need for extra effort and be willing to perform better in acquiring new competencies. In this context, employers must develop training policies and programs to create a blue-collar workforce capable of adapting to technological changes (Argote et al., 1983; Pogodin et al.2018).

Blue-collar workers collaborating with robots in a harmonious work environment will gain the necessary knowledge and skills through in-service or continuous training processes, positively impact their job satisfaction and motivation (Bhargava et al., 2020; Looy, 2022). Blue-collar workers with increased job satisfaction and motivation maximize the benefits of advancing technologies, enabling technological advancements that support sustainable economic growth, environmental protection, and social progress.

Another important issue is the understanding and adoption by blue-collar workers of the effects of technology on sustainable development. Sustainable development, a field served and supported by technology, must be fully understood. Understanding the process is crucial for blue-collar workers to make effective contributions. In this regard, company policies and incentives are important factors in encouraging blue-collar workers to contribute to the process (Acemoğlu & Restrepo, 2018). Awareness campaigns, in-service training, and informational posters and brochures can help blue-collar workers learn about sustainable development (Frey & Osborne, 2017). Blue-collar workers who understand the significance of sustainable development will adopt a participatory approach, actively engaging in activities to achieve these goals. Rewarding blue-collar workers who create value through active participation can also serve as an incentive (Acemoğlu & Restrepo, 2018).

Technological advancements present both opportunities and challenges for labor markets. As technological advancements in environmental sustainability and economic growth become evident, the adaptation of blue-collar workers, whose societal roles and identities are changing, has become increasingly important. During this adaptation process, employers and policymakers must evaluate the impacts of technological advancements on the labor market and implement strategic programs to ensure that workers acquire the necessary competencies in line with technological progress.



## **Harnessing Artificial Intelligence for Sustainable Education Strategies**

**Liya Demir**

This study explores how artificial intelligence (AI) can be used to develop sustainable education strategies and expedite the advancement of the Sustainable Development Goals. Exploring AI's transformative potential in this area, it analyzes AI's multifaceted applications to examine its ability to personalize learning experiences, increase accessibility, optimize resource allocation, and promote sustainability awareness.

This study argues that the strategic integration of AI can contribute to creating sustainable education ecosystems and equipping students with the skills necessary for a sustainable future, addressing issues such as data privacy, algorithmic bias, and the digital divide. AI-driven learning platforms and tools support efficient and equitable education. The study emphasizes the role of AI in addressing educational inequalities and empowering educators by providing data-driven insights.

On the other hand, many technological developments, including AI, autonomous vehicles, virtual reality, and renewable energy, are expected to mature by 2030. The 2030s will bring advantages and disadvantages, especially in education, where technology will advance. At this point, the imperative for sustainable development requires a radical reassessment of educational paradigms. Traditional education systems, often characterized by resource intensity, standardized approaches, and limited accessibility, face increasing challenges in preparing students for a future defined by environmental awareness, social equity, and economic viability. AI offers a transformative opportunity to revolutionize education, promote sustainable practices, and empower students with the skills and knowledge needed in a complex and evolving world.

AI's data analytics capabilities offer significant advantages in optimizing resource allocation within educational institutions. By analyzing energy consumption, waste production, and material use, AI-powered systems can identify inefficiencies and suggest data-driven strategies to reduce environmental impact. AI-powered innovative building management systems can optimize lighting, heating, and cooling based on occupancy and usage patterns, leading to significant energy savings. Additionally, AI can facilitate the transition to paperless learning environments by managing digital resources, automatically grading digital assignments, and providing online learning platforms, minimizing the environmental footprint associated with traditional paper-based practices.

Beyond resource optimization, AI can potentially increase equity and accessibility in education. AI-powered personalized learning platforms can cater to various learners by adapting to student needs. AI-powered translation tools can bridge language barriers, and intelligent tutoring systems can bridge

gaps in teacher availability. Additionally, AI-powered assessment tools can assess students' ability to apply and analyze knowledge.

The integration of AI can enrich curricula by encouraging critical thinking, problem-solving, and creativity—skills necessary to address the complex challenges of sustainable development. AI-powered simulations and virtual reality environments can provide immersive and engaging learning experiences that allow students to safely and interactively explore complex environmental issues, social dilemmas, and economic models. Intelligent content curation tools can help educators identify and integrate relevant and up-to-date information on sustainability topics, ensuring students have the latest knowledge and perspectives.

AI can promote environmental literacy and foster a sense of responsibility toward the planet. AI-powered educational games and interactive platforms can make learning about ecological issues engaging and accessible for students of all ages. Natural language processing can analyze vast amounts of environmental data and present it in understandable formats, raising awareness and encouraging informed decision-making. AI can also facilitate citizen science initiatives, promoting a sense of ownership and initiative in addressing sustainability challenges by engaging students in real-world environmental monitoring and data collection.

AI is a significant opportunity to create more sustainable education systems. By optimizing resource use, personalizing learning experiences, enriching curricula, and promoting environmental literacy, it can empower students to contribute to a sustainable future. While ethical implications must be considered and challenges addressed, the strategic integration of AI can potentially transform education. This study highlights the critical need for more research, development, and thoughtful implementation of focused solutions to unlock the full potential of this transformative technology to advance sustainable education strategies.

# **The Impact of Social Assistance Programs on Poverty and Income Distribution in Türkiye**

**Alparslan A. Basaran, Erdem Utku Eke**

The concepts of poverty and hunger, as expressed in the first two goals of sustainable development, namely "no poverty" and "zero hunger," have undergone significant evolution in terms of definition, measurement methodology, and poverty reduction policies since Rowntree's (1901) pioneering work. The discourse has progressed from a focus on zero hunger to considerations of relative poverty, from the necessity of examining the capabilities of impoverished individuals to the adoption of a multidimensional poverty approach. Contemporary poverty reduction policies have undeniably experienced rapid transformations in response to economic development and growth, social, political, and technological changes, as well as environmental and structural challenges. From a current perspective, this evolution is encapsulated by the World Bank (2022) under the framework of "poverty and shared prosperity."

Since the turn of the millennium, social assistance programs have been regarded as a crucial instrument for poverty alleviation policies that consider the sharing of prosperity. Indeed, since 2000, the number of social assistance programs, including conditional cash transfers, in-kind and cash transfers, disability benefits, and social pensions, has increased from 80 to 180, and these programs are estimated to encompass 900 million individuals globally. Similar to the rest of the world, there has been a significant increase in the number of social assistance programs in Türkiye, accompanied by institutional transformation. In the early 2000s, social assistance in Turkey comprised a limited number of programs covering the elderly, children, disabled, and economically disadvantaged individuals, as well as access to public services in the domains of education and health. Public expenditures for these programs and services constituted approximately 0.5 percent of the GDP, and the institutional structure was relatively fragmented. With the rapid transformation experienced in the last twenty-five years, the number of social assistance programs has expanded to 43, and the ratio of social assistance expenditure to GDP has reached 1.1 percent by 2024. Progress in institutional structure was achieved through the establishment of the Ministry of Family and Social Services in 2011.

Today's social assistance programs, which are implemented in various forms such as cash transfers, in-kind transfers, and public work practices, aim to alleviate poverty and increase the welfare of vulnerable people while covering certain groups such as the elderly, disabled, women, and children. The effectiveness and efficiency of these programs in reducing poverty and income inequality and increasing access to basic public services such as health, education, electricity and drinking water is crucial. The Child Support Programs in Lesotho and South Africa, food assistance programs in Malawi, Bolsa Familia in Brazil, Indira Gandhi National Old Age Pension Scheme and National Rural

Employment Guarantee Scheme in India and Dibao in China are examples of the changing and differentiating practices of social assistance programs in the last 25 years. The impacts of these assistance programs are revealed using different methodological approaches such as difference-in-differences, propensity score matching, instrumental variables, and regression discontinuity analysis. However, these analyses typically focus on the impacts of specific programs due to data limitations and may be insufficient for comprehensive analysis of all programs, monitoring programmatic changes over time, and facilitating cross-country comparisons. To address this gap, the World Bank has developed the Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE) database, enabling comparative analysis of social assistance programs within the context of diverse program designs across different countries. This database provides an opportunity to analyze the scope of social security and social assistance programs, which are two important pillars of social protection, and their effects on poverty and inequality. Owing to the ASPIRE databases, social assistance programs are constantly monitored and evaluated.

This study examines the new paradigm in Turkey's social assistance programs from the 2000s to the present. Specifically, the scope of social assistance programs from 2002 to the present was investigated, and the effects of these programs on poverty and inequality were comparatively analyzed for the last 20 years utilizing the ASPIRE database. The coverage of social assistance in Turkey has expanded with an increasing number of social assistance programs. The number of individuals benefiting from social assistance programs has demonstrated significant change, particularly in the poorest quintile. In Turkey, the impact of social assistance in reducing poverty rates was approximately 4 percent on average between 2004 and 2019. In 2019, the rate was 4.8 percent. The impact of social assistance on the poverty gap is comparable to its effect on poverty rates. While the progressive impact of social assistance on the Gini coefficient, an indicator of income distribution, was 0.5 percent in the early 2000s, it increased to 1.26 percent in 2019.

## **Enhancing Sustainable Business Models with Smart Technologies:**

### **A Case Study On Defacto Phygital Smart Store**

**Zahide Kübra Koçak**

The business model as a concept originated in the field of computer science. Although a business model has different definitions, it generally refers to the processes related to how businesses create, deliver, and capture value. Business model terminology has recently gained popularity and is often associated with new technologies. In particular, related trends such as smart technologies have led companies to use new business models. One of these innovative business models is sustainable (innovative) business models. Considering the potential benefits for companies and societies, sustainable business models have become an increasingly important topic for managers and academics. A sustainable business model can be developed when companies are aware of the importance of moral and ethical values and integrate the components of corporate social responsibility into their business models. These business models represent a new understanding in which sustainability is integrated into value creation and delivery activities by combining sustainability concepts and principles.

Previous research on smart technologies emphasizes the critical importance of such technologies in developing sustainable business models. The integrated application of smart technologies that developed during the Industrial Revolution, which started with Industry 4.0 and continued with Industry 5.0, forms the basis for sustainable business models. Accordingly, smart technologies contribute to the design and implementation of sustainable business models by accelerating or improving the process of creating a sustainable business model. According to various researchers, increasing the competitiveness among businesses, reducing costs, maximizing profits, and ultimately developing a sustainable business model are among the main objectives of smart technologies. In order to achieve these objectives, smart technologies should be included in the organizational strategy, and digital transformation should be accelerated in organizations. In addition, it is also important for businesses to develop a set of basic skills for managers to maximize the effects of smart technologies. Despite all these effects of smart technologies, it remains unclear how companies will use and integrate them to create sustainable business models.

Many innovative systems developed with smart technologies are changing the retailing concept in terms of process management (technology can help improve retail management), consumer experience (interaction with technology can improve consumers' experience), and service delivery (technology can offer additional services that consumers can access in the shortest time). This new understanding has also been practical in the retail store system, and a sustainable business model

approach supported by smart technologies has emerged. This research aims to reveal the potential difficulties of smart technologies in creating a sustainable business model and to address how companies integrate smart technologies into their business models. Within the scope of this purpose, how the Turkish company Defacto, which started its operations in 2018, uses smart technologies to create a successful sustainable business model with its "Phygital Smart Store" initiative has been empirically evaluated with a case study approach. This study conducted semi-structured interviews and observations with the manager and project manager responsible for in-store smart technologies. The data analysis process adopted a qualitative approach based on thematic analysis of interview records. The findings from the case study support the idea that the strategic importance of smart technologies is largely taken into account in developing sustainable business models. The advantages of the developed sustainable business model were revealed, such as improving customer experience, gaining competitive advantage, reducing costs, technological innovation, social innovation, and a sustainable environment. Similarly, the findings highlighted the challenges of integrating smart technologies into sustainable business models, such as the need for temporary capabilities, the formation of strategic partnerships, and changes in service access and consumption.

## **Sustainable Working Patterns and Work Life Balance; Contribution of Employee Satisfaction and Organizational Commitment to Sustainable Development Goals on The Way to 2030**

**Murat Başal, Ömer Faruk Şarkbay, Cemile Şeker, Aşlı Kaya**

Today, the business world increasingly requires innovative and long-term strategies to achieve sustainable development goals. Sustainability, defined as the responsible management of natural resources, economic activities, and social structures, has become a central concern in working arrangements and work-life balance, particularly for managers facing shifts in workforce dynamics and evolving work models following technological transformations. Sustainable working arrangements are business models designed to enhance employees' long-term productivity and well-being while considering environmental, economic, and social factors. Practices such as flexible working hours, remote work, work-life balance policies, and inclusive work environments not only increase employee satisfaction and organizational commitment but also enable businesses to contribute to sustainable development goals. These practices ultimately enhance workforce motivation and productivity, fostering long-term success for both employees and organizations. Work-life balance refers to individuals maintaining a healthy equilibrium between their professional and personal lives. A well-balanced work-life dynamic reduces employees' stress levels while boosting their motivation and productivity. Policies such as flexible working hours, remote work, and paid leave can facilitate this balance. Employees who achieve a high level of work-life balance tend to be happier, more creative, and more productive, whereas organizations benefit from improved employee commitment and performance, ultimately creating a more sustainable corporate structure. As human-centered approaches gain prominence in the business world, aligned with sustainable development goals, employee satisfaction plays a crucial role in fostering a motivated and engaged workforce. Employee satisfaction ensures that individuals feel valued and motivated in their work environment, while organizational commitment strengthens long-term success by employees' emotional and professional dedication to their organization. Looking ahead to 2030, key factors such as digital transformation, flexible working models, and inclusive leadership are expected to further reinforce employee satisfaction and commitment. This transformation aims to establish more productive and fulfilling work environments at both individual and institutional levels, contributing to the development of sustainable business models.

In line with the United Nations Sustainable Development Goals (SDGs) targeted for realization by 2030, this study aims to evaluate the contribution of employee satisfaction and organizational commitment to sustainable development. Specifically, it examines the impact of work-life balance on employee satisfaction and the subsequent effect of satisfaction on organizational commitment, particularly in the context of flexible working models, hybrid systems, and digital transformation.

Data was collected from employees working in businesses operating in Istanbul. A total of 400 data points were gathered through an online survey administered via Google Forms. The data were analyzed using SPSS 23, employing structural equation modeling and t-tests to test the study's hypotheses. The findings indicate that increased employee satisfaction positively influences work efficiency, which, in turn, supports companies' sustainability objectives. Furthermore, within the framework of contemporary working models, flexible work arrangements were found to have significant psychological and performance-related benefits for employees. This study highlights the long-term impact of sustainable working environments on employee well-being, organizational commitment, and company performance. The results suggest that achieving sustainable development goals in the business world necessitates a flexible and transformative approach. To maintain a competitive advantage and secure long-term success, businesses should implement strategies that promote sustainable working arrangements.



## **Technological Implications of Sustainable Development:**

### **Industry 4.0 And Its Limitations**

**Özge Aynagöz**

Since the second half of the 18th century, the industrial revolutions witnessed around the world have not only influenced the competitive structures of countries, international trade dynamics, and development efforts, but also brought new opportunities and threats. Particularly, with the third industrial revolution and the differences created by the Fourth Industrial Revolution, defined as Industry 4.0, in communication technologies, it is evident that Industry 5.0 and beyond will reshape many areas, from production structures to social dynamics of countries, in the near future.

While the modern world is experiencing Industry 4.0 in the 2000s, it was certainly not easy to predict the effects, changes, and opportunities that Society 5.0, which began at the end of the 21st century and is still ongoing, would create. However, it was not difficult to predict the advantages that countries that could meet the requirements to have a say in the conditions that this new form of society would offer would gain in both development and foreign trade.

This study, aiming to evaluate the impacts of the agenda formed by Society 5.0, which is being introduced in Japan, and the Fifth Industrial Revolution, focuses on assessing the effects of technological developments, especially those arising before and after Industry 4.0, on industry, production, and foreign trade. To achieve this, the developments that occurred during the industrial revolutions will first be examined, with a particular focus on the technological implications of these developments. The main purpose of this study is to interpret the agenda created by the concept of Industry 5.0, which emerged in response to the challenges posed by the technological environment created by Industry 4.0, and was introduced by the European Union (EU) in 2021, through the lens of sustainable development. While examining this industrial revolution, which centers on societal interests and concerns in digitalization, the aim will be to analyse this revolution, which reshapes digital transformation solutions for sustainable development, along with its technological outcomes.

Especially, the digitalization, automation, artificial intelligence, and Internet of Things technologies brought about by the third and fourth industrial revolutions have led to profound changes in industrial production processes. Industry 4.0 offers great potential, particularly in terms of increasing efficiency and reducing costs, but at the same time, the digitalization of production processes and the adaptation to new technologies have created new challenges such as the retraining of the workforce and technological inequality. From this perspective, Industry 5.0 can be seen as a revolution that adopts a human-centred approach and thus highlights the collaboration between humans and machines. This fifth revolution, signalling an era where technologies are designed to complement labour creativity

and intelligence, can be defined as a new milestone that countries need to consider when determining their development strategies.

As with every revolution, there are both opportunities and threats offered by Industry 4.0 and 5.0. These threats, which can be summarized under headings such as the structural change of the workforce, digital divide, data security, and unemployment rates, and the new opportunities for sustainable development that can be created by effectively managing this process, are extremely important to accurately define in order to provide policymakers with a fundamental roadmap.

It is evident that the technological innovations brought about by the fourth industrial revolution and deepened by the fifth industrial revolution are the primary driving force behind economic and social changes at both the country and firm levels. The rapid increase in efforts to explain and focus on "Technology" in theories and policy proposals in recent years also confirms this. However, merely understanding and incorporating technology as a concept into the process will hinder the ability to keep up with current trends. The common cornerstone in every revolution is that the technological development carrying the revolutions has not only brought about significant changes in the economy but also in society. From this perspective, the necessity of following the technological innovation dimension of the sustainable development goal through with Industry 5.0, makes policy measures such as the development of digital skills, training the workforce in this context, infrastructure investments that will make technology accessible, adaptation of existing technologies, and support/incentives for new technological investments urgent and essential. Policies must also be designed as solutions to the increasing unemployment issue and the training of a workforce unable to adapt to the new revolution's nature. In the scope of this latest revolution, where technology is not only shaped by human but also environmental awareness, undoubtedly, the need to ensure investments in environmentally sensitive technologies should also be added to these policies. Furthermore, all these measures will need to be supported not only by state and public cooperation but also by international collaborations.

## **Climate Change and The Importance of Eco-Social Policies in Green Transformation**

**Ömer Can Çevik**

Throughout the historical process, humanity and its environment have faced many challenges. It is seen that these challenges have emerged in different ways in different periods of history and that humanity has made great efforts to overcome these challenges. Challenges that have a widespread impact turn into problems day by day and can spread globally to all societies. Today, one of the problems that emerges globally and threatens all humanity and its future day by day is climate change.

Climate change today is not only an environmental problem, but also a crisis with social, economic and political dimensions. Phenomena such as heat waves, natural disasters, depletion of water resources and loss of agricultural productivity target the most vulnerable segments of society and make their living conditions more difficult. This can lead to widening inequality and escalating social unrest. Especially in underdeveloped and developing countries, they deepen social inequalities, pave the way for many problems, especially poverty and food security problems, and cause displacement.

Measures to be taken and policies to be developed against climate change, which has a devastating impact on all living things in nature, need to take into account social inequalities and injustices. At this point, green transformation and eco-social policies come to the fore to minimize the destructive effects of climate change.

New social policies must be produced against climate change and the new social risks that this change brings with it. In the literature, these environmentally sensitive policies are referred to as eco-social policies. The green transformation process, which is based on efficient resource utilization and environmental sustainability, is also considered very important in terms of eco-social policies.

Green transformation includes the development of green technologies, in particular the creation of legal regulations mandating energy savings or greenhouse gas emission reductions, as well as other activities aimed at changing society's attitude towards the acceptance of technological solutions and legal norms - often more costly but more environmentally friendly.

Eco-social policies offer an approach that argues that environmental sustainability and social justice should be considered together in the fight against climate change, aiming for societies to combat climate change with social and economic equality. These approaches address the solution of environmental problems within the framework of social needs and rights, independent of purely technical dimensions. Therefore, such policies aim not only to protect the environment, but also to make poor and disadvantaged groups more resilient to the negative impacts of climate change. In this context, it is possible to build eco-social policies on four main components. These components can

be listed as just transition, social equality and participation, green economy and sustainable development, and national/international cooperation.

Eco-social policies propose a more inclusive and equitable response to climate change through strategies such as equitable sharing of natural resources, access to clean energy, creation of a green workforce, protection of ecosystem services and social participation. These policies aim to empower communities not only environmentally, but also economically and socially in the fight against climate change.

In this context, first of all, the greening of working life, green economy and green employment creation are advocated. In this direction, green labor force can be created in areas such as renewable energy sector and sustainable agriculture in the fight against climate change. On the other hand, with the greening of working life, factors such as energy efficiency, waste management, green marketing/labels, sustainable business models, corporate social responsibility practices, reducing working hours and flexible (remote) working practices, sustainable transportation and sustainable consumption come to the fore. This situation is thought to help reduce environmental impacts. On the other hand, social safety nets for communities vulnerable to climate change need to be strengthened. These networks should provide temporary support for situations such as post-disaster relief, migrant reception and displacement. In addition, educating communities about climate change and eco-social policies will help raise more sensitive individuals and communities. Education can enable individuals to change their behavior in the face of climate change. Finally, integrating policies to combat climate change with social and economic development policies will create more comprehensive and sustainable solutions.

Accordingly, the aim of this study is to establish the relationship between social policy and the issue of climate change, which has the power to affect all elements of social life in recent years, and to reveal how and within which elements social policies have evolved towards eco-social policies in the green transformation process we are in.

## **The Impact of Greenhouse Gases in Sustainable Cities**

**Nuray Örnek, İslam Gökalp**

Greenhouse gases are naturally occurring gases already present in the atmosphere that prevent the Earth's heat from escaping back into the atmosphere as it is transported. Carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrogen oxides (NO<sub>x</sub>) and water vapor are among the most common greenhouse gases. Greenhouse gases trap heat in the atmosphere, creating what is known as the greenhouse effect. The greenhouse effect is a natural occurrence that keeps the planet at a favorable temperature under normal conditions. However, when too much greenhouse gases accumulate in the atmosphere, there is an excessive increase in temperature, causing climate change. Climate change is not only about the warming of the earth, but also about fundamental changes in weather patterns, water theory and ecosystems, and it has been one of the most important threats of all time that needs to be prevented. It is expected that a wide range of applicable policies will be produced by the relevant authorities in accordance with the principle of sustainability, which has a broader scope such as environment, society and economy. Indeed, sustainability is directly related to less damage to nature, providing better living conditions for people and using resources efficiently. It is essential to create a sustainable city as cities are settlements where individuals in society come together and basic needs are met within a limited place. Sustainable cities have an infrastructure that makes the best use of natural resources, minimizes harmful impacts on the environment, provides equal opportunities to meet the needs of its constituents, and sustains economic development. Yet, in today's conditions, greenhouse gas emissions caused by harmful factors such as the use of fossil fuels in cities and the construction of buildings far from greening, etc. have caused the speed up of climate change.

All living and non-living beings affected by greenhouse gases are exposed to the harmful effects of the gases they release, both psychologically and physiologically. The negative impacts of these gases on nature have triggered many diseases in living beings and have increased the severity of existing conditions. Some of these physiological disorders can be listed as follows: respiratory diseases such as lung conditions caused by air pollution, respiratory disorders like pharyngitis, skin diseases such as allergies, cardiovascular diseases due to temperature changes, an increase in the number of premature babies resulting from early births, and many other conditions that could be further expanded. The effects of greenhouse gases have become an undeniable issue, with impacts felt in almost every field. Along with these physiological disorders, stress, anxiety, depression, and similar psychological conditions are also among the effects of greenhouse gases on living health. Increases in air temperature and the associated disorders are just some of the impacts that greenhouse gases have on society. Additionally, infrastructure, settlements, human well-being, social life, and economic

activities are just a few of the many aspects influenced by greenhouse gases, which have become an increasingly dominant issue in developing cities today.

Unfortunately, this problem is no longer limited to urban centers but has started to spread to rural areas as well. Social mobility, economic development, needs, industrial development, and the growing attractiveness of urban centers as living hubs have led to a higher concentration of greenhouse gas emissions and their effects in these areas. Especially climate change caused by greenhouse gases in coastal cities has led to significant changes in temperature, glacial melting, and alterations in precipitation types and amounts, showing that coastal cities are at high risk. This is because climate and temperature changes due to emitted gases can cause sea levels to rise and result in natural disasters like floods due to excessive rainfall. Reducing greenhouse gas emissions in rural and urban centers contributes to extending the recurrence period of these natural events and decreasing the disturbances that negatively affect living health and even lead to species extinction, making cities healthier, more livable, and sustainable. In this context, sustainable cities can be contributed through applications such as developing the sponge city system understanding with risk analysis reports and R&D studies, generating energy needs from green energy sources to ensure energy efficiency and promoting its spread throughout the city, restoring lost green spaces to the city, and enabling social mobility through environmentally friendly transportation systems. In this way, social health, well-being, and peace can be achieved.

# **The Impact of Artificial Intelligence-Supported Learning Environments on Student Achievement and Motivation: An Experimental Study**

**Halil Kamışlı**

This study aims to examine the impact of artificial intelligence (AI)-supported learning environments on student achievement and motivation. The rapid advancement of educational technologies necessitates the adoption of new approaches in teaching and learning processes. Traditional teaching methods often fail to provide the flexibility needed to accommodate the individual learning pace and needs of students. At this point, the use of AI-based educational tools emerges as a significant innovation that can make learning processes more personalized and effective. In particular, adaptive learning environments that support individualized learning paths play a critical role in enhancing students' motivation and academic success. In this context, the study compares the effects of traditional teaching methods and AI-supported learning environments on academic achievement, participation in the learning process, and student motivation. AI-Supported Learning Environment: An AI-supported learning environment refers to digital education platforms that can adapt to students' individual learning pace, interests, and needs. These environments utilize AI algorithms to analyze students' learning processes, identify areas of difficulty, and provide personalized content. Additionally, they track students' progress, offer real-time feedback, and dynamically adjust instructional materials to create a more effective learning process. The AI-supported learning environment used in this study is a system that analyzes student interactions, provides personalized recommendations, and automatically adapts instructional processes. Through AI-supported platforms, students can progress at their own learning pace and focus on topics they find challenging, thereby developing customized learning pathways. Particularly, with the help of natural language processing (NLP) technology, intelligent tutoring assistants and chatbots provide instant feedback, answer students' questions, and help them correct their mistakes. Consequently, the learning process becomes more individualized, efficient, and student-centered. Method: This study employed an experimental design and was conducted over a 10-week instructional period with two different student groups. The research involved 120 students enrolled in the Faculty of Education at a public university in Turkey. The participants were randomly assigned to two groups: the experimental group (n=60) received instruction in an AI-supported learning environment, whereas the control group (n=60) was taught using traditional methods. The 10-week instructional period was conducted within the scope of the "Introduction to Education" course. Data were collected through a pre-test and post-test achievement test as well as a semi-structured interview form developed to assess students' learning experiences. Findings: The findings indicate that students who were instructed in an AI-supported learning environment demonstrated significantly higher academic achievement

compared to those in the control group ( $p < 0.05$ ). Additionally, positive effects were observed in students' motivation towards the learning process and their participation levels in classes. In particular, individualized feedback mechanisms and adaptive learning strategies were found to enhance student achievement. This process is enhanced by the AI-supported learning environment's continuous analysis of student performance. Machine learning algorithms determine students' strengths and weaknesses based on their previous course performance, response times, and error patterns. The AI-based system detects students' deficiencies and recommends additional content and exercises tailored to those areas. Moreover, learning materials are automatically reshaped based on students' comprehension speed. As a result, a customized educational experience is provided for each student. Furthermore, NLP-supported chatbots and intelligent tutoring assistants offer real-time feedback to students, answer their questions instantly, and support the learning process. Adaptive learning strategies adjust the content based on students' learning pace and present the most suitable materials through instant assessments. This enables each student to progress at their own optimal pace and address their weaknesses, leading to a more solid learning experience. The learning of particularly complex academic concepts is facilitated through AI-supported simulations and interactive educational materials.

**Conclusion and Recommendations:** The study's findings suggest that AI-supported learning environments can be effective tools in enhancing student achievement and motivation. These environments provide a supportive structure for students' individualized learning processes, enriching their learning experiences and improving academic performance. Additionally, such digital learning environments have been observed to make the learning process more flexible and accessible, particularly for students who struggle with traditional teaching methods. It is recommended that educators integrate technological tools more effectively into pedagogical processes. Special training programs should be developed to enable teachers to use AI-supported platforms more consciously and efficiently. Future research should examine the effects of AI-based learning environments across different educational levels and disciplines. In particular, studies should be conducted on the long-term impact and sustainability of AI-based learning models. This study highlights the opportunities of digitalization in education and its contributions to teaching processes, serving as a valuable reference in the field of educational sciences. Future studies should be designed to assess the broader applicability of AI-supported learning across various student profiles and educational contexts.



# **Alternative Development Approaches and Philosophies of Latin America Relating to the Achievement of SDGs**

**Ceren Urcan**

Development is a process of economic, social and cultural transformation that is necessary for the modernization of every nation-state. How this will be achieved has always been a matter of opinion. With the acceptance of the existence of heterogeneous societies, the combination of a human-centered perspective, and the idea that development should be realized in a participatory manner, there is a tendency towards a development approach where development can be achieved in more than one way and where the contribution of local communities is also important at the core of the process. In Latin America, where the concept of development has been discussed theoretically, especially since the second half of the 20th century, alternatives to development have been sought and these researches have actually been put into theory in a way that is compatible with the daily life practices of the people of the region. Holistic ecological humanism, solidarity economies, workers' self-management economy, cooperativism, participatory development, just transformation in production, human-centered development, microcredits, sustainable development at the grassroots, sustainable livelihoods, and similar approaches reflect alternative development perspectives, especially in the Latin American region. These approaches offer a different development framework in terms of considering local people and communities and their own dynamics. The "Good Living" philosophy, which is based on the harmony among individuals, societies and nature, essentially emphasizes the tools necessary for sustainable development. For these reasons, the validity of alternative development approaches in Latin American countries will be examined in this study by considering SDGs.

The main aim of the study is to determine the effectiveness of alternative development approaches in the success of Latin American countries that have achieved some sustainable development goals. This study contributes to the literature by clearly relating the sustainable development goals of Latin America to alternative development approaches. When the Sustainable Development Goals 2024 Report is examined, it is seen that several countries have already made progress in several goals. For this reason, the sample of the study consists of Honduras (13), Nicaragua (13), Costa Rica (7), Bahamas (11), Cuba (12,13), Haiti (12,13), Trinidad and Tobago (1), Suriname (1), Peru (4), Brazil (7,17), French Guiana (1), Argentina (4,5), Uruguay (1,7) that have been successful in any goal. The units of analysis are the sustainable development goals that have been achieved. These goals are SDG 1- No Poverty, SDG 4- Quality Education, SDG 5- Gender Equality, SDG 7- Affordable and Clean Energy, SDG 11- Sustainable Cities and Communities, SDG 12- Responsible Consumption and Production, SDG 13- Climate Action, SDG 17- Partnerships for the Goals. The indicators of these

goals were not preferred as units of analysis. Since expanding the sample in this respect would make it difficult to obtain a definite result, it was not preferred, however indicators that achieved significant success were also included. For this reason, in accordance with the dialectic of thesis-antithesis-synthesis, analyses will be conducted through alternative approaches on the countries and targets mentioned above. The level of analysis is multilateral due to the diversity of actors and development indicators involved in development processes. Qualitative and quantitative data collection methods were used in this study. Quantitative data and progress regarding sustainable development goals were obtained through SDG Index Dashboard. Alternative development approaches and theories regarding the development of the Latin American region were obtained from secondary data sources such as books, scientific articles and reports by using qualitative data collection methods. In addition, official web pages were also used in the data collection process.

When achieved goals are taken into consideration, it is seen that parallel results have emerged with the “Good Living” philosophy that has been adopted in the Latin American region for many years. Today, each development indicator that is intended to be developed in line with sustainable development goals is essentially considered as an Andean philosophy in terms of development. Sustainable development goals, designed in accordance with the patterns of the neoliberal world order and expected to be achieved worldwide, are essentially the adaptation of the lives of Latin American indigenous peoples who have tried to live a life based on not separating society and nature from each other, to the 21st century order. When we look at the goals achieved, it is possible to say that alternative views that emphasize the harmonious movement of society and nature and that give importance to participatory development have found a response in practice in this respect. In fact, many of the alternative approaches have already emphasized the concept of sustainability. We can see how important the environment is in terms of sustainable development studies from the fact that the target has been achieved in almost all of Latin America in Freshwater withdrawal, an indicator of SDG 6- Clean Water and Sanitation. Similarly, a very high target completion rate has been achieved in population with Access to clean fuels and technology for cooking, one of the indicators of SDG 7. While success has been achieved throughout the region in most of the indicators of SDG 12, the fact that the major economies of the region have encountered great difficulties in achieving the targets has caused the target not to be achieved throughout the region.

## **Sustainable Development and Incentive Policies:**

### **Comparative Analysis of Policy Implementations**

**Ebru Yalçın**

Technological developments are the main source of productivity differences between countries, sectors and industries and are the main driving force of economic growth. Increasing the competitive power based on industrial innovation, which has become a priority for all countries in today's world, and achieving sustainable industrialization goals are only possible with the mediating effect of human capital and innovation, which will be strengthened as a result of the development of the R&D ecosystem. Sustainable Development Goal No. 9, which draws attention to this phenomenon with the main theme of 'Building Resilient Infrastructures, Promoting Inclusive and Sustainable Industrialisation and Strengthening Innovation', emphasises the necessity of government intervention and refers to the evaluation of input incrementality in the light of measurable indicators. Sub-targets 9.2 and 9.5 set out a roadmap for integrating industry and innovation with sustainable development. Sub-target 9.2 states that inclusive and sustainable industrialisation should be promoted and that the share of manufactur sector in the labour force and the share of manufacturing value added in GDP should be increased by 2030. Value added in the manufacturing sector is based on product and process innovations that result from R&D activities. Sub-target 9.5, which is based on two types of R&D input indicators that form the basis of international R&D statistics, stresses the importance of increasing expenditure on R&D activities and the number of full-time equivalent researchers. R&D expenditure and the number of researchers are key input indicators for the design of R&D and innovation policies and are considered a strategic objective for policy makers in terms of increasing the national industrial R&D level and social welfare. The parallelism between the structural transformation and R&D investment in the manufacturing sectors of China and South Korea, which play an important role in the global competitive chain, is striking and instructive in terms of good policy practice. In China, which significantly increased its R&D intensity after 2000, this ratio rose from 0.89 to 2.55 in 2022. Over the same period, the number of full-time equivalent researchers per million inhabitants increased from 551.8072 to 1849.4608. As a result of the transformation of the manufacturing sector brought about by investments in research and innovation infrastructure, the value added of the manufacturing sector to GDP increased significantly, rising from 16.48 to 28.58. South Korea, which has gained a strong competitive advantage in high-tech production and high value-added products, is one of the countries with the highest R&D intensity, and this ratio, which was 2.12 in 2000, was realised as 5.21 in 2022. Over the same period, the number of full-time equivalent researchers rose from 2323 0401 to 9430 5027, while the value of manufacturing's contribution to GDP increased from 22.96 to 26.69. Compared to developed and developing

countries, Turkey's limited innovation capacity is striking. Although R&D intensity increased from 0.46 in 2000 to 1.40 in 2021, it remains below the world average of 1.92. Developing its R&D ecosystem in line with the Sustainable Development Goals is essential for Turkey's transition from a low value-added producer to a high-tech manufacturer. Value-added technological developments are realised through inventions and innovations resulting from R&D activities carried out by entrepreneurs and profit-seeking firms. However, due to market failures, technological knowledge and investment in technology and innovation remain below the optimal allocation of resources. The problem of access to financial markets caused by asymmetric information between financial institutions and firms willing to invest in R&D and the positive technological externalities make it essential to support the R&D ecosystem. In all countries, various incentive policy instruments are offered in different forms and combinations to encourage investment in long-term and high-cost R&D projects. The innovation infrastructure and the industrialisation stage of the countries shape the incentive mechanisms. In addition, the characteristics of experimental research and development phases in particular lead to selective policies for different phases of R&D activities. This study evaluates the incentive policies that have been implemented to accelerate the innovative infrastructure and technology-driven structural change that is crucial for sustainable development from a comparative perspective. To this end, incentives to increase the number of full-time equivalent R&D personnel and R&D intensity, which are the main indicators of input incrementality, will be examined through application-based examples and indicators.

## **Educational Equity and Inclusivity: The Case of Hakkari Province**

**Halil Kamışlı**

Educational equity and inclusivity refer to ensuring that all individuals have equal access to quality education, regardless of socio-economic status, cultural background, or physical limitations. However, Hakkari, located in the eastern part of Turkey, faces unique challenges in this regard due to its mountainous geography, socio-economic hardships, and cultural dynamics. This study aims to assess the current state of educational equity and inclusivity in Hakkari, identify key barriers, and suggest viable policy and practice-based solutions.

### **Methodology**

A mixed-methods approach was adopted, combining quantitative and qualitative data collection tools. The sample consisted of 300 participants—200 students, 50 teachers, and 50 parents—from ten schools across Hakkari's central district and the subdistricts of Yüksekova, Şemdinli, Çukurca, and Derecik. Surveys captured participants' perceptions of educational equity and inclusivity, while semi-structured interviews with 20 teachers and administrators provided in-depth qualitative insights. Qualitative data were analyzed using content analysis, and quantitative findings were interpreted through descriptive statistics.

### **Findings**

#### **1. Level of Educational Equity**

The study revealed that educational equity in Hakkari is significantly lower than the national average. Rural students face considerable challenges such as long travel distances, inadequate transportation infrastructure, and severe winter conditions that hinder school attendance. Overcrowded classrooms and a high student-to-teacher ratio further limit access to quality education. Language barriers particularly affect non-Turkish-speaking students, especially in primary school, resulting in academic underachievement and reduced participation.

#### **2. Barriers for Disadvantaged Groups**

Key disadvantaged groups include girls, non-Turkish-speaking students, children from low-income families, and students with special needs. Girls' participation in secondary education is limited by traditional gender roles, early marriage, and long distances to school. Non-Turkish-speaking students lack language support, which delays literacy and academic development. Children from low-income families often lack basic school supplies and may

leave school to support their households. Students with special needs face a shortage of specialized institutions and inadequate physical infrastructure in mainstream schools.

### **3. Adoption of Inclusive Education Practices**

Inclusive education practices remain underdeveloped in the region. About 68% of teachers reported not receiving training in inclusive education. Schools generally lack accommodations for students with disabilities, and individual education plans are rarely implemented. Teachers mostly use conventional teaching methods, and there is minimal support for multilingual learners. Consequently, inclusivity in classrooms is limited, and students requiring additional support are often left behind.

### **4. Recommendations for Policy and Practice**

To enhance educational equity in Hakkari, the study proposes a set of targeted recommendations:

- **Improve Transportation and Access:** Strengthen the school transport system and invest in infrastructure to maintain road access during harsh winters.
- **Support Female Education:** Introduce scholarship programs, raise community awareness, and implement distance learning options where needed.
- **Enhance Special Needs Education:** Increase the number of special education teachers, create more resource classrooms, and upgrade school accessibility features.
- **Reduce Class Sizes:** Accelerate school construction projects and introduce incentives to attract and retain qualified teachers in the region.
- **Support Non-Turkish-Speaking Students:** Develop bilingual education programs and mother-tongue-based Turkish language learning initiatives.

## **Conclusion**

This study highlights the structural and contextual barriers to achieving educational equity in Hakkari. Factors such as geographic isolation, socio-cultural barriers, and insufficient infrastructure create significant challenges for disadvantaged groups. Implementing the proposed policies could significantly enhance educational access and quality, particularly for those most at risk of exclusion. These improvements are essential for fostering an inclusive and equitable educational environment in the region.

## **Developing a Disaster-Resilient Framework for Small Island Communities:**

### **A Case Study of The North Cyprus**

**Yazgül Ceylan**

In a rapidly evolving world dominated by digital advancements, nature continues to assert its influence through catastrophic events. Across the globe, natural disasters such as earthquakes, storms, floods, and wildfires have devastated communities, causing extensive loss of life and property. The increasing frequency and intensity of these disasters highlight the urgent need for disaster-resilient communities that can minimize damage, ensure swift recovery, and safeguard individuals and assets. Disaster resilience is defined as a community's ability to anticipate, prepare for, adapt to, and recover from unforeseen disasters. The significance of this research lies in the necessity of integrating disaster resilience into urban planning, architecture, and policy-making to mitigate the adverse effects of natural calamities. This study examines risk assessment, infrastructure development, emergency response, socioeconomic resilience, and policy implementation as key strategies for enhancing disaster resilience, with a particular focus on the Turkish Republic of Northern Cyprus (TRNC).

The concept of disaster resilience has been extensively studied in architecture and urban planning, with a strong emphasis on sustainable and adaptive strategies. Notably, Japanese architecture serves as a benchmark due to its application of resilience principles in response to continuous natural disasters. Numerous studies have explored resilient urban planning, disaster mitigation policies, and the role of socioeconomic stability in enhancing resilience. Incorporating resilient architecture as a subset of sustainable design has been a focal point in contemporary discourse. Studies indicate that green infrastructure, early warning systems, and adaptive urban planning play vital roles in strengthening disaster resilience. However, while research has extensively documented best practices in developed nations, limited studies focus on small island communities such as TRNC, which face unique geographic and infrastructural challenges.

Despite the wealth of research on disaster resilience, gaps remain, particularly in the context of small island nations. Current literature does not sufficiently address how TRNC's unique urban and architectural characteristics can be leveraged for disaster preparedness. Additionally, while Japan and other disaster-prone regions have implemented comprehensive resilience strategies, similar frameworks tailored to TRNC's socioeconomic and environmental conditions are lacking. Furthermore, there is insufficient research on the intersection of disaster resilience and cultural heritage preservation in TRNC. Historic sites and coastal areas are particularly vulnerable to climate-induced disasters, yet existing policies do not fully integrate resilience measures into their conservation. This study aims to bridge these gaps by proposing a context-specific framework for TRNC.

The primary objective of this research is to develop a comprehensive framework for disaster-resilient communities in TRNC. The study aims to conduct a risk assessment and readiness evaluation to identify vulnerabilities and develop early warning mechanisms, propose land use and infrastructure planning strategies focusing on green infrastructure and sustainable urban development, and develop response and recovery strategies to enhance post-disaster reconstruction efficiency. The research employs a mixed-methods approach, combining qualitative and quantitative analyses. The methodology includes a thorough literature review of existing studies and case studies to identify best practices, examination of disaster vulnerabilities specific to TRNC, including earthquakes, floods, and wildfires, analysis of infrastructure resilience, policy effectiveness, and community engagement, evaluation of disaster risk by region, with a focus on high-risk zones such as coastal areas and historic sites, and assessment of current infrastructure, including roads, bridges, and utilities, to recommend necessary enhancements. The paper is structured as follows: Section 1 introduces the research context and significance. Section 2 reviews relevant literature on disaster resilience. Section 3 highlights existing research gaps. Section 4 outlines the research methodology. Section 5 presents key findings, followed by Section 6, which discusses the study's contributions and implications.

The findings of this study emphasize the necessity of a multi-faceted disaster resilience strategy that integrates policy-making, infrastructure development, and community participation. Risk assessment reveals that TRNC's coastal regions and historic sites are particularly vulnerable to climate-induced disasters. A lack of integrated policies and inadequate infrastructure further exacerbate these risks. The research identifies key strategies for enhancing disaster resilience, including the incorporation of green infrastructure, improved building regulations, and community-based disaster preparedness programs. The study also highlights the importance of public-private partnerships in fostering sustainable disaster resilience efforts.

This study makes a significant contribution to the field of disaster resilience by addressing the specific challenges faced by TRNC. It proposes a tailored framework that integrates resilience into urban planning, historic site preservation, and community engagement. The research also offers policy recommendations that align with international best practices while considering TRNC's unique environmental and socioeconomic context. From a methodological perspective, the study bridges the gap between theoretical resilience strategies and their practical application in small island communities. The findings can serve as a model for other regions facing similar challenges, reinforcing the broader applicability of disaster resilience principles. Ultimately, this research enhances the discourse on sustainable urban planning and disaster mitigation, ensuring the long-term safety and sustainability of communities in TRNC and beyond.



# **Integrating Biophilic Design and Smart Technologies for Sustainable Urban Development in Muscat, Oman**

**Zainab Al Farsi, Doğa Üzümcüoğlu**

Urbanization in Muscat presents pressing challenges related to climate resilience, energy efficiency, and sustainability, as outlined in Oman Vision 2040. As part of a national economic diversification strategy, urban planners are tasked with integrating technological advancements while maintaining environmental sustainability. Muscat's hot climate, rapid urban growth, and limited green infrastructure exacerbate environmental concerns such as heat stress, inadequate resource management, and urban heat island (UHI) effects. This research explores the integration of biophilic design and smart city technologies to create a climate-adaptive and human-centered urban model for Muscat.

Existing studies emphasize the benefits of biophilic design in enhancing urban sustainability, reducing heat stress, and improving air quality (Beatley, 2016; Browning et al., 2014). Research also highlights the role of smart technologies such as sensors, renewable energy solutions, and advanced irrigation systems in bolstering urban resilience (Al Hatmi et al., 2014). However, contemporary urban planning often overlooks vernacular architecture and biomimicry, favoring energy-intensive practices (Abdulmajeed, 2023). Previous works identify the potential of integrating nature-based solutions (NBS) with digital innovations, yet practical implementation in Muscat remains limited. Despite the recognized advantages of biophilic and smart technologies, their application in Muscat is constrained by infrastructural, policy, and financial barriers. While studies explore individual components, limited research examines their synergies in addressing Muscat's climatic and urban challenges. Moreover, there is a lack of empirical data on public perception, policy feasibility, and the effectiveness of integrated biophilic-smart solutions. This study seeks to bridge these gaps by investigating the combined impact of biophilic design and smart city initiatives in mitigating UHI effects, enhancing resource efficiency, and improving urban livability.

This research aims to develop a strategic urban planning framework that integrates biophilic design and smart technologies to enhance Muscat's climate resilience. The study addresses key questions, including: How can biophilic design improve urban sustainability, energy efficiency, and well-being in Muscat? What smart technologies can optimize urban resilience and resource management? How can biophilic-smart city strategies mitigate UHI effects and enhance urban livability? What are the main challenges in implementing such strategies within Muscat's policy and infrastructure framework?

A mixed-methods approach is employed, incorporating comparative case studies from Singapore, Amsterdam, and Dubai to extract best practices. Data collection includes expert interviews, resident

surveys, and GIS climate modeling to assess the effectiveness of biophilic-smart urbanism. Policy analysis evaluates Oman Vision 2040's alignment with these strategies. The research is structured to present background analysis, literature synthesis, methodology, findings, and policy recommendations.

Preliminary findings suggest that integrating biophilic design with smart technologies can significantly improve urban resilience, energy efficiency, and environmental quality in Muscat. GIS climate modeling indicates that biophilic strategies can reduce UHI effects, while renewable energy solutions enhance sustainability. Surveys and expert interviews reveal strong support for biophilic-smart initiatives but highlight policy and financial constraints as key implementation barriers. The research provides actionable recommendations for urban planners, architects, and policymakers to integrate biophilic-smart principles into Muscat's development strategy.

This study contributes to sustainable urbanism discourse by proposing an integrated biophilic-smart city model for Muscat, specifically tailored to hot-arid regions. It advances theoretical understanding by examining the intersection of NBS and digital technologies in climate-adaptive urbanism. Methodologically, it introduces GIS climate modeling and empirical analysis to assess the feasibility of biophilic-smart solutions. Practically, the study offers strategic urban planning recommendations aligned with Oman Vision 2040, positioning Muscat as a global leader in sustainable and intelligent urban development.

## **Green Fiscal Rules and Economic Growth in Europe: An Entropy Balancing Approach**

**Nuran Belet, Shehzada Ghulam Abbas, Shahzada Rahim Abbas**

Considering the climate changes and environmental degradation of the Anthropocene era and the economic and social transformation in combating climate change and its possible consequences, the European Union declared the basic policy document called the European Green Deal to the Member States in 2019. The European Green Deal is a policy package dated December 1, 2019, based on the just transition principle, aiming to achieve zero net greenhouse gas emissions of the European Union countries by 2050, to ensure that economic growth is independent of natural resources and that no region is left behind in this goal.

The EU's strategy for achieving net zero emissions within the next three decades encompasses the development and implementation of a suite of novel clean technologies, in addition to the formulation of a Green Deal Industrial Plan that encompasses regulatory frameworks, financing mechanisms, skill development, and trade-related aspects. The European Green Deal Industrial Plan is designed to initiate Europe's transition into a preeminent centre for clean technology and industrial innovation, with the objective of attaining net zero emissions. In order to facilitate this transition, the EU must promote global collaboration and national coordination to ensure that the process is both equitable and sustainable. To this end, it is essential to relax state aid rules and establish a new framework for green fiscal rules, with the aim of directing public subsidies towards the production of key green technologies. However, it should be noted that the provision of these structures is complicated by the differences in macroeconomic conditions and the level of competences of the countries in the union.

As European economies strive to achieve carbon neutrality by 2050, green fiscal rules have become central to policy debates. The European Union (EU) has integrated environmental considerations into its fiscal governance framework, including green budgeting, sustainable debt rules, and carbon taxation. While these policies aim to balance sustainability with economic growth, their macroeconomic effects remain contested. This study examines how green fiscal rules influence economic growth across European countries, employing the Entropy Balancing Method to improve causal inference. This research is significant as it investigates the effects of green fiscal policies on economic expansion in Europe, providing policymakers with valuable information. The Entropy Balancing Method enhances causal inference, thereby increasing the reliability of the findings. Grasping this connection enables a balance between environmental sustainability and economic stability. This research offers European comparisons, helping other areas develop environmental policy strategies. This initiative also addresses a research void, providing empirical data on whether green fiscal policies stimulate or impede economic expansion.

The objectives of the study are as follows:

- Assess the impact of EU-wide and national green fiscal rules on economic growth.
- Evaluate whether such rules enhance sustainable economic development or create fiscal rigidities that hinder investment.
- Identify how fiscal discipline interacts with green public investments, innovation, and competitiveness.
- Apply entropy balancing to correct selection bias in cross-country comparisons.
  - The study uses robust methodology to assess the relationship and impact of green fiscal rules on economic growth. The detail of the variables, sources of data is given below.
- Dependent Variable: Economic Growth (GDP per capita growth, Total Factor Productivity).
- Independent Variable: Green Fiscal Rule Index (constructed from EU directives, national fiscal rules, and environmental taxation frameworks).
- Control Variables: Public debt, fiscal balance, green R&D investment, institutional quality, inflation, trade openness.
- Data Sources: Eurostat, European Commission Fiscal Governance Database, OECD Environmental Policy Stringency Index, IMF, and World Bank.
  - The study employs Entropy Balancing Approach with GMM model to estimate the overall impact.
- Entropy Balancing Method: Ensures treated (countries with strict green fiscal rules) and control groups are comparable across economic and institutional characteristics.
- Estimation Model: Dynamic panel data regression using the Generalized Method of Moments (GMM) to address endogeneity.
- Robustness Checks: Alternative specifications, placebo tests, and sensitivity analyses
  - This study is relevant in the EU fraternity of green financing as it provides a comprehensive and empirical evidence into the subject of green financing and its impact on the overall economy and sustainability.
- Policy Relevance: Informs EU policymakers on whether green fiscal rules enhance economic resilience or impose growth trade-offs.
- Methodological Contribution: Entropy balancing improves causal inference in green fiscal policy research.
- Comparative Insights: Examines EU core vs. peripheral economies variations and identifies best practices.

## **Mitigating Misinformation in Diplomacy with AI**

**Erman Akilli**

In the contemporary diplomatic landscape, misinformation and disinformation represent mounting threats that disrupt political stability, distort public perception, and undermine international cooperation. As diplomacy increasingly intersects with digital communication, malign actors exploit online platforms to manipulate narratives, manufacture consent, and erode trust in institutions. These disruptions are no longer confined to conventional state-sponsored propaganda efforts; they now operate at scale through artificial intelligence (AI)-enabled tools, including deepfakes, large language models, and coordinated inauthentic behavior across social media networks.

The emergence of AI-generated content—especially synthetic media such as deepfakes—has added an alarming layer of complexity to international information environments. These technologies allow for the creation of hyper-realistic but entirely fabricated images, audio, and video that can impersonate public figures or simulate real-time events. In diplomacy, where the credibility of communication is paramount, such manipulations can trigger crises, provoke retaliatory measures, or delegitimize key actors. A single convincingly forged video of a head of state making inflammatory remarks, for instance, could escalate tensions or destabilize multilateral negotiations. As such, misinformation is no longer a peripheral nuisance but a strategic tool in hybrid conflict and great power competition. Artificial intelligence, while contributing to the problem, also offers potent countermeasures. AI-based systems are being increasingly developed and deployed to identify, classify, and mitigate the dissemination of false information in real-time. These systems rely on techniques such as natural language processing (NLP), anomaly detection, and image forensics to trace the origin of disinformation, analyze dissemination patterns, and flag suspicious content before it goes viral. Notable case studies illustrate this potential: OpenAI, in collaboration with threat intelligence agencies, has actively monitored and restricted misuse of its models in influence operations, while Meta has expanded its AI-driven misinformation detection protocols to cover languages and regions that were previously under-protected.

Deepfake detection algorithms now form a critical line of defense. Trained on large datasets of both real and synthetic media, these algorithms can identify subtle inconsistencies in facial movements, audio sync, or pixel-level abnormalities that reveal manipulation. Generative Adversarial Networks (GANs), originally responsible for creating deepfakes, are paradoxically used in training detection models, generating adversarial examples that allow defensive systems to improve iteratively. Furthermore, AI-enabled social network analysis helps detect coordinated inauthentic behavior by identifying bot clusters and disinformation amplification strategies, offering diplomatic missions early warning signals of narrative manipulation in target regions.

However, while AI holds promise, its application in diplomacy raises several critical challenges. First, the adaptive nature of disinformation actors means that detection systems must constantly evolve. Just as AI systems improve in identifying fake content, adversaries develop more sophisticated methods to bypass those same defenses. This ongoing arms race demands not only technological agility but also strategic foresight. Second, AI systems are not infallible; they can produce false positives, inadvertently suppressing legitimate speech, or false negatives that allow harmful content to proliferate. In diplomatic contexts, where precision is vital, such errors can have far-reaching consequences.

Ethical concerns also emerge regarding the surveillance and moderation of online content. AI-based misinformation detection often requires scraping and analyzing vast amounts of user-generated data, raising questions about privacy, consent, and the potential for political abuse. If AI moderation systems are weaponized or lack transparency, they may erode trust in democratic institutions rather than protect it. The problem is compounded in authoritarian regimes, where similar technologies are used not to counter misinformation, but to suppress dissent and control the narrative. Thus, any normative framework for AI in diplomacy must prioritize transparency, accountability, and the preservation of human rights.

Moreover, the integration of AI into diplomatic infrastructures cannot be viewed as a purely technical upgrade. It demands interdisciplinary collaboration between technologists, diplomats, legal scholars, and ethicists. AI solutions must be embedded within broader institutional protocols, including media literacy programs, strategic communication efforts, and legal safeguards against malign information influence. Institutions like the European External Action Service and the U.S. State Department have begun to integrate digital resilience strategies into their diplomatic toolkits, reflecting this holistic approach.

This study underscores AI's transformative role in safeguarding diplomatic communications and enhancing strategic resilience in the face of digital disinformation. While the technical capabilities of AI systems continue to evolve, their effective and ethical deployment in diplomatic practice depends on a sustained commitment to oversight, adaptability, and international cooperation. Diplomatic actors must not only harness AI's strengths in detecting and mitigating false information but also lead in setting global norms that prevent its misuse.

## **The Status of Breast Milk Banks in the World within the Scope of Sustainable Development Goals**

**Nazan Kartal, Semih Işık, Gamze Arıkan, Ebru Yıldırım**

Throughout history, in different cultures and periods, the indispensable role of breast milk in infant nutrition and the importance of breastfeeding have been universally accepted. There is a consensus among international organizations and researchers on the importance of breast milk on maternal and infant health. However, it has been stated that the desired level of breastfeeding has not been reached worldwide. Breastfeeding is not only considered the best option for infant nutrition, but is also considered a critical element for public health (Bosi et al 2016; AAP, 2012; Lawrence, 2012). Breastfeeding has been shown to have a positive relationship with child development, national productivity and environmental sustainability (Rollins et al., 2016; Victora et al., 2016). The economic impact of infant feeding is comprehensive and multifaceted. Low breastfeeding rates impact healthcare and the costs borne by families through expenses for illness and treatment and for breast milk substitutes. It has also been argued that breastfeeding women make a significant, direct and positive contribution to the national economy through the supply of breast milk (Pokhrel et al. 2015). Additionally, it has long been known that optimal breastfeeding practices reduce neonatal and child mortality (Kavle et al., 2017). Within the scope of the Sustainable Development Goals, the global under-five mortality rate is targeted to be 25 per 1000 live births by 2030 (Desa, 2016). In 2018, the rate was 39 per 1,000 live births globally, but much higher at 68 per 1,000 live births in low-income countries (WHO, 2018). In this sense, breastfeeding alone provides an important and effective strategy for developing countries to achieve the SDG target (Gebrekidan et al., 2020; Nkrumah, 2016). With increasing momentum to support and meet the Sustainable Development Goals (SDGs), an increased focus on innovative methods to strengthen breastfeeding and reduce neonatal mortality has come to the fore. These are particularly important for SDG 2 to improve nutrition, SDG 3 to prevent child mortality and reduce the risk of noncommunicable diseases, and SDG 4 to support cognitive development and education (Adhanom Ghebreyesus & Lake, 2017; United Nations, 2017; United Nations Department of Economic and Social Affairs, 2015). A breast milk bank is “a practice that allows for the collection and distribution of human milk donated by nursing mothers other than the biological mother.” Over the last few decades, various milk banks and milk banks have been established across Europe, acting as a source of nutrition for babies in need (Weaver et al., 2019). In a joint statement made in 1980 by the United Nations Children's Emergency Fund (UNICEF) through the Baby-Friendly Hospital Initiative, WHO stated that "Donated human milk is the preferred alternative when breast milk is not available" (UNICEF, 2018). Human milk banking represents the most institutionalized method for collecting, screening, processing and

preserving breast milk for later distribution (Obeng et al., 2023). Donated expressed breast milk comes from a source other than the mother's own milk. It is usually collected from several human donors and processed by a donor milk bank for use by a recipient who is not the mother's own baby (Bertino et al., 2009).

Existing literature supports the need to improve breast milk banking services to reduce neonatal mortality (Mathias et al., 2023; Adhisivam et al., 2019; Shenker et al., 2021). Breast milk banking has evolved from a niche practice into a cornerstone of modern newborn care. Originating in the mid-20th century in response to the urgent needs of premature infants, these banks have expanded their scope to include a broader demographic of medically fragile newborns. As demand for donor milk increases, supported by advances in neonatal intensive care and increased awareness of the unique benefits of breast milk, understanding the policies that govern these banks becomes increasingly important (Hisham et al., 2024; Torres-Muñoz et al., 2021).

The first breast milk bank was established in Vienna, Austria in 1909 (Plessis and Mahlatje, 2024). Since then, more than 700 milk banks have been established worldwide. However, due to the lack of global guidelines and the practice of adapting to existing local needs and health systems, there are different operational models and a wide range of applications (Israel-Ballard et al., 2024). Several well-organized breast milk banks and guides have been established in Europe, America, Australia and England (Leung and Yau, 2015; Arnold, 2006; Hartmann et al. 2007; Kim and Unger, 2010). In Turkey, there is no existing breast milk banking practice. In 2011, the “Turkish Human Milk Banking Model” was developed according to the relevant standards in Turkey. However, due to differences of opinion and lack of public acceptance, further work could not be done. The results of a 2015 survey of Turkish clergy showed that most of them do not approve of the establishment of Western-style milk banks (Akpınar et al 2024; Ozdemir et al., 2015).

It is seen that countries have implemented various practices such as milk banks regarding human milk substitutes. Breast milk sharing is subject to various interpretations in different cultural and religious contexts, and especially in Muslim-majority societies such as Turkey, there are reservations about breast milk banking practices due to religious and ethical concerns. For these reasons, the establishment of milk banks can serve as an important preventive health activity. Milk banking policies should be clearly integrated into breast milk and breastfeeding policies and implemented through program development. The necessity to carry out studies for the integration of breast milk banks into public health policies necessitates a comprehensive examination of social attitudes and beliefs towards milk banks in this context.



## **Inequalities and Polarization in the Context of Health: The Case of Cyprus**

**Merve Ertok Onurlu**

Social vulnerability is frequently pronounced in recent years in the scope of health all over the world. In general, it refers to individuals or a group of individuals that are likely to be disadvantaged in accessing health services due to their status of social, economic or other types of circumstances in society. As a result, they become more sensitive to health inequalities and polarization.

Regarding the current health system in Cyprus, health services that are accessible through hospitals, clinics, or health centers have been provided by both public and private sectors performing together for years. One of the major issues of the Cyprian health system is the deficiencies of health insurance coverage among all citizens. Therefore, this is likely to result in a huge barrier regarding the affordability of health care services, especially for examinations and procedures with high costs. In this context, such challenges might create inequalities and polarization in access to health services based primarily on social and economic characteristics of patients. For instance, individuals with high income levels or with higher education might have an advantage over those with low-income levels or lower education in accessing and benefitting from health services in the country. Furthermore, as “Health and Well-Being” is defined as Goal 3 of the Sustainable Development Goals by the United Nations, preventing inequalities and providing equitable access to health care for everyone in the country could contribute to achieving this specific goal.

In the health economics literature, there exists a wide range of studies examining inequalities and polarization in the context of health with the aim of evaluating the performance of health care systems with respect to quality of care or access to health services. The focus of recent studies in the literature is to explore health inequalities with respect to socio-economic factors by leveraging indices such as Abul-Naga-Yalcin (ANY) (2008), Cowell-Flachaire (CW) (2007) and Allison-Foster (AF) (2004). Unlike traditional inequality indices (i.e. Concentration Index, Gini Index) that are more applicable with cardinal and unbounded health data, these indices could be utilized in cases where health data are associated with a binary or an ordinal and bounded structure (i.e. survey based self-assessed health). Moreover, although health polarization is closely related to the concept of inequality, the former is more associated with distributional aspects of health data with regards to clusters or sub-groups in the population. Apouey (2007), Esteban-Ray (ER) (1994) and Duclos-Esteban-Ray (DER) (2004) are frequently employed indices in the applied health economics literature in exploring polarization. However, Apouey (2007) is reported to show greater efficacy in measuring polarization with ordinal and bounded health data.

Utilizing the World Values Survey, 2018 (Wave 7), this study aims to explore inequalities and polarization in the self-assessed health status within the scope of social and economic indicators among individuals residing in Cyprus. Empirical results based on those aforementioned indices claim that individuals that are assumed to be socially vulnerable are more likely to explore inequalities and polarization in accessing health services in the country. In other words, the findings of the study assert that socio-economic characteristics of individuals accessing health services are closely linked to inequalities and polarization in health. The findings of the study further highlight the fact that policy makers should take these related socioeconomic factors into account in designing policies or reforms that would induce reductions in inequalities and polarization concerning the health sector in Cyprus.

## **Entrepreneurs by Necessity, Entrepreneurs Constrained:**

### **Challenges faced by Self-employed Women Entrepreneurs in Cote D'Ivoire**

**Jamyla Maime Kamagate, Feyza A. Bhatti**

Achieving gender equality and empowering all women and girls represents a priority goal of the 2030 Agenda for Sustainable Development. Over the last decade, despite significant improvements in women's educational attainment and health, the gender gaps in labour market remained persistent across cultures and national boundaries. Entrepreneurship does not only offer women a prospect of accessing the labour market, but also achieving financial independence, and an opportunity to challenge traditional gender roles. Encouraging women's business ownership and reducing the gender gaps in entrepreneurship is not only a matter of equity but it is also crucial for economic growth, social development, job creation, and the progress of local communities, thus having a spillover effect on ending poverty and other deprivations towards achieving Sustainable Development Goals.

In 2023, 47.4% of employed women in the world were self-employed and another 2.3% were employers. Although significant proportion of women own businesses, they still face numerous obstacles in starting and sustaining their entrepreneurial undertakings across cultures with varying levels and issues. Existing literature, also suggest that the entrepreneurship ecosystems are highly gendered, where women encounter distinct challenges compared to men. While women's entrepreneurship is increasingly researched, the existing studies often overlook the gendered nuances within the entrepreneurship ecosystems and the constraints that are deeply embedded in social and cultural norms. The studies on Sub-Saharan Africa are also scarce. This study aims to address this gap by exploring the experiences of self-employed women entrepreneurs in Cote D'Ivoire to identify the opportunities and challenges faces by women entrepreneurs. How do women perceive their entrepreneurship identity? What is the importance of entrepreneurship for them? What are the opportunities and challenges for women within the Cote D'Ivoire's entrepreneurship ecosystem?

Utilizing 65 semi-structured interviews conducted by self-employed women entrepreneurs in urban and rural areas of Cote D'Ivoire between August 2023-September 2023 and August 2024- September 2024, this exploratory study uses a poststructuralist feminist perspective, to expand and deepen our understandings of importance of entrepreneurship for women and social and cultural constraints that women's entrepreneurship encounter in Sub-Saharan contexts.

The study shows that women entrepreneurship in Cote D'Ivoire is not only vital for financial and social empowerment of women, but also for the education and well-being of children and households of women entrepreneurs. Many women entrepreneurs were driven by the desire to survive and support

their households, and particularly the schooling of their children. Their entrepreneurship was vital for their families and communities.

Along with the gendered cultural environment of the country, however, the current entrepreneurial ecosystem found to be weak and gender-blind in Cote D'Ivoire. Women entrepreneurs face significant challenges in access to finance, networking, resources and markets, have tax payment issues and loan repayment issues, have high risk perceptions, struggle to reach a work-life balance, and encounter regulatory obstacles and cultural stereotypes and gender biases. The challenges are particularly pronounced in rural settings where markets are marked by low profits and difficulties in accessing customers. Men entrepreneurs, who have higher mobility and therefore better access to markets and customers, are entering into areas that were traditionally dominated by women, and this had created an extra source of concern and additional challenges for women entrepreneurs. Interaction with other women entrepreneurs and networks, on the other hand, emerged as an essential strategy to eliminate the effects of these obstacles.

The study also suggests policy recommendations that necessitates tailored policies and support strategies for women entrepreneurs in urban and rural areas, from specific funding opportunities to measures that aim to eliminate socio-cultural barriers and gender biases.

## **Agricultural Total Factor Productivity and Public Support in Emerging Market Economies**

**Nazile Taşkın**

Agriculture is a fundamental sector for human survival and economic development. Throughout human history, agriculture has not only provided nourishment but also laid the foundation for the socio-economic structures of societies. Agriculture is more than just a production activity; it is of vital importance for economic growth, food security, environmental protection, cultural richness, and sustainability. The future of agriculture, which aims to become more efficient, environmentally friendly, and technology-driven, holds significant importance globally. For agricultural output to grow at a fast enough rate to meet the food and raw material demands arising from population growth, an increase in productivity in the agricultural sector is essential. Agricultural total factor productivity (TFP) refers to the efficiency of the resources (land, labor, capital, etc.) used in the agricultural production process. High agricultural TFP indicates that more agricultural production can be achieved with fewer resources. Productivity prevents resource waste and minimizes environmental impacts. This plays a key role in ensuring sustainability. Efficient management of the factors used in agriculture enables sustainable growth in agricultural production in these countries. This not only enhances food security but also contributes to economic development. Increasing agricultural productivity presents significant opportunities not only in the agricultural production field but also for societal welfare and development. These opportunities are a crucial factor in supporting the development of local communities and countries by creating better living conditions, ensuring economic stability, and contributing to the more effective use of natural resources.

Emerging market economies are part of developing countries and refer to those that are rapidly growing, often rapidly industrializing or partially industrialized. Although the share of agriculture in the economies of these countries has decreased, agricultural production still plays a very important role. Agricultural total factor productivity indicates the effectiveness of agricultural policies in these countries and shows the position of the agricultural sector in terms of global competitiveness. Agricultural total factor productivity in emerging market economies is a critical factor for increasing productivity in the sector and supporting sustainable growth. The agricultural sector in these economies often relies on traditional methods, but technological innovations, education, infrastructure improvements, and effective policy support are necessary to increase productivity. The combination of these elements contributes to long-term economic development and sustainable productivity growth in agriculture. Agricultural total factor productivity in emerging market economies is not only the backbone of the agricultural sector but also of overall economic development. Increasing agricultural production efficiency helps achieve many strategic goals in these countries, such as economic growth, food security, environmental sustainability, poverty

reduction, social development, and foreign trade. Therefore, improving agricultural productivity is considered a critical component of both short-term and long-term development strategies.

Increasing agricultural total factor productivity in emerging market economies requires a multifaceted and strategic approach to public support. The state's role in areas such as agricultural R&D, education, financial support, infrastructure investments, policies, and access to international markets is crucial. Public support promotes the modernization of the agricultural sector and enhances productivity, thereby encouraging economic development and rural welfare. Such support not only contributes to the growth of agriculture but also provides long-term benefits to the overall welfare of societies. This study analyzes the relationship between public-supported agricultural R&D expenditures, infrastructure investments, and agricultural productivity. Causality analysis was conducted using data from 2003 to 2021 for emerging market economies. The analysis revealed a bidirectional causality relationship between agricultural TFP and infrastructure investments, as well as between R&D investments and infrastructure investments. Additionally, a unidirectional causality relationship exists between agricultural TFP and R&D investments. In this context, there is a strong interaction between agricultural total factor productivity, agricultural innovation, and infrastructure investments in emerging market economies. These three factors support and complement each other. Agricultural innovations increase productivity, while infrastructure investments provide the necessary environment for the effective implementation of these innovations. This dynamic interaction contributes to rural development, economic growth, sustainable agriculture, and food security. Strategic investments in agricultural innovation and infrastructure can accelerate the industrialization process and make the agricultural sector more efficient, competitive, and sustainable.

## **Smart Cities and Sustainability: Bibliometric Mapping with Vosviewer**

**Glten Őenkul, Begm Eyll zdaŐ**

The rapid population growth experienced today has made the intensive use of natural resources in cities inevitable. The increasing population and rising resource consumption lead to ecological and environmental problems, as well as challenges in public order (Haughton, 1997). Technological innovations enable cities to be managed more efficiently. These innovations not only automate routine urban functions but also improve citizens' quality of life and enhance the overall functioning of cities through real-time data analysis (Batty et al., 2012). For this reason, cities today are making greater efforts to transform into smart cities by leveraging technological advancements (Lim, Kimm & Maglio, 2018). Cities generally depend on external resources and operate as structures that consume these resources. Sustainability is recognized as a goal to preserve and enhance natural capital (Albino, Berardi & Dangelico, 2015). Smart cities can promote a more sustainable ecosystem by using new technologies and creating solutions to protect and enhance natural capital.

This study examines the main trends, keywords, authors, countries, institutions and collaboration networks of publications on smart cities and sustainability through bibliometric analysis. In addition, the study aims to guide researchers, central and local governments by identifying gaps in the smart cities and sustainability literature.

VOSviewer software was used for bibliometric analysis in the study. Vosviewer is a free software that allows detailed examination of publications in the literature, creation and visualization of bibliometric maps (Arslan, 2022). Scopus database was selected to access publications on this subject. To access relevant publications from the Scopus database, a search was made in the title, abstract and keywords, and 6,411 publications were reached between 2000 and 2024. When the distribution of publications by year was examined, it was observed that there were very few publications on smart cities and sustainability in the early 2000s, but a rapid increase was observed after 2011. The year when the publications reached their peak was 2024. Today, the increasing awareness of sustainability and the increase in smart city applications and initiatives in this direction may explain this increase. When the distribution of publications by subject area and type is examined, it is seen that the most publications are made in the fields of computer science, engineering, social sciences, environmental sciences and energy, and journal articles constitute the majority of the publications. However, conference proceedings have a significant share. This distribution shows that smart cities and sustainability publications are researched in different disciplines and are widely discussed not only in academic research but also in scientific conferences.

The analysis results conducted with VOSviewer show that the most productive authors in the field of smart cities and sustainability are authors such as Simon Elias Bibri, Tan Yiğitcanlar, John Krogstie, and Zaheer Allam. These authors also appear as the most cited authors. When we look at the citation analysis of countries, it is seen that the most cited countries are Italy, the United Kingdom, the United States, China, and India, respectively. When the citation analysis of the institutions is examined, it is seen that the relevant departments of Sapienza University, Polytechnic University and Ryerson University are among the most cited institutions. These results show that the majority of the research in the field of smart cities and sustainability is shaped by these authors, institutions and countries. As a result of examining the author collaborations, it is seen that authors such as Yajun Fang, Longfei Zhou, Hao Yuan and Zhiyuan Yang are the most collaborative authors. In the keyword analysis, it was seen that the most prominent keywords were smart cities, sustainability, internet of things, urban planning, machine learning, artificial intelligence and blockchain. The density of these keywords shows that the technologies used in smart cities and their effects are very important in sustainable city planning. The bibliographic matching result of the documents shows that the publications with the most significant impact on the literature are the studies of Albino (2015), Bibri (2017c), Ahvenniemi (2017) and Allam (2019).

The results of the study reveal that research in the field of smart cities and sustainability is increasingly being addressed from an interdisciplinary perspective, and that technological innovations and data-driven solutions will shape the future of the field. Therefore, it is recommended that future research focus more on data processing, efficiency, and citizen participation.



# **Women Entrepreneurship in Türkiye within the Framework of Entrepreneurship Ecosystem**

## **Approach: Good Country Practice Examples and Recommendations for Türkiye**

**Banu Metin**

Today, constantly changing and developing economic, technological, social and cultural conditions strengthen the role and position of women in working life by increasing their participation in the labor market and employment. In addition to women in paid employment, the number of women who set up their own businesses is also increasing. This situation also creates opportunities in terms of paid employment. In addition to its contribution to individual and household welfare, women's entrepreneurship also indicates an important potential in macroeconomic terms with the contributions it can make to production, employment and national income. On the other hand, entrepreneurship is effective in helping women become self-sufficient, self-confident, and self-aware individuals, thus playing an important role in the construction of their social identities.

In a study that systematically analyzed peer-reviewed articles on women's entrepreneurship published between 1950 and 2019, it is emphasized that women can have a positive impact on reducing poverty and social exclusion by making significant contributions to entrepreneurial activities and economic development in terms of creating new jobs and increasing gross domestic product (Cardella, Hernandez-Sanchez, & Sanchez-Garcia, 2020, p.1). In OECD countries and the EU, female entrepreneurship remains a policy priority as a means of economic independence for women and a lever for development, growth and innovation. However, long-standing gender inequality in entrepreneurship imposes a significant cost on the economy through missed opportunities for job creation, growth and innovation. Recent estimates from several OECD countries suggest that closing the gender gap could have a positive economic impact. In Canada, estimates from 2017 suggest that closing the gender gap in entrepreneurship could add CAD 150 billion (€ 102 billion) to the Canadian economy by 2026, 6% more than the current estimate for 2017-26 (OECD/European Commission, 2023, p.51).

The increase in global competition has made it much more important for countries to have an innovative and productive economic capacity and potential. In this context, a change in approach has emerged in studies in the field of entrepreneurship since the 1980s, and entrepreneurship has begun to be addressed with a more inclusive and holistic perspective within the framework of the ecosystem approach, beyond individual characteristics and conditions. The entrepreneurial ecosystem, like an ecosystem in nature, consists of many components that are believed to strongly affect entrepreneurial activities in a particular region (Vogel, 2013: 446). The concept of the entrepreneurial ecosystem has begun to be used more frequently in the literature after 2015. The focal point of the entrepreneurial ecosystem is its system feature. In this context, the components of the system and the interactions between them are of critical importance, and as the system changes over time, these components and interactions also change. According to the World Economic Forum, the main pillars of the entrepreneurial ecosystem consist of accessible markets; human capital/workforce; financing; mentors, guidance and support systems; regulatory framework and infrastructure; education and training; catalyst universities and cultural support (WEF, 2013).

In many countries around the world, entrepreneurship is predominantly a male-dominated phenomenon, and the barriers to female entrepreneurship are quite similar around the world. These barriers include lack of family support for women to become involved in entrepreneurial activities; dual responsibilities of taking care of family and business; limited access to technology, markets and resources; lack of knowledge and skills, limited access to credit; negative social and cultural attitudes towards entrepreneurship and the social roles attributed to women and men. Closing the gender gap in entrepreneurial activities not only positively affects women's well-being both individually and within the household but also contributes to increasing economic development and social welfare on a macro scale.

Closing gender gaps in entrepreneurship requires implementing inclusive entrepreneurship policies. The aim of inclusive entrepreneurship policies is to reduce inequalities of opportunity and ensure that everyone, regardless of their personal characteristics and background, has the opportunity to start and manage a business. On the other hand, helping people gain skills and work experience and build networks through participation in inclusive entrepreneurship programs also contributes to their becoming more employable. The goals of inclusive entrepreneurship policies vary according to political priorities, cultural attitudes towards participation in working life and social life, budgets allocated to entrepreneurship policies and programs, and approaches to active labor market policy. Policy frameworks for women's entrepreneurship are well developed in some countries but are lacking or ineffective in others. Most of the EU Member States (22) have clearly defined a ministry or department responsible for developing policies to support women entrepreneurs. Policy frameworks are often expressed in high-level policies, strategies and action plans. More than half of EU Member States (15) have a women-specific entrepreneurship strategy, either developed as a stand-alone strategy or embedded in a broader entrepreneurship or labor market strategy. Examples of countries that have developed a stand-alone strategy include Germany and Ireland. Countries that support women's entrepreneurship as part of a broader strategy include Spain and the USA.

In Turkey, women's labor force participation and employment rates are far behind men. A similar situation also applies in terms of entrepreneurship rates. The purpose of this study is to evaluate the situation and implemented policies in the field of women's entrepreneurship in Turkey and to offer solution suggestions by examining the policies in Germany, Ireland, Czech Republic, Italy and Spain, which stand out as good country practices in the development of public policies to support women's entrepreneurship. When good practice examples are examined, it is observed that governments have developed policy measures that respond to the different needs of women entrepreneurs. In this context, it is possible to talk about financial supports such as loan guarantees, grants and funds, and non-financial supports such as financial literacy training, entrepreneurial skills training, mentoring and coaching, and networking initiatives. When developing public policies to support women's entrepreneurship in Turkey, it is important to consider a framework that can respond to institutional, cultural and social contexts. In this sense, policies should take into account the diversity in the profile, needs and challenges of women entrepreneurs, as well as the diversity in business types and sectors of activity.

## **Sustainability in Healthcare: A Bibliometric Analysis**

**Ahmet Yiğit, Dilek Uslu, Gülşen Çelik, Feyziye Tombak Dizili**

The rising urgency of environmental degradation and climate change has placed healthcare systems under scrutiny not only for their clinical outcomes but also for their ecological footprints. As healthcare contributes significantly to global greenhouse gas emissions — estimated at around 5% of total global emissions —there has been a growing call for the integration of sustainability principles within the health sector. In this context, sustainable healthcare facilities have become emblematic of the shift toward environmentally responsible healthcare delivery.

Sustainable healthcare places or green hospitals are defined as healthcare facilities that are designed, constructed, and operated with a focus on reducing environmental impact while improving resource efficiency in areas such as energy, water, materials, and waste management. Beyond infrastructural characteristics, these healthcare facilities also encompass operational strategies including sustainable procurement, green information systems, indoor environmental quality monitoring, and staff training for sustainability practices. These hospitals are an example of a system that combines medical care and ecological responsibility by integrating public health service delivery with the principles of environmental protection and sustainable use of resources.

From a broader systems perspective, sustainable health services refer to the holistic integration of environmental, economic and social sustainability from health services policies to their practices and outcomes. This approach is not only focused on environmental protection; it also aims to ensure equality in access to health services, increase the durability of service delivery and maintain its long-term viability. All these elements are addressed within a framework compatible with the United Nations Sustainable Development Goals (SDG 3: Good Health and Well-being, SDG 12: Responsible Consumption and Production, and SDG 13: Climate Action) on a global scale and bring the environmental responsibility of the health sector to the global policy area.

In this context, the aim of the study is to reveal the development and research trends of scientific publications in the field of sustainable health services and to contribute to the existing knowledge in the field with a bibliometric evaluation. This study presents a bibliometric analysis of research over the period 2004-2024, using the Scopus database. A total of 486 studies were included in the analysis, identified through four search terms in the titles only: "sustainable healthcare" (340 publications), "sustainable hospital" (36 publications), "green healthcare" (41 publications), and "green hospital" (69 publications). VOSviewer software was employed to visualize co-authorship networks, keyword co-occurrence patterns, bibliographic coupling of the documents and citation relationships.

When the distribution of the number of studies on sustainable health services by country is examined; The results indicate that India ranks first with 91 studies. It is followed by the United States of America with 77 studies and the United Kingdom with 61 studies. Besides, Türkiye ranks 9th along with Spain with 16 studies.

A co-authorship analysis applying a minimum threshold of one publication and one citation filtered the initial 1583 authors down to 1170, providing a comprehensive network of collaborative research in sustainable healthcare. The most frequently cited studies in this field were identified as Abou-Nassar (2020), Shaw (2021), and Simmons-Mackie (2007), reflecting the influence of these works in shaping sustainability-related discourse within healthcare research.

Keyword analysis revealed 1234 unique terms across the dataset, with "sustainability" (57 occurrences), "healthcare" (35 occurrences), "sustainable healthcare" (31 occurrences), "green hospital" (24 occurrences), and "climate change" (20 occurrences) being the most prevalent. These findings indicate the primary research foci within the domain, underscoring the growing interconnection between sustainability efforts and climate change mitigation in healthcare.

The citation analysis further highlights the increasing academic interest in sustainable healthcare, demonstrating an upward trend in publications and citations over the two decades examined. The bibliometric insights provided in this study offer a valuable foundation for future research directions, particularly in understanding the evolution of sustainable practices in healthcare institutions and their impact on policy and operational efficiency. This research contributes to the broader discourse on environmental responsibility in the healthcare sector, emphasizing the need for continued scholarly and practical advancements.

This study has certain limitations that should be considered when interpreting the findings. First, the analysis is based solely on data retrieved from the Scopus database with title filter, which means excluding relevant publications indexed in other databases such as Web of Science or PubMed. Second, the bibliometric mapping was conducted exclusively using VOSviewer software, limiting the scope of visualization and network analyses that could be performed with alternative tools. Third, the study period was restricted to 2004-2024, potentially overlooking earlier and later foundational research in sustainable healthcare. Additionally, in the co-authorship analysis, a minimum citation threshold of one was applied, which may have excluded emerging authors with limited citations but significant contributions to the field. Future research could address these limitations by incorporating multiple databases, employing diverse bibliometric techniques, and expanding the study period to gain a more comprehensive understanding of sustainable healthcare research.

# Planet Health: Assessing Health Services in the Context of the Sustainable Development Goals

İlkay Sevinç Turaç, Gülsüm Şeyma Koca, Nazan Kartal

**Introduction:** In recent years, environmental degradation and climate change have had significant impacts on human health. Rapid industrialization, urbanization, use of toxic chemicals and population growth threaten global ecosystems and create the need to re-evaluate health services in the context of sustainable development. According to World Health Organization (WHO) data, approximately one-fourth of global deaths are due to environmental factors. In this context, the concept of planetary health is increasingly gaining importance in terms of protecting ecosystems and creating sustainable health systems.

In recent years, the complex interaction between human health and planetary health has become increasingly recognized. The concept of planetary health has come to the fore in the context of the environmental impacts of health care, strategies to combat climate change, and the integration of health systems into sustainable development principles. Planetary health was first defined in 2015 as “the health of human civilization and the state of the natural systems that depend on it.” The World Health Organization (WHO) has introduced planetary health as one of the key terms in its “Glossary of Health Development Terms 2021,” recognizing the interdependence between the world’s natural ecosystems and human health.

**Method:** This study examined the integration of planetary health and health services in line with the sustainable development goals (SDGs). Using the literature review method, sustainable health systems, the effects of environmental factors on health, and strategies for planetary health were evaluated. Within the framework of the 2030 SDGs determined by the United Nations, SDG 3 (Health and Quality of Life), SDG 6 (Clean Water and Sanitation), SDG 13 (Climate Action), and SDG 15 (Life on Terrestrial) targets were taken as basis. Among the projects supporting planetary health in the health sector, environmentally friendly solutions such as zero waste practices, clean air centers, and green hospitals stand out.

**Findings:** The concept of planetary health offers an interdisciplinary approach that emphasizes that human health is dependent on the functioning of natural ecosystems. Aligning health services with environmental sustainability principles plays a critical role in both human health and environmental balance in the long term. Studies show that increasing green areas reduces mortality rates, sustainable food systems reduce the risk of nutritional diseases, and environmentally damaging activities such as tobacco production have negative effects on human health.

One study discussed the difficulty of making comprehensive information on planetary health simple and understandable, and to achieve this, a situation table was used that related two variables, human health and planetary health. This table, consisting of binary expressions as good and bad, contains different conditions. The first condition includes actions that are good for both human and planetary health, while the second condition includes activities that are bad for both human health and planetary health. The remaining two conditions include actions that can have opposite effects on people and the planet, potentially requiring trade-offs. It has been stated that increasing green walking areas could potentially reduce 667 deaths per year among individuals over the age of 14, which could lead to an increase in life expectancy by 360 days. Reducing the

threat of infectious diseases, minimizing environmental footprints and promoting better nutrition through sustainable food systems are examples of positive effects for both human and planetary health. It is known that diseases and deaths resulting from tobacco production and consumption and the use of chemicals harm human health as well as the environment. The extinction of aquatic species due to excessive water use and exposure to chemical mixtures during tobacco production is an example of the second condition, which is bad for both human health and the health of the planet.

A study predicted that approximately 86,000 deaths will be caused by a 3 °C temperature increase each year between 2071 and 2100. Infectious diseases have become widespread as a result of climate change. The Intergovernmental Panel on Climate Change (IPCC) 2022 report stated that infectious diseases will gradually increase due to worsening climate change. In addition, it has been found that environmental factors such as climate and air pollution affect the transmission and severity of the coronavirus disease (COVID-19), which has affected the whole world. For these reasons, it is very important to recognize and address the role of human activities in the emergence and spread of infectious diseases. Among the projects that support planetary health in the field of health; zero waste practices to encourage recycling of waste in the health sector, clean air centers, which include the establishment of measurement and analysis centers to combat air pollution in large cities; environmentally friendly solutions such as climate-friendly health facilities and green hospitals, which support the construction of hospitals that reduce carbon footprints and use renewable energy, stand out. Integrating health systems with ecological sustainability principles offers an important roadmap in combating global health crises.

With financial resources and trained health workers, strengthening the health system infrastructure, using clean energy in health facilities, raising awareness of patients and society about climate change, participating in political movements related to health and climate change and taking action against climate change, and strategies and policies, planetary health can be improved.

**Discussion and Conclusion:** The effects of climate change and environmental degradation on human health make it necessary to integrate health systems with sustainable development principles. Intersectoral cooperation, interdisciplinary studies and strategic investments are of vital importance in the process of protecting and developing planetary health. Aligning health services with ecological sustainability principles will provide positive contributions to human health in the long term and will also help prevent environmental degradation.

This research examines how health services can be aligned with sustainable development goals from a planetary health perspective and offers solution-oriented approaches to reduce the environmental impacts of health systems. In the future, health policies should be shaped within the framework of ecological sustainability and international cooperation should be increased in order to protect planetary health.

# Analyzing Inequalities in Economic Development, Health, and Environment Using Machine Learning

Gülsüm Şeyma Koca, Nazan Kartal, İlkay Sevinç Turaç

**Background:** Disparities in health and environmental sustainability persist across nations with varying economic development. Low-income countries face challenges such as high maternal mortality and low life expectancy, while high-income countries grapple with increasing non-communicable diseases like diabetes due to lifestyle factors. Examining how economic conditions shape health and environmental outcomes is essential for addressing these disparities. Economic development influences healthcare infrastructure, access to medical services, and environmental policies, which in turn affect overall well-being. Countries with higher income levels often have better healthcare systems, lower infectious disease burdens, and improved sanitation, while lower-income nations face limited healthcare access, higher disease prevalence, and inadequate environmental regulations. Environmental sustainability indicators, including air pollution levels, energy consumption patterns, and renewable resource utilization, also vary significantly across income groups, shaping long-term public health outcomes. This study investigates economic classifications and their association with life expectancy by analyzing key health and environmental factors across countries. By understanding these influences, policymakers can develop strategies to improve healthcare access, implement targeted interventions, and promote sustainable development globally.

**Aim:** This study's primary objective is to use predictive modeling techniques to assess the relationship between income levels and key health and environmental sustainability indicators. It also aims to identify key determinants influencing life expectancy across income groups and examine disparities in maternal mortality, diabetes prevalence, PM air pollution, and energy usage.

**Methods:** A dataset comprising 40 countries was classified into four income groups based on World Bank classification: low-income, lower-middle-income, upper-middle-income, and high-income. The independent variables include maternal mortality ratio (modeled estimate, per 100,000 live births), life expectancy at birth, total (years), diabetes prevalence (% of population ages 20 to 79), PM2.5 air pollution, mean annual exposure (micrograms per cubic meter), renewable energy consumption (% of total final energy consumption), and renewable internal freshwater resources per capita (cubic meters). The Decision Tree and Random Forest algorithms were employed to analyze the influence of these factors on life expectancy. Orange data mining software was used for modeling, with categorical variables appropriately encoded to facilitate analysis.

**Results:** This study examined variables affecting countries' health and environmental performance using decision trees and Random Forest algorithms. The income group was determined as the dependent variable in the model, and independent variables included maternal mortality rate, life expectancy at birth,

diabetes prevalence, PM2.5 air pollution, renewable energy consumption, and renewable inland freshwater resources per capita.

The most important determining variable in the decision tree model is seen to be the maternal mortality rate. The first point of distinction in the model is the threshold value determined for the maternal mortality rate, and countries below and above this value are directed to different categories. It can be thought that countries with low maternal mortality rates generally have higher life expectancy and better health services. This situation coincides with the better health indicators of countries in the high-income group. In addition, countries with high maternal mortality rates are generally in the lower-income group, and access to health services is likely to be limited in these countries.

The second important variable of the model is PM2.5 air pollution, and countries are divided into different subgroups according to the determined threshold value. While countries with low air pollution generally have higher life expectancy at birth, it can be said that health problems are more common in countries with high air pollution. It has been determined that PM2.5 air pollution increases the maternal mortality rate by 56.2%. These findings emphasize the critical effect of air pollution on health indicators.

The third important variable of the model is renewable inland freshwater resources, and it has been determined that this variable reduces maternal mortality rates, especially in upper-middle-income countries. In countries with sufficient renewable inland freshwater resources, the maternal mortality rate has decreased by 69.2%. However, it has been observed that the effect of access to water resources on health indicators is more limited in low and lower-middle-income groups. This shows that the quality of health services is shaped not only by water resources but also by a broader infrastructure and policy framework.

As a result, the decision tree model has shown some success in classifying the health and environmental performance of countries. Especially in low-income groups, the high maternal mortality rates and the negative effects of air pollution on health indicators are noteworthy. However, it is seen that clean water resources improve health indicators in upper-middle-income countries. These findings reveal that improving environmental factors and health policies can positively affect health indicators, especially in low-income groups. Therefore, policies to reduce air pollution and increase access to clean water resources are considered critical strategies to improve the health conditions of countries.

**Conclusions:** The study highlights the critical role of economic status in shaping health and environmental outcomes. Policies focused on reducing maternal mortality in low-income countries and addressing non-communicable diseases in high-income nations are necessary. Investments in renewable energy can improve ecological sustainability and indirectly enhance public health. Future research should explore longitudinal analyses to assess changes over time and examine interventions' effectiveness in bridging health disparities across income groups.



# **Comparative Analysis of Interior Landscaping Elements in Shopping Malls across Different Cultural Contexts: A Study of Istanbul and Dubai**

**Sarvenaz Pakravan**

Comprehending the advantages of interior landscapes can enhance environmental sustainability, a significant issue in interior design. Throughout a building's life cycle, ecological interior design can mitigate adverse impacts and enhance positive effects on environmental systems. Technological advancements have enabled humans to enhance their interior environments, where they predominantly reside apart from nature and urban greenery. This separation adversely affects users' health, leading to problems such as sick-building syndrome (SBS), as well as diminishing their comfort and performance.

Today, there is a growing interest in interior landscaping. Public building structures and residential buildings are designed with the basic elements of landscaping. Landscaping elements serve as complementary components of interior spaces. The selection and design of interior landscaping elements significantly influence the success of interior designs. It alleviates various health issues, including headaches, insufficient fresh air, and eyestrain, and it exerts a beneficial psychological influence on individuals that can enhance the user's contentment and effectiveness. Moreover, interior landscapes serve both physical/functional and aesthetical/psychological functions. Interior landscaping integrates landscaping components into interiorspaces, serving as a complementary aspect of interior design. Its significance rises, particularly in public spaces. In cosmopolitan cities, where public spaces attract diverse populations, it is crucial to comprehend how people from various cultures perceive and communicate with interior landscapes to foster inclusive and appealing surroundings.

Given the significant role of landscaping in interior spaces, this research aims to analyze the utilization of basic landscaping elements in shopping malls. A total of 10 shopping malls have been selected for the case study, comprising 5 from Istanbul and 5 from Dubai. The study of interior landscaping in cosmopolitan cities such as Istanbul and Dubai is important because of the interaction of various cultural, climatic, and socio-economic aspects. Istanbul and Dubai serve as cultural melting pots, shaping their architectural and landscaping styles. Istanbul, characterized by its extensive historical and cultural heritage, embodies a fusion of European and Middle Eastern influences, whilst Dubai exemplifies a contemporary manifestation of Arabic and Islamic culture. Comprehending how these cultural settings influence interior landscaping can yield insights into consumer preferences and design aesthetics.

The cities exhibit diverse climatic conditions that influence landscaping selections. Istanbul possesses a subtropical Mediterranean climate, whilst Dubai exhibits a subtropical arid climate. The climatic variations require specific methodologies for plant selection, water elements, and comprehensive design techniques in interior landscaping. Examining these changes can aid in formulating climate-responsive design principles.

The socio-economic standing of these cities is a critical factor. Dubai is distinguished by elevated income levels and a preference for lavish design, resulting in lavish landscape features. On the contrary, Istanbul, characterized by a moderate wealth level, generally prefers simplicity in its architecture. Examining these socio-economic elements helps elucidate their impact on the functionality and the visual appeal of interior spaces in shopping malls.

The objective of the study is to examine whether identical basic landscape elements provide analogous functions across diverse global regions characterized by varying cosmopolitan identities, climates, cultures, and wealth levels.

The four basic elements of landscaping—base covering, plant material, interior décor and furnishing, and water elements—are investigated through observation in three primary areas: entrances, corridors, and common spaces of the selected ten shopping malls, based on their physical/functional and aesthetical/psychological use. Based on the findings, it will be clarified whether design guidelines for interior landscaping in shopping malls may be formed.

Due to the scarcity of references on indoor landscaping, this study can establish a basic framework for subsequent investigations. It can assist designers and architects in developing places that reflect the cultural and socio-economic circumstances of cosmopolitan cities, resulting in more impactful and significant designs.

In summary, the study of interior landscaping in cosmopolitan cities like Istanbul and Dubai is vital for understanding the complex interactions between culture, climate, and socio-economics, which can inform better design practices and enhance user experiences.

## **A Review on Decarbonizing Maritime Transportation**

**Abderrahmane Meimou, Mamadou Saliou Sow**

Maritime transport is an essential process in the global economy, as it moves over 80 % of goods around the world, making it a significant part of global trade. However, it emits greenhouse gases (which account for more than 3% of global CO<sub>2</sub> emissions), air, and marine pollutants because many current container ships run on heavy fuels. Therefore, as world trade expands, so does the need for decarbonization. According to the IPCC's Sixth Assessment Report, there must be a 50% reduction in emissions by 2030 to reduce global warming by 1,5 °C (Ipcc.ch, 2022). Furthermore, the International Maritime Organization (IMO) has set a goal of reducing greenhouse gas emissions to zero by around 2050, which includes reducing the use of fossil fuels that the majority of container ships are dependent on and looking into alternative fossil fuels to meet international regulation metrics, assessing ocean pollution is now essential for developing impactful environmental policies. The main goals of these maritime regulations are to enhance safety for vessels and crew at sea, minimize risks of injuries (or fatalities), protect ecosystems, especially marine environments and safeguard assets. Vessels crossing international boundaries encounter varying regional laws (European maritime safety agency, China maritime safety administration, United states coast guard, etc.), 'each country has unique circumstances, especially when it comes to port infrastructure and ship energy systems' (Xu et al., 2024), making it difficult to create standardized global shipping. However, with the foundation of the international maritime organization (IMO), it has established multiple regulations to reduce shipping's environmental footprint, covering strict emissions standards, waste handling systems, marine conservation programs and port noise reduction measures. Nowadays, as environmental concerns emerge, the policies that contribute to reducing pollution should evolve accordingly, to ensure the decarbonization of maritime transportation. 'Sustainable maritime practices deliver multiple benefits, reducing climate impacts, protecting ecosystems, optimizing resource use, meeting legal requirements, strengthening brand image, and generating sustainable profits.' (Gunningham et al. 2017). The IMO plays a crucial role in reducing the industry's environmental impact by standardizing practices, promoting compliance, and facilitating innovation (Bu et al. 2022), furthermore, focusing on giving a higher importance to green technologies and it seeks to promote sustainable methodologies to overcome economic challenges. One of the most important regulations that the IMO has implemented is the Safety of Life at Sea (SOLAS) regulation. The main objective of SOLAS is to improve the safety of vessels, and passengers, 'thereby mitigating potential environmental hazards or damage to marine ecosystems' (Joseph and Dalaklis, 2021). Another important set of regulations is the international convention for the prevention of pollution from Ships (MARPOL), the objective is to address marine pollution, from oil spills to toxic air and

water pollution. ‘MARPOL establishes definitive limits on emissions and discharges and mandates specific requirements for on board waste management systems, thereby advocating sustainable environmental practices within the maritime domain’ (Gossling et al., 2021). The IMO adoption of the Energy Efficiency Design Index (EEDI) represents an important advancement in maritime sustainability. This critical framework actively improves ship energy performance while significantly reducing the shipping industry’s carbon footprint. As an extension of the Energy Efficiency Design Index (EEDI), we have the Energy Efficiency Existing Ship Index (EEXI), which measures the energy of existing vessels. This metric benchmark ships’ energy performance by measuring the fuel consumption needed to transport cargo accounting for ships characteristics like speed, size and propulsion design (Czermanski et al., 2022). In synergy with the EEDI is the Ship Energy Efficiency Management Plan (SEEMP), which facilitates ship-owners and operators in boosting the energy efficiency of existing vessels through strategic measures (Psaraftis, 2019). While exploring emerging technologies such as hybrid systems, the goal of this study was to provide a comprehensive economic and environmental evaluation of certain alternative fuels that container ships can use to reduce toxic air and water pollution. Throughout this research, we’re going to discuss the feasibility of retrofitting the engine of an existing container ship that runs on diesel (MSC Appollo Ship) to an engine that runs on liquified natural gas (LNG) and diesel (dual-fuel engine). Through a life cycle assessment, we’re going to quantify greenhouse gas reduction and analyze the ecosystem benefit of LNG.

## **Old Age Policies in terms of Economic and Social Risks of Aging**

**Banu Karakaş Çevik**

Population aging is becoming an increasingly important problem in both developed and developing countries, necessitating the development of new policies to meet the social and economic needs of older persons. According to 2023 data, the proportion of people aged 60 and over has exceeded 10% worldwide. According to 2024 data, the elderly population in Turkey has exceeded the 10% rate recognized by the United Nations as the very old population. According to the United Nations population projections, this rate is projected to increase by approximately 3% each year worldwide. Of course, this change in population structure brings with it many economic and social risks. This study aims to provide a comprehensive analysis of the economic and social risks of aging and old age policies. The aim of the study is to evaluate the successes and failures of old age policies in combating both the social and economic risks of population aging and the social and economic risks faced by the elderly in their daily lives. In this context, in addition to a comprehensive domestic and foreign literature review, statistical data shared by international institutions were also analyzed.

In this context, first of all, the risks of aging were grouped. In line with the literature, these risks have been identified as economic problems; social problems; problems arising in terms of social security and social protection; problems in access to health services; care problems; and problems arising in terms of social and cultural participation. Therefore, the policies to be developed are expected to respond to the problems under these headings. In this context, old age policies are defined as a set of strategies and measures developed to meet the social and economic needs of older persons, improve their quality of life and ensure their participation in social processes. These policies aim to meet the basic needs of the elderly such as maintaining their independence, benefiting from health services, having sufficient income and participating in social activities. The United Nations has set out some principles to guide ageing policies. These principles are grouped under the headings of independence, participation, care, self-realization and dignity.

On the other hand, there are various challenges in the implementation of ageing policies. These challenges stem from economic, social and cultural factors. Accordingly, while economic challenges are characterized by loss of income in old age and insufficient pension income, sustainability of social security systems is another important challenge in the implementation of old age policies. Early retirement, long life expectancy and increasing elderly dependency ratios put pressure on social security systems and cause problems in financing these systems.

There are various proposals to address the challenges faced in the implementation of ageing policies. These recommendations aim to improve the quality of life of older persons by taking into account

economic, social and cultural factors. Accordingly, in terms of solving economic challenges, it is suggested that pension systems should be reformed and private pension programs should be expanded to alleviate the economic problems of the elderly. Practices such as gradual retirement systems and partial retirement are listed as suggestions that can enable older workers to transition to retirement without losing income. In addition to economic problems, these practices are thought to be a partial response to the problems experienced in terms of social security systems.

One of the findings presented in the study is about the nature of policy preferences in old age policies in developed countries. Accordingly, it can be said that the policies of developed countries are mostly based on strategies based on keeping older individuals in working life for as long as possible. Increasing the employability of the elderly, lifelong learning and more generally active aging policies are examples that can be mentioned in this context.

In conclusion, it has been found that while responding to the risks of aging, ageing policies should not ignore the multidimensional nature of these risks. Because, if the problems brought about by the aging of the population are addressed only in terms of economic income loss or lack of social protection, solutions for many other risks will not be offered. However, it can be said that the problems experienced by older individuals are intertwined. In this respect, it has been concluded that policy makers acting together will help policies to be multidimensional and comprehensive. In addition, age discrimination was also found to be another factor affecting the effectiveness of policies. Therefore, another conclusion of this study is that the effectiveness of ageing policies in practice should be closely monitored as well as their development and strategies should be developed to combat the negative effects of factors such as age discrimination on ageing policies.

## **Circular Construction:**

### **Managing Material Lifecycles to Advance Responsible Consumption and Production**

**Jesse Murima Ayubu, Doğa Üzümcüoğlu**

The construction industry is one of the largest consumers of natural resources and a significant contributor to environmental degradation. With growing concerns over resource depletion, waste generation, and climate change, there is an urgent need to transition from linear construction models to circular construction principles. Circular construction emphasizes the responsible management of material lifecycles, promoting sustainability through resource efficiency, waste minimization, and the reuse and recycling of materials. Despite increasing awareness of sustainable construction, there remains a lack of comprehensive frameworks that integrate circular economy principles effectively within architectural practices. This study seeks to explore the role of material lifecycle management in advancing responsible consumption and production, with a particular focus on its implications for healthcare facilities.

Several studies have explored sustainability and circular economy principles within the built environment. Several researches highlight the importance of resource recovery and material reuse in construction. Similarly, various researches discuss the barriers to implementing circular economy principles in architecture, emphasizing regulatory, financial, and cultural challenges. Existing methodological approaches include life cycle assessments (LCA), cradle-to-cradle (C2C) design strategies, and material flow analysis (MFA), which have been instrumental in evaluating material sustainability. However, while the theoretical underpinnings of circular construction are well-documented, there is a gap in the practical application of these concepts in real-world construction projects, particularly within healthcare infrastructure.

Despite the growing body of literature on circular construction, several key gaps persist. First, there is a lack of standardized frameworks that integrate circular economy principles with construction industry practices. Second, limited research exists on the application of these principles in healthcare facilities, which have unique requirements due to strict health and safety regulations. Third, while existing studies focus on theoretical approaches, empirical data on material lifecycle management in healthcare construction remains scarce. Addressing these gaps is crucial for developing practical, scalable solutions that can be implemented across various sectors.

The primary aim of this research is to examine how effective material lifecycle management in circular construction can promote responsible consumption and production, particularly in the context of healthcare facilities. The study will address the following research questions:

- How can circular economy principles be integrated into material lifecycle management in construction?

- What are the key challenges and opportunities in implementing circular construction in healthcare infrastructure?
- How can sustainable material practices contribute to improved health outcomes and environmental resilience?

A mixed-methods research approach will be employed, incorporating both qualitative and quantitative data collection. Case studies of healthcare construction projects will be analyzed to assess material usage patterns, waste management practices, and lifecycle impacts. Additionally, interviews with architects, policymakers, and construction professionals will provide insights into existing challenges and potential solutions. The research is structured as follows:

1. Introduction and background of circular construction
2. Literature review on sustainability and material lifecycle management
3. Identification of research gaps and justification for the study
4. Methodological framework and case study selection
5. Analysis of findings and their implications
6. Conclusions and recommendations for industry and policymakers

Preliminary findings indicate that adopting circular construction principles can optimize resource utilization and significantly reduce waste. The study highlights the potential for circular economy strategies to enhance the sustainability of healthcare facilities by:

- Reducing material wastage through innovative reuse and recycling techniques.
- Implementing lifecycle assessments to track environmental impact.
- Encouraging industry-wide adoption of sustainable procurement and construction methods. These findings suggest that improved material lifecycle management can create safer, more resilient built environments that prioritize public health and ecological sustainability.

This research makes a significant contribution to the field of sustainable architecture by proposing a framework for integrating circular economy principles into construction practices. The study provides empirical evidence on the benefits of circular construction, particularly in healthcare infrastructure, bridging the gap between theory and practice. Furthermore, the research offers practical recommendations for industry stakeholders and policymakers to promote responsible material consumption and long-term environmental stewardship. By fostering a paradigm shift towards sustainable construction, this study contributes to global sustainability goals and supports broader ecological and social benefits.



## **Quality Assurance System and Sustainability Relationship in Higher Education:**

### **The Case of Çanakkale Onsekiz Mart University (ÇOMÜ)**

**Handenur Sunal Işık, Erhan Gümüş**

Today, the perception of the quality of products and services offered by public institutions and organizations, as well as the private sector, has become increasingly important. In this direction, quality-oriented management approach continues to exist in the field of higher education with efforts to increase quality awareness. The quality assurance system in higher education aims to provide quality services. Quality service provision refers to the continuity of stages such as audit, evaluation and review. In establishing this continuity, the determination of medium and long-term goals, basic principles and strategic alternatives created for problems is a necessity that enables appropriate decisions to be made in terms of management. With this necessity and increasing perception of quality, there have been changes in the determination and management of strategic goals in higher education. In this context, higher education institutions have started to prepare strategic plans with medium and long term goals, changes, opportunities and threats affected by the quality assurance system and quality assurance systems have been affected by the sustainable development goals set by the United Nations.

The concept of quality, which is defined as the continuous improvement of products and services, people, processes and the environment, is becoming increasingly important at national and international level, as is the concept of sustainability. Sustainable development goals, which significantly affect the quality assurance system of higher education institutions, have started to be included in strategic plans with their economic, social and environmental dimensions. The principles of quality and sustainability in strategic planning processes express the continuous effort made by all stakeholders in higher education institutions in the context of quality education through the continuous improvement of products, services, people, processes and the environment.

Quality assurance requires a quality management system and a structured approach with planned and systematic activities - identification, inspection, monitoring, documentation - to prevent quality problems. The main objective of quality assurance is to avoid negative developments and thus prevent poor quality.

In general, the concept of quality assurance is defined as "the set of planned and systematic activities required to ensure that the product or service provides sufficient confidence to meet the quality requirements". When these definitions are examined; the most important feature of the concept of quality assurance is emphasized that the series of activities it includes covers the future.

Higher education quality assurance system refers to the principles regarding the internal and external quality assurance of higher education institutions' education-training, research and social contribution activities and administrative services, accreditation processes and the recognition and authorization of independent external evaluation and accreditation bodies. It covers the provision of quality services at a

level that meets the expectations of stakeholders related to education-research services, as well as auditing, evaluation and review activities.

In higher education institutions, which are defined as universities and institutes of higher technology and their faculties, institutes, colleges, schools, conservatories, research and application centers, vocational schools affiliated to a university or institute of higher technology, and vocational schools established by foundations without being affiliated to a university or institute of higher technology and provided that they are not for profit, quality- oriented management and continuous improvement of institutional performance in line with sustainable development goals are essential. Quality assurance systems also accept today's inclusive and egalitarian understanding of securing quality education and supporting lifelong learning for all as one of the requirements. Successful implementation of sustainable development goals generally requires the existence of an organizational culture that is based on quality assurance systems and that this requirement is clearly stated in strategic planning

With the Sustainable Development Goals, the United Nations aims to ensure universal peace and prosperity by 2030. "Quality education", one of the seventeen goals identified in this context, is associated with social contribution activities as the basis of sustainable development. In the relationship between sustainability and quality in higher education institutions, it is important to maintain accountability, continuous improvement and development skills.

The Relationship between Quality Assurance System and Sustainability in Higher Education: Çanakkale Onsekiz Mart University (ÇOMÜ), the relationship between quality assurance system and sustainability will be examined through strategic plans. This study is important in terms of determining the relationship between quality and sustainability in higher education institutions through Çanakkale Onsekiz Mart University.

The "Regulation on Higher Education Quality Assurance and Higher Education Quality Board" published in the Official Gazette dated 23.11.2018 and numbered 30604, which contains information about the quality assurance system units in higher education institutions established within the scope of the additional article 35 of the Higher Education Law No. 2547, will be coded in accordance with the purpose of the study. The data obtained from the strategic plan of Çanakkale Onsekiz Mart University 2024-2028, which constitutes the data of the study, will be analyzed using MAXQDA Analytics Pro 2022, a computer-aided qualitative data analysis software.

In this study, the aims and policies of Çanakkale Onsekiz Mart University will be evaluated under the headings of quality education-research and social service level.

## **From Prediction to Causation:**

### **The Role of Causal Machine Learning in Advancing the Sustainable Development Goals**

**Elanur Türküz**

Global efforts towards the Sustainable Development Goals (SDGs) have brought the need for timely, reliable, and actionable data to the forefront more than ever. Today, governments, development agencies, and many international organizations frequently use machine learning techniques to design appropriate intervention programs and allocate resources effectively, in addition to monitoring progress in areas such as health, education, agriculture, poverty, and energy. As advances in digitalization and internet technologies have transformed smart devices, websites, search engines, and social media into data generation mechanisms, we are in a period of unprecedented volume and complexity of data sets. While these changes in data offer important opportunities for sustainable development policies, they also raise serious methodological questions.

Machine learning is one of the most frequently used techniques for analyzing large and complex data sets. Its capacity to model non-linear relationships, detect hidden patterns, and produce highly accurate predictions has made it a powerful tool. In recent years, ML has been used in many fields, ranging from agricultural production forecasting to epidemic disease monitoring, from tracking learning outcomes to poverty mapping. These models have made it possible for policymakers to respond to development problems more quickly and efficiently. However, most machine learning models are optimized for prediction, not for understanding causality. While they can predict what is likely to happen under current conditions, they are not designed to answer a fundamentally different class of questions essential for policy evaluation: What would happen if we introduced a new program, changed an existing one, or removed it altogether? Such ‘counterfactual’ questions are central to impact assessment and evidence-based policy development. In short, just because a model can make highly accurate predictions does not mean it can make causal inferences. This distinction is crucial in the SDG context. For example, a model may be able to predict high school dropout rates with 95 percent accuracy. However, this model alone cannot show whether a school meal program, digital learning tools, or a practice that encourages parental involvement actually impacts learning outcomes. Interpreting predictive relationships as causal effects can lead to wrong policy decisions, wasted resources, and unintended negative consequences, slowing down the process of achieving the SDGs.

To overcome this problem, researchers have developed a new generation of methods known as Causal Machine Learning (CML). CML combines the flexibility of machine learning with the theoretical rigor of causal inference. These methods make it possible to estimate causal effects with observational

data while simultaneously controlling for confounding effects that arise in complex models. Prominent techniques such as Double Machine Learning (DML) incorporate a large number of control variables into the model without compromising interpretability and validity. This way, stable results can be obtained even in data environments where classical approaches are insufficient. One of the key contributions of causal machine learning is that it enables researchers and policymakers to move beyond correlations and generate credible estimates of causal impact in real-world, data-rich environments. In practice, this means asking and answering questions such as: Did a particular agricultural subsidy program increase yields? Did access to solar energy improve household income? Did a conditional cash transfer improve school attendance? With the correct data and models, CML can provide robust answers to such questions, helping to prioritize interventions that genuinely work. Moreover, these methods are well-suited to today's data environment. Government agencies and civil society organizations are collecting increasingly detailed administrative data, using remote sensing technologies, and analyzing indicators derived from digital platforms. Analyzing this abundance of data in a causal framework is not only useful but also necessary. CML methods offer a powerful tool to bridge the gap between big data and policy-relevant evidence.

This paper aims to consider causal machine learning as an innovative methodological approach that bridges the disconnect between data and policy in the context of sustainable development. Moving beyond purely predictive models, it highlights the importance of causal reasoning and demonstrates how CML techniques can contribute to more reliable impact assessments, smarter resource allocation, and more effective policy designs. It is crucial that these methods are recognised and used critically by a wider audience of researchers and practitioners in order to truly benefit from data in achieving the SDGs.

# **Corporate Digital Responsibility as a Catalyst for Employee Digital Activism:**

## **Unpacking the Mediating Effects of Digital Innovation and Engagement**

**Suhaib Soomro, Mumtaz Ali, Tayyaba Gul, Suzan Dağaçaner**

**Introduction:** Employee Digital Activism (EDA) is on the rise as more employees believe they can effectively make beneficial societal changes (Vo Thai et al., 2024). EDA refers to employees campaigning for constructive change within their organization and participating in coordinated actions urging their employers to address digital issues (Xia and Md Johar, 2025). Furthermore, the characteristics and capabilities of digital media facilitate employees in organising and executing coordinated actions across organisations, industries, and geographical regions with greater ease and speed. Despite the growing significance of this issue, there is limited comprehension of the factors that transform employees into EDA and the mechanisms involved. The objective of this study is to investigate EDA concerning Corporate Digital Responsibility (CDR).

CDR comprises “a collection of practices and behaviours designed to direct organisations in the socially, economically, technologically, and ecologically responsible use of data and digital technologies.” While Corporate Social Responsibility (CSR) generally pertains to social and environmental concerns, CDR emphasises the establishment of ethical and responsible practices related to developing, deploying, and utilising digital technologies and data. It provides a thorough strategy that transcends individual issues like data privacy or access, seeking to tackle the responsibilities that emerge inside the digital realm comprehensively.

The Digital Engagement (DE) of employees may be a vital element in developing their CDR. Digital engagement is characterised as “the active, work-related positive psychological state manifested by the intensity and direction of cognitive, emotional, and behavioural energy invested in digital platforms and technology utilization.”(Zia et al., 2024). It pertains to the effort and time that employees allocate to digital platforms and systems within a business. Regular and increased DE equips individuals with the essential skills for promoting CDR. Consequently, modern organisations are progressively concentrating on factors that improve employees' digital engagement, thereby fostering their CDR.

With the growing significance of digitalisation, Digital Innovation (DI) has emerged as a crucial research focus due to the escalating demand for innovative digital solutions. DI pertains not only to new products or services incorporating digital technology but also to the integration of digital technology within the innovation process, resulting in enhanced production processes, transformed business models, and innovative organisational structures (Xia and Md Johar, 2025). Although research interest in digital innovation is increasing, the literature on the subject remains in its nascent

phase. Most of the research on digital innovation examines it from technical, architectural, or information systems viewpoints ignoring managerial perspectives.

The theoretical foundation of this study is based on the Dynamic Capabilities Theory (DCT). Digital capability is “an organization's capacity to develop new products and processes while adapting to evolving market conditions.” Furthermore, digital capability enhances a firm's digital orientation, as only those firms proficient in managing new technologies will be prepared to adopt them and dedicated to transforming these technologies into new products.

**Methodology:** The authors developed a research instrument using Qualtrics. The study recruited 245 participants from the United States via a crowdsourcing platform called Amazon MTURK in return for nominal remuneration. The research employed a G power software application to determine the sample size. It was calculated at the medium effect size of 0.15, the significance level was 0.05, the power level was 95%, and the number of predictors was 4. The findings indicate that a sample size of more than 74 was sufficient. The authors employed the SMART PLS software application to analyse the data.

**Results:** The authors tested the measurement model. The Cronbach Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE) were under the benchmark values of greater than 0.7, 0.7, and 0.5 respectively (Figure 1). The authors also checked the Discriminant Validity which was under the threshold value of <0.9. Inspired by the Dynamic Capabilities Theory (DCT), the findings revealed a positive and significant relationship between CDR, DE, DI, and EDA, supporting H1-H5. DI and DE were found to mediate the relationship between CDR and EDA. However, the mediating impact of DI is higher than the mediating effect of DE in the given relationship (Figure 2). The findings corroborate the previous studies, suggesting that CDR positively affects employee advocacy (Vo Thai et al., 2024, Xia and Md Johar, 2025, Depino-Besada et al., 2025, Zia et al., 2024).

**Conclusion and contribution:** The research provides important theoretical and practical implications. This study contributes to the existing literature on DCT by offering new insights into the influence of CDR, DI, DI, and EDA. This study's research strategy establishes a basis for exploring new avenues to formulate a cohesive perspective in developing EDA. The findings are critical to educating novices who intend to invest in cryptocurrencies. Our study provides significant insights for organisations. By choosing the most appropriate framework and customising CDR strategies, banks can adeptly tackle the challenges and opportunities of the digital age.

## **Evaluation of TİKA's Activities between 2020-2024 in terms of Sustainable Development Goals (SDGs)**

**Hatice Koç, Haşim Koç**

With globalization, sustainable development has gained strategic importance in the development policies of both international institutions and states with its economic, social and environmental aspects. It has become increasingly important for countries, especially developing countries, to create a development model that balances economic growth, environmental sustainability and social welfare. The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015 to guide countries on sustainable development, set the basic framework for this transformation process and placed priorities such as reducing poverty, increasing access to education and health services, protecting the environment and ensuring inclusive economic growth at the center of the global agenda. With the 17 SDGs, which set out 17 main goals, the countries that are parties to the UN continue their efforts to ensure sustainable development by determining their concrete plans within the framework of 17 goals with the agenda titled Towards 2030.

In this context, the Turkish Cooperation and Coordination Agency (TİKA), which determines and implements Turkey's global development cooperation policies, carries out economic, humanitarian, and technical support projects by establishing cooperation mechanisms and providing development aid in the international arena. Founded in 1992 for six Turkish states in Central Asia and significantly expanding its scope of activities, especially since the 2000s, TİKA now operates in a wide geography, including Central Asia, Africa, the Middle East, the Balkans, and Latin America, with 63 offices in 61 countries and projects in over 170 countries. TİKA is active in many areas, such as education, health, agriculture, environmental sustainability, cultural heritage preservation, and infrastructure development, and serves as one of Turkey's key public diplomacy institutions, acting as the main actor in development cooperation. Its activities align with Sustainable Development Goals (SDGs), focusing on critical issues such as water and sanitation services, renewable energy use, women's participation in economic life, rural development support, and disaster relief.

TİKA conducts projects in various fields, including education, health, infrastructure development, agriculture, and energy, in the regions where it operates. The alignment of these projects with sustainable development goals is important both in terms of international development cooperation and Turkey's foreign policy strategies. Within the framework of development and cooperation, Turkey undertakes significant projects in areas such as poverty reduction (SDG 1), combating hunger (SDG 2), access to healthcare services (SDG 3), quality education (SDG 4), gender equality (SDG 5), clean water and sanitation services (SDG 6), economic growth and employment (SDG 8).

Although different theories, such as modernization and dependency theories, can be used to analyze Turkey's development aid, the focus of this study will not solely revolve around the concepts of economic growth or dependency. Instead, a holistic approach will be adopted to examine development aid from environmental, social, and economic dimensions, based on the sustainable development approach. The sustainable development approach prioritizes not only economic growth and short-term solutions but also long-term support for welfare, social equity, and environmental sustainability. From this perspective, TİKA will be analyzed in terms of whether it contributes to the creation of self-sufficient and sustainable development models in recipient communities by strengthening local capacity, producing environmentally friendly development projects, and increasing social equity. The study will evaluate how development projects serve independent and sustainable development processes in the long term, rather than focusing solely on humanitarian aid.

This research is limited to TİKA's activities between 2020 and 2024. The primary reason for this limitation is the impact of the COVID-19 pandemic on international development aid and the significant changes in the nature of aid during this period. The pandemic marked a critical turning point in global development aid, prioritizing health, hygiene, food security, and crisis management. During the pandemic, TİKA carried out projects that differed from previous years, such as providing health equipment aid, hospital support, food aid, and hygiene projects. From the perspective of SDGs, projects carried out during the pandemic particularly stood out under SDG 3 (Health and Well-being), SDG 2 (Combating Hunger), and SDG 6 (Clean Water and Sanitation).

The study will first address the fundamental principles of SDGs and their role in international development aid, followed by an examination of the extent to which TİKA's projects align with these goals. Particular emphasis will be placed on TİKA's projects in health, education, economic development, agricultural production, environmental sustainability, and energy. An analysis will be conducted to determine under which of the 17 SDG headings these projects can be classified, and the contributions of Turkey's development cooperation activities to global efforts will be discussed.



## **A Paradox in Sustainability:**

### **The Problem of Greenwashing and Methods to Prevent Greenwashing in Companies**

**Dilber Ulaş, Seher Gündoğdu**

Today, the concept of sustainability is becoming increasingly important and the focus of a wide range of stakeholders, from businesses to consumers. With rapid industrialization, emissions of greenhouse gases such as carbon and methane from human activities are increasing environmental disasters, leading to severe impacts such as droughts, floods and forest fires. To limit climate change and protect the planet, emissions need to be cut by almost half by 2030 and to net zero by 2050.. As environmental and social problems become more visible on a global scale, companies feel the need to publicize their sustainability performance and commitments. However, this situation brings along a problem called “greenwashing”. Greenwashing refers to the use of misleading information or marketing strategies by companies to appear greener or more sustainable than they really are, which creates a significant contradiction by undermining the credibility of sustainability efforts. In an era when sustainability can easily be used as a marketing tactic, companies use greenwashing to persuade consumers to buy products that are not as environmentally friendly as they claim, misleading consumers and harming the environment. The use of greenwashing negatively impacts credible efforts to reduce emissions and address the climate crisis. Climate change is exacerbated by greenwashing. Human-caused climate change is caused by industry's greenhouse gas emissions. According to McKinsey, 88% of Gen Z shoppers no longer trust brands' environmental, social and governance (ESG) claims, so the approach to greenwashing is changing. The EU and other countries are taking a hard look at what needs to be done to combat greenwashing and support consumers to make informed and environmentally friendly choices. On World Environment Day 2024, the UN Secretary-General called for a worldwide ban on fossil fuel advertising and for advertising agencies to prevent companies from advertising greenwashing. Combating greenwashing is an issue where human rights, consumer rights and climate goals are compatible. As public awareness of greenwashing has increased, academic research has also begun to increase, and greenwashing issues have begun to be addressed.

Today, it is important for consumers to be aware of greenwashing methods as conscious consumers, to research and select products from companies that use resources responsibly and are committed to reducing their emissions and waste, and to understand whether a product is sustainable by considering its environmental and social impacts from design to final product stage. To hold businesses accountable for meeting their Environmental, Social, Governance (ESG) commitments, consumers and stakeholders need to know about greenwashing. This will put pressure on companies to be more open and accountable and distinguish genuine ESG initiatives from those that engage in

greenwashing. Thus, businesses can be incentivized to take significant steps to solve environmental and social problems and to change the environment. In this paper, we first define the concepts of sustainability and greenwashing and examine the factors that influence the emergence of greenwashing. Then, it details the greenwashing methods frequently used by companies. The main objective of the study is to identify firm-level and external strategies that can be used to solve the greenwashing problem. Finally, in the light of the findings, examples of advertisements of companies engaged in greenwashing in Türkiye, which were identified by the Competition Authority in 2024, are given, the results are presented, and various recommendations are made. Combating greenwashing is of great importance for the effectiveness and credibility of sustainability efforts.

## **Is the Green Transformation a Threat to Turkish SMEs' Exports to the EU Market or an Opportunity for Transformation?**

**Cemalettin Aktepe, Ateş Bayazıt**

The European Green Deal is a comprehensive roadmap for the European Union (EU) to achieve its goal of becoming climate neutral by 2050. Although 2050 is shown as the target, transformation is expected to be realized step by step within this roadmap. This consensus includes a series of policies and regulations focused on sustainable economy and environmental transformation. In this transformation process, combating climate change is at the forefront and net zero carbon emissions are targeted by 2050. In this process, it is aimed to phase out fossil fuels. Waste reduction and recycling will be at the forefront, especially for industrial enterprises. It is planned to take measures to prevent pollution of air, water and soil, as well as to promote environmentally friendly methods, especially in food exports, where we have partial advantages.

As can be seen, the European Union Green Deal is not only an environmental transformation policy, but also a comprehensive transformation plan, especially for manufacturing sectors. For countries like Turkey, which have strong trade relations with the European Union, it poses some challenges and threats, but it can also present some opportunities.

On the other hand, Turkey's manufacturing industry exports a significant amount to the European Union (EU). In particular, the machinery sector exported a total of 28.3 billion dollars in 2024, including free zones. A significant portion of these exports are to EU countries. In addition, the textile and garment sector also has a significant share in Turkey's exports to the EU. Therefore, foreign trade relations between the European Union and Turkey are of great importance especially for us. The adaptation of this manufacturing and exporting real sector to the green transformation is of vital importance for our exports. The exports of our manufacturing enterprises to European markets account for over 45% of our total exports of industrial goods. Approximately 91% of the enterprises in this producer group are SMEs. Given these figures and ratios, it seems inevitable that exporting SMEs will transform into businesses that reduce pollution, respect biodiversity and demonstrate the ability to access green finance.

On the other hand, the Border Carbon Regulation Mechanism (BCRM), a carbon tax developed by the European Union (EU) to prevent carbon leakage and make industries more sustainable, is a serious regulation for our industrialists to comply with.

The costs of compliance with all these regulations, the obligation to comply with the regulations of countries, together with the difficulties in finding green financing, reveal the fact that Turkish SMEs need to manage a number of challenges, but if this transformation is successful, SMEs will gain a competitive advantage, especially savings in energy costs, and some important advantages can be seen with the increase in the brand value of SMEs. What needs to be done to achieve these advantages,

the current situation of our SMEs for this stage, and the level of utilization of incentives will be discussed by obtaining secondary data.

In the transformation process that starts with energy-intensive sectors, cement, electricity generation, fertilizer, iron-steel, aluminum and hydrogen sectors are seen as the sectors that will be affected first. For example, the iron and steel sector, one of Turkey's largest export items, will be subject to additional taxes due to carbon emissions.

The European Union's (EU) Border Carbon Adjustment Mechanism (CBAM), which will start in 2026, will be implemented gradually and will bring significant changes for all countries that export to the EU, such as Turkey. The main objective of this study is to provide a perspective on what kind of a period will come in terms of the sectors that are in the first place in Turkey's exports to the EU region and the sectors mentioned above, which will be the first to be addressed in the green transformation process. Apart from this main objective, finding the areas that we will be affected sectorally and determining the level of impact will be one of the secondary objectives of this research. Secondary data is planned to be used as the research method. In particular, in addition to the relevant regulations of the European Commission, open access secondary data from institutions and organizations such as the European Environment Agency (EEA), the EU Statistics Office and the European Centre for Environment and Health (ECDC), as well as national organizations will be used. On the other hand, interviews will be conducted with manufacturing and exporting SMEs related to green transformation and data will be collected on a scale to be prepared in accordance with green transformation. These data will be obtained especially from SMEs in the manufacturing sector. Following the developments in the European market, which has a very important place in terms of Turkey's goal of closing the foreign trade deficit, is important for the future of both our SMEs and our exports to EU markets.

# **Ethical Leadership: A Mediating Moderating Model to Showcase How Ethical Leadership Shapes Behaviors within Organizations**

**Temitope Popoola**

This study examines the intricate links among ethical leadership, organisational trust, unethical pro-organizational behaviour, and ethical work climate inside marketing organisations. The study specifically examined the impact of ethical leadership on unethical pro-organization behaviour, organisational trust, and the mediating and moderating roles of trust and ethical work climate. The interaction between ethical leadership (EL) and employee behaviour is crucial in influencing organisational culture and performance within the field of organisational behaviour. Ethical leadership, defined by adherence to moral ideals, integrity, and accountability, establishes the ethical standards inside an organisation. The ethical conduct and behaviour of leaders has become an increasingly significant topic of debate in recent years to improve ethical standards in the workplace (Kuenzi et al., 2020; Moor et al., 2019). Within this framework, the emergence of unethical pro-organizational behaviour (UPB) poses a paradoxical challenge, as individuals partake in unethical actions to further organisational goals or interests, exemplified by the scandals involving Wells Fargo, JP Morgan Chase, and Bank of America (Personable.com, 2024). Consequently, experts have recently intensified their focus on unethical workplace behaviour (Treviño et al., 2014). Thus, employee participation in UPB has been acknowledged as a manifestation of pro-social behaviour within organisations (Umphress & Bingham, 2011). Nonetheless, comprehending the causes and repercussions of UPB has emerged as a persistent focus of inquiry in management study (Mishra et al., 2021). Multiple studies have analysed the influence of various leadership styles on employees' likelihood to engage in UPB (Uymaz & Arslan, 2022). Furthermore, EL has been examined for its possible influence on employees' UPB (Hsieh et al., 2020). The current findings are not wholly consistent, highlighting the necessity for additional research (Ahmed & Khan, 2023).

Comprehending the mechanisms that connect ethical leadership with unethical pro-organizational behaviour necessitates a comprehensive approach that examines the influence of trust and ethical work environment. Trust in the organisation constitutes a fundamental element of the employee-employer relationship, shaping perceptions of equity, transparency, and ethical behaviour. The theory of trust posits that a leader's interactions with employees shape their perceptions of the organisation, leading them to generalise the leader's trust to the entire entity (Erdem, 2003). Leaders significantly influence the cultivation of organisational trust or distrust among followers (Bruhn, 2001). The ethical work atmosphere influences the norms, attitudes, and practices that direct individuals and groups in making ethical judgements and maintaining integrity in their relationships with colleagues, customers, stakeholders, and society at large.

This article analyses six hypotheses to analyse the dynamics based on theory of planned behaviour and social learning theory. The Theory of Planned Behaviour (TPB), developed by Ajzen (1991), provides a thorough framework for comprehending the cognitive mechanisms that influence individual behaviour. The Theory of Planned Behaviour (TPB) elucidates the relationship among attitudes, subjective norms, perceived behavioural control, and behavioural intentions, revealing how ethical leadership affects employees' intentions to partake in unethical pro-organizational behaviour, with trust in the organisation serving as a mediator and ethical work climate as a moderator.

The findings validates the intuitive premise that ethical leadership mitigates unethical pro-organizational behavior. Ethical leaders, by exemplifying integrity, providing moral guidance, and cultivating an ethical organizational culture, diminish the probability of employees participating in unethical conduct for the organization's advantage. Additionally, the dismissal of moderation hypotheses indicates the resilience of ethical leadership across various ethical climates, suggesting that leadership is the paramount factor in influencing ethical behavior, irrespective of the work environment. Organizations should concentrate on leadership development programs that emphasize ethical decision-making, as this can significantly influence trust and ethical conduct in the workplace.

This study provides significant insights into the impact of ethical leadership on trust and unethical pro-organizational behavior. Although ethical leadership diminishes unethical pro-organizational behavior and directly fosters trust, the influence of ethical work climate as a moderating variable is constrained. These findings contest some assumptions regarding the processes of ethical leadership and indicate that direct leadership interventions are essential for fostering ethical behavior inside organizations.

## **Is it Real or Deception? Green Washing from a Consumer Perspective**

**Mehmet Baş**

Greenwashing refers to misleading marketing and communication strategies aimed at creating the impression that a company is fulfilling its environmental responsibilities. This concept has emerged in the face of increasing demand for sustainability and environmentally friendly products, with some companies resorting to such misleading practices in order to create a “green” image rather than genuine environmentally friendly practices. Greenwashing can mislead consumers and hinder genuine eco-friendly efforts without verifying the veracity of eco-friendly claims.

Greenwashing emphasizes the need to effectively identify and penalize environmentally responsible consumers and companies. Greenwashing practices often involve various methods used to create false impressions that companies are environmentally friendly.

Studies on the economic, social and environmental impacts of green washing reveal that such practices can hinder sustainable development and undermine consumer confidence. In addition, green washing can also have negative consequences, such as the loss of competitive advantage for companies that adopt environmentally friendly practices.

One of the most significant negative impacts of green washing is the damage to consumer trust. Green washing practices can reduce consumers' trust in companies' environmental claims and create doubts about sustainable consumption. Moreover, such misleading advertisements may mislead consumers by ignoring real environmental issues, rather than encouraging environmentally responsible behavior.

Another impact is regulatory gaps. In most countries, effective oversight mechanisms and legal regulations against green washing are lacking. This situation allows companies to create the perception of environmental friendliness through unethical methods. For example, a product marketed as environmentally friendly may be environmentally harmful in terms of the raw materials or processes used in its production, and this may be overlooked due to lack of oversight.

The economic effects of greenwashing can also be large. When truly environmentally friendly companies engage in costly sustainability practices, they may be disadvantaged by misleading advertising from competitors using a greenwashing strategy. This can hinder fair competition in the market and negatively affect the development of environmental innovations

An effective fight against green washing is possible by strengthening the standards and controls developed by regulatory authorities. Transparency, accurate labeling and independent verification processes stand out as important tools in the fight against green washing. At the same time, raising

awareness of consumers and raising their awareness about green washing also plays a critical role in solving this problem.

When we look at Greenwashing Practices in the world, we come across the following examples. Although major fashion brands such as H&M and Zara claim to offer “sustainable” collections, only a small share of these collections are usually made with truly sustainable materials. More often than not, these collections are far less impactful compared to the brands' overall environmental impact.

Large energy companies such as BP (British Petroleum) and Shell advertise that they invest in green energy and are environmentally friendly. However, it is observed that these companies mostly maintain fossil fuel-based operations and the ratio of green energy investments to their total operational expenditures is quite low.

Companies such as Coca-Cola and Nestlé use marketing strategies that emphasize their use of “natural” or “organic” ingredients. However, these products have limited recyclable packaging or truly environmentally friendly production processes

If we give examples of Greenwashing Practices in Turkey we can encounter the following. Major food brands in Turkey claim to be environmentally friendly by offering products with “natural”, “organic” and “healthy” labels. However, these products often do not have sustainable production processes and may only have environmentally friendly labels as a marketing strategy.

When energy companies in Turkey talk about green energy production, they usually only source a small part of it from truly green energy sources, while the majority of it is still based on fossil fuels. This could be an example of greenwashing to create the image that companies are environmentally friendly.

While some automotive brands in Turkey claim to be developing electric vehicles and environmentally friendly technologies, their production processes and materials are often controversial in terms of environmental impact. The production of electric vehicles, especially battery production, can cause environmental problems.

This study will examine how green washing businesses are perceived by consumers and how consumers evaluate these practices. In line with the results obtained, feedback will be given to businesses that make similar practices and what they should pay attention to while doing this practice will be suggested.



## **Green Economy and Just Transition: Transformation Towards a Sustainable Future**

**Adnan Soysal**

Today, climate change and environmental degradation demonstrate that traditional economic models are unsustainable. The depletion of natural resources, increasing carbon emissions, and damage to ecosystems are among the most critical issues humanity faces. To address these problems, transitioning to a green economy model that aligns economic growth with environmental sustainability is anticipated. However, concerns have been raised about the potential deepening of social and economic inequalities during this transition. Therefore, it is crucial to implement this transformation while ensuring social justice and economic equality. In this context, the concept of just transition aims to include all segments of society in the shift towards a green economy, ensuring that no one is economically or socially disadvantaged.

The green economy is a model focused on economic development while preserving natural ecosystems and reducing carbon footprints. Unlike traditional economic models, it promotes the use of sustainable energy sources and advocates for the efficient management of natural resources.

The core principles of the green economy include:

- Reducing dependence on fossil fuels and investing in renewable energy,
- Implementing circular economy practices to minimize waste and pollution,
- Efficiently using natural resources to protect biodiversity,
- Creating green employment opportunities to support sustainable development.

The green economy provides an effective solution to the climate crisis by reducing carbon emissions and promoting renewable energy sources, thereby minimizing environmental degradation. However, the transition to a green economy significantly impacts the employment status of millions of workers in the traditional fossil fuel industry. Therefore, the concept of just transition has been developed as a strategy to ensure that no one is economically or socially disadvantaged during this process.

The concept of just transition is linked to labor rights movements dating back to the mid-20th century. In the 1970s, trade unions raised concerns about environmental regulations potentially leading to job losses, emphasizing the need to protect workers. The modern understanding of the term emerged in the 1990s when it was adopted by the International Labour Organization (ILO) and environmental movements. In the 2015 Paris Agreement, just transition was recognized as a key principle that ensures support for workers and communities during the green transformation. Today, countries such as the European Union, Canada, and Germany implement just transition policies to manage the phase-out of fossil fuels within a framework of social justice.

Just transition encompasses the following key objectives:

- Protecting the rights of workers in the fossil fuel industry,
- Creating new employment opportunities,
- Reducing social and economic inequalities,
- Implementing retraining and skill development programs.

Just transition policies, supported by the International Labour Organization (ILO) and the United Nations (UN), aim to promote social justice.

Several countries have developed policies to manage the transition to a green economy fairly:

- **European Green Deal:** The European Union aims to achieve carbon neutrality by 2050 by reducing its reliance on fossil fuels. The European Green Deal, announced by the European Commission in 2019, includes policies such as investments in renewable energy, energy efficiency projects, and carbon taxation. Additionally, the EU Just Transition Fund provides financial support to assist regions dependent on fossil fuels in transitioning to a greener economy.
- **Canada and Germany:** These countries have implemented just transition policies to protect workers during the phase-out of coal. Canada aims to completely phase out coal use by 2030 and has established federal funds for worker retraining. Germany's "Coal Exit Law" plans to shut down coal plants by 2038 while creating new job opportunities in affected regions. A €40 billion support package has been allocated to finance economic development projects in mining-affected areas.
- **Türkiye:** Although Türkiye has made progress in investing in renewable energy, it still lacks comprehensive policies addressing the social aspects of just transition. In 2021, Türkiye ratified the Paris Agreement, committing to carbon neutrality goals. Investments in renewable energy, particularly in solar and wind power, have accelerated. As these investments increase, there is a growing need for extensive reskilling and economic development programs to support workers in coal-dependent regions.

The green economy and just transition stand as fundamental pillars for a sustainable future. However, this transformation must be approached not only from an environmental perspective but also from a social justice standpoint. Just transition policies aim to facilitate the shift to a more environmentally friendly economic model while also considering potential welfare losses among specific social groups.

This study comprehensively examines the transition to a green economy and the just transition concept by analyzing its historical development, current status, and implementations in different countries.

# **MetaVerse and Education in North Cyprus Vision, Opportunities and Challenges**

**Hussein Alsteif**

Traditional education has evolved with the advancement of information technology throughout human history. The Metaverse has garnered significant interest in several applications, including entertainment, commerce, and cultural tourism, within the realms of big data and cyber-physical systems throughout the past decade. The Metaverse, as an innovative concept in social work, encompasses several technologies, including big data, interactive systems, artificial intelligence, game design, Internet computing, the Internet of Things, and blockchain. We anticipate that the Metaverse's utilisation will enhance educational progress. The educational structures of the Metaverse remain insufficiently developed. Numerous enquiries need consideration about the Metaverse in schooling. This research seeks to provide a comprehensive literature review on the Metaverse in education. This article provides an extensive examination of the "metaverse" in education, emphasising contemporary technology, difficulties, possibilities, and prospective developments. Initially, we provide a concise summary of the Metaverse in education, along with the rationale for its incorporation. We then look at some of the most important aspects of the Metaverse in education, including the personal learning and teaching environments. Next, we consider the possible variants of this combination and their pros and cons in future schooling. We also examine cutting-edge case studies, encompassing both technological enterprises and educational institutions, about the Metaverse in education. Ultimately, we identify several problems and concerns in this potential domain. The notion of the Metaverse initially emerged in 1992 and gained prominence through the film Ready Player One. The Metaverse is a virtual realm intricately connected to real life. It seeks to create a digitized realm composed of digital media. The integration of real and virtual worlds demonstrates that virtuality may influence reality through everyday activities and economic interactions. The Metaverse, according to research [3], [4], [5], is a three-dimensional virtual realm where avatars representing real individuals conduct daily activities. In other words, he or she will find it simpler to discover their identity in the Metaverse than in the physical world. Furthermore, the research [4] provides an alternative, more profound description of the "Metaverse".

It is "a realm where virtual and physical realities engage and develop concurrently, facilitating social, economic, and cultural activities that create value." In other words, as previously articulated, the actual The world and virtual reality are interconnected through the Metaverse rather than existing as separate realms. More broadly, the metaverse can be depicted as a realm where everyday living and commercial activity are synchronized. Various firms and organizations have begun the implementation of the Metaverse across multiple uses, including staff training, student education, and entertainment. People are gradually integrating the metaverse into their daily lives. Understanding the metaverse is essential and imperative to fully leverage its potential. Throughout the extensive history of human education, oral transmission has been a ubiquitous approach embraced by humanity in its natural state. In the absence of a dependable medium for knowledge transmission, predecessors were compelled to convey their narratives orally, akin to Homer's epics and the Classic of Poetry.

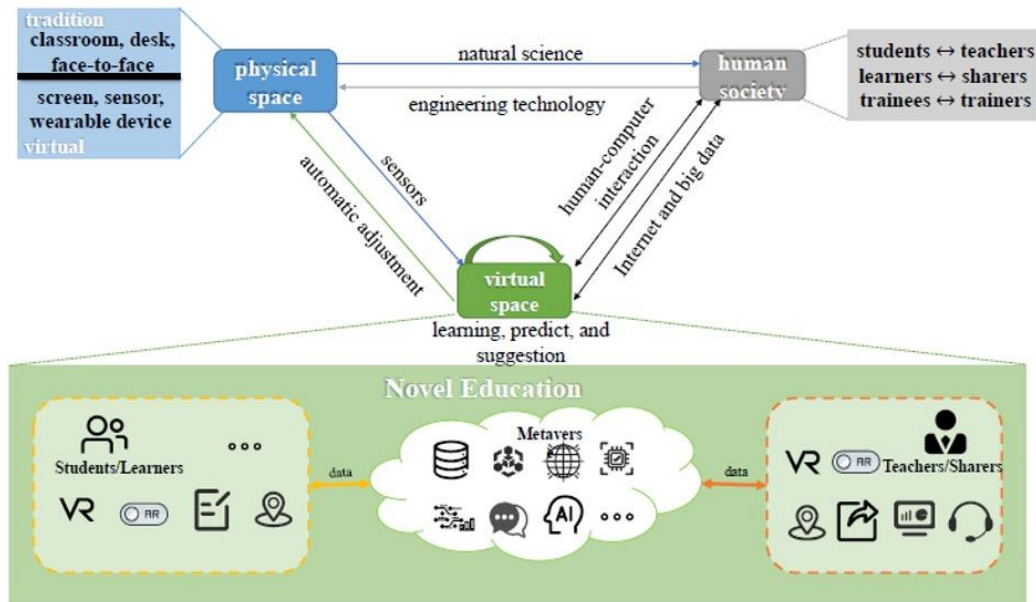


Fig. 1: An overview of the Metaverse in education

These survival stories are characterized by simplicity, significance, inspiration, and memorability. Nevertheless, information distortion unavoidably occurs throughout dissemination, necessitating the listener to fully engage their imagination to comprehend the narrative. This circumstance significantly limits many individuals' pursuit of knowledge. The subsequent invention of paper enabled anyone to document nearly anything with ease. Written communication is more reliable and practical than spoken communication, and paper can preserve information for a long time. Moreover, the author can employ an extensive vocabulary to vividly depict the scenario, reducing the information entropy to some extent. In recent decades, the globe has engaged in the Internet era and has advanced swiftly. Individuals are no longer content with acquiring knowledge just from written materials. Innovative technologies such as 4G, streaming media, and Bluetooth enhance individuals' perceptual experiences. We can see high-resolution images or seamless films on a computer or even on a mobile device! Internet technologies enable us to effortlessly get knowledge about events occurring globally. The separation between the world and ourselves is only a network wire. Currently, the Metaverse offers a novel paradigm for education, encompassing decentralized classrooms and immersive learning experiences. The term "meta" signifies first, starting, significant, and culmination. It signifies a fresh beginning; nevertheless, from the standpoint of wholeness, its implications encompass not only the virtual and historical realms but also the tangible and forthcoming realms. At the technological level, it encompasses several developing technologies, including big data, virtual reality (VR), augmented reality (AR), mixed reality (MR), blockchain, digital twins, and artificial intelligence (AI).

In summary, it constitutes a substantial amalgamation of human, virtual, and physical realities across temporal and spatial dimensions (e.g., cyber-physical space). As seen in Fig. 1, Metaverse education originates from traditional educational practices (e.g., knowledge dissemination and acquisition) while simultaneously transforming several aspects, including the dynamics between educators and learners, as well as constraints related to time and physical space.

# **Influence of Democratic Leadership on Hospitality Employees' Work Engagement, Job Satisfaction and Organizational Commitment**

**Hüseyin İlgen**

This paper aims to delve into the influence of democratic leadership approach on work engagement and job satisfaction within the hospitality industry. Because of its capacity to cultivate a dedicated and driven workforce, democratic leadership—which is defined by shared duties, open communication, and participatory decision-making—has drawn more and more attention in the literature on organizational behavior. Leadership is crucial in determining workplace results in the hospitality sector, because employee attitudes and engagement are directly related to service quality. A structured questionnaire with 23 items was created and verified in order to investigate this link as described by Bhatti et al. (2012). Employee impressions of their leaders' democratic actions as well as their own levels of job satisfaction and work engagement are the main topics of the questionnaire. Results should demonstrate that democratic leadership significantly and favorably affects job satisfaction and work engagement. Workers who were under democratic leadership said they felt more appreciated, had a say in decisions, and were inspired to actively participate in their companies. Additionally, it is anticipated that hotel workers will exhibit greater job satisfaction, indicating that the collaborative and team-oriented nature of the hospitality industry may enhance the benefits of democratic leadership. The findings in many leadership studies emphasize how crucial leadership is for fostering worker productivity and well-being. Democratic leadership improves work engagement and job satisfaction, both of which are critical for organizational performance, especially in service-oriented industries. One of an organization's most valuable assets are its employees, and as industries and services become more specialized and sophisticated, there is a greater need for high-caliber talents, particularly in light of the increasingly competitive human resource market brought on by globalization. Employees' loyalty has a significant impact on them and the organization's overall performance. It indicates how committed an individual is to their work and how devoted they are to their company. Accordingly, this study proves the significance of this subject by using a validated measure of employee commitment to work organizations. The Organizational Commitment Questionnaire (OCQ) is the tool that Porter and his associates created. According to numerous research, including Hyenjin et al. (2012) and Miguel et al. (2014), managers' capacity to suitably provide for workers' needs in the workplace has been a significant factor in determining organizational commitment. Consequently, it has been demonstrated that organizational commitment and job satisfaction are positively correlated. One other way that helps reveal the positive correlation between the two is to look at the factors that influence organizational commitment. This particular study is focused on the internal elements of organizational commitment, which are the likes of

management and supervisors' gratitude, leadership philosophies, incentives and acknowledgment, and management involvement. Ultimately, this informative research aims to show how employee involvement and open communication is vital within the service sector. With Democratic Leadership approach, a caring environment can flourish and workers may feel valued and heard and these alone can dramatically increase their focus on work and the satisfaction they get while carrying out their duties. Accordingly, engaged and satisfied employees are inclined to establish a solid emotional bond to their workplace and this creates the path to organizational commitment. Hospitality industry is highly dependent on service performance, and comprehending the influence of democratic leadership on the mentioned outcome is important for developing performance.

# **An Analysis of the Structure and Functioning of Social Assistance as a Part of the Social Security System in the Turkic World**

**Erdem Eke, Alparslan Başaran**

When discussing the concept of social security today, there is no universally agreed-upon framework in the literature regarding which rights and benefits should be included in this scope and which strategies and programs should be considered part of the social security system. Approaches to social security vary significantly not only between developed and developing countries but also among states situated in different geographical regions.

Although some international organizations attempt to classify the benefits and services provided by social security systems based on specific criteria, there is no globally accepted standard classification methodology. For instance, Eurostat, the Organisation for Economic Co-operation and Development (OECD), and the International Labour Organization (ILO) categorize social assistance based on factors such as legal status, the structure of the implementing institution, whether contributions are required, and whether participation is mandatory or voluntary. On the other hand, the World Bank (WB) defines social security policies as instruments that help individuals and societies manage risks and vulnerabilities, enhance resilience, promote equity and equal opportunities, and ultimately protect people from economic deprivation and social exclusion.

An integral component of social security systems, social assistance is designed to provide financial or in-kind support to economically disadvantaged or vulnerable individuals. These programs are predominantly funded by the state through taxation or, in some cases, by donors.

Social security programs, including social insurance and social assistance mechanisms, differ among countries in terms of administrative structures, financial resources, legal frameworks, program content, and eligibility criteria. However, three common elements emerge in the process of determining beneficiaries.

The first element is the global trend towards "universal social security", aligned with the United Nations' (UN) development goals, which emphasize the necessity of reducing poverty and inequality. The rapid expansion of social security programs over the past two decades and their integration into the constitutional frameworks of some states reflect this approach. The second element highlights that, despite variations in implementation across countries, social assistance programs are adapted according to living standards and typically include at least one core program targeted at poverty reduction. Special support mechanisms for particularly vulnerable groups, such as children and the elderly, are widely implemented. The third element concerns the theoretical and practical challenges of identifying eligible beneficiaries, as well as the high costs resulting from errors in this process. Consequently, social assistance policies must be continuously reviewed and updated to improve efficiency and cost-effectiveness.

Similar to the World Bank, the Asian Development Bank (ADB) also classifies social security into three main components: social insurance, labor market policies, and social assistance. According to the ADB's definition, social assistance comprises non-contributory cash and in-kind state transfers designed to support low-income and disadvantaged individuals.

The scope and diversity of social assistance programs have expanded since the early 20th century. However, particularly in the past two decades, these programs have evolved into a more sophisticated mechanism in the fight against poverty and household vulnerability. In the post-2000 period, the number of social assistance programs in 130 low- and middle-income countries increased from 80 to over 180.

The rapid expansion of social assistance programs has not only led to institutional, financial, and legal transformations but has also necessitated continuous evaluations to ensure their effectiveness, efficiency, and economic sustainability in response to changing socioeconomic conditions. In this context, this study examines the social assistance policies of five countries within the Turkic World using data from the ASPIRE (Atlas of Social Protection Indicators of Resilience and Equity) dataset developed by the World Bank. The social assistance systems in Azerbaijan, Kazakhstan, Kyrgyzstan, Turkey, and Uzbekistan have been analyzed, focusing on the strategies these countries employ to combat poverty.

This study explores the historical evolution, legal foundations, and implementation processes of social assistance systems in each country, assessing their impact on income distribution and poverty indicators. The ASPIRE dataset has been utilized to conduct a comparative analysis of the scope, types, and effectiveness of social assistance programs.

Ultimately, this study presents recommendations for developing a common social assistance model encompassing the entire TURAN region within the Turkic World. The existing social assistance systems of the five selected countries have been examined, identifying similarities and differences in their implementation.

By incorporating the social security policies of Turkey and four independent Turkic republics into a single analytical framework, this study constitutes a pioneering contribution to the literature. Furthermore, in an effort to establish a unified Turkic World Social Security Program, an in-depth examination of the social security systems in these countries has been conducted, identifying complementary aspects while highlighting strengths and areas for improvement. Within this framework, the policy recommendations developed in this study aim to provide a concrete foundation for enhancing regional cooperation in social assistance.



# **Impact of Income Inequality on Economic Growth in Sub-Saharan African Countries**

**Oliver Chika Ike, Mehdi Seraj**

This research investigates how inequality influences economic growth in Sub-Saharan Africa, aiming to analyze their connection and infer potential policy implications. Evidence was drawn from multiple countries across the region (Nigeria, Ghana, Tanzania, Ethiopia, Angola, Cameroon, Namibia, and Zambia), representing various geographical zones. Several theories and contemporary literature were reviewed in relation to the study. The analysis utilized panel data sourced from the WDI and WIID databases, covering the years from 2000 to 2022. Stata software was employed to conduct various econometric tests and models, examining the relationship between inequality (measured by the GINI index) as the explanatory variable, and economic growth (GDP) as the response variable, while incorporating population growth (POP) and inflation rate (INF) as control variables. The regression results indicate a strong correlation among these variables, with five out of six correlation tests demonstrating statistical significance at the 1% level. This suggests a long-term relationship between them variables. MMQR and DSKE models further revealed the degree to which inequality can affect economic growth in SSA. The models found a strong negative and statistically significant relationship between the variables in both the long run and short run. This study contributes to the current issue of inequality and growth in the SSA where there is high inequality and developing economies. The outcome of the study offers insights for policymakers and development ministries working towards sustainable economic progress in Sub-Saharan Africa.

Introduction: High income inequality has remained a persistent challenge in Sub-Saharan Africa. In this motive, this study focuses on understanding the relationship between Income inequality and Economic growth in Sub-Saharan Africa. The research aims to address the problems of identifying and analyzing the degree to which income inequality affects economic growth in the selected SSA countries (Nigeria, Ghana, Tanzania, Ethiopia, Angola, Cameroon, Namibia, and Zambia). The countries were selected based on data availability and on gaps in existing literature, which have not been specific about these countries. The paper estimated a panel of data of the variables spanning from 2000 to 2022 and Stata software was extensively used in the data analysis. The selected indicators are suggested by past literature, studies, and theories.

Unit root on the variables showed the variable showed GINI (Inequality indicator): I(1), GDP ( Gross Domestic Product: I(1), POP(Population growth: I(1), and INF(Inflation): I(0) order of integration. Furthermore, several correlation tests were applied, and five out of six correlation tests (Westerlund: statistic 9.54; p-value 0.00. Modified Dickey-Fuller: 0.26; 0.00. Dickey-Fuller: -4.78; 0.00. Augmented Dickey-Fuller: -2.35; 0.00. Unadjusted modified Dickey-Fuller: -6.50; 0.00, and Unadjusted Dickey-Fuller: -9.20;0.00.) were statistically significant at a 1% level. The cointegration

test results predominantly support the existence of a long-run relationship between the variables (inequality and economic growth in Sub-Saharan Africa). The findings are supported by the economic development theory, which proposes that the variables are negative in their relationship. As against the saving theory that consistently supports a positive relationship between the variables.

The outcome of the result implies a long-term relationship between income inequality and economic growth. The method of Moments Quantile Regression (MMQR) model further revealed the degree to which inequality can affect economic growth. The models found a strong negative and statistically significant relationship between the variables in both low and high quantiles, signifying long-run and short-run relationships. Due to the heterogeneity problem in the data, Driscoll-Kraay standard error (DKSE) methods were added to further support the MMQR result.

This research is important for various reasons. In the African context, this research validates existing theories and literature of similar findings, strengthening the overall body of knowledge on the effect of income inequality on economic growth.

## **The Comparison of Cyprus and Türkiye in the Context of Sustainable Development and Health**

**Sıtkıcan Saraçoğlu**

Sustainable development has emerged as an essential notion since the publication of "Our Common Future (Brundtland Report)" in 1987, prepared by the World Commission on Environment and Development. This report serves as a guide for understanding the crucial balance that must be maintained between economic development and environmental protection. Sustainable development is a type of development that ensures the current generation meets its needs while protecting next generations' ability to satisfy their own requirements. "The Earth Summit", took place in Rio in 1992, "the World Summit on Sustainable Development", took place in Johannesburg in 2002 (known as "Rio+10"), and "the United Nations Conference on Sustainable Development" (known as "Rio+20"), took place in 2012, are milestones in sustainable development progress. Additionally, in 2000, the United Nations decisively approved "the Millennium Development Goals", which aim to combat critical issues such as discrimination against women, disease, environmental degradation, hunger, illiteracy, and poverty. Because not all the targets of "the Millennium Development Goals" were achieved from 2000 to 2015, the United Nations adopted "the 2030 Agenda", including "the Sustainable Development Goals" in 2015.

"The Sustainable Development Goals" can be listed as follows:

Goal 1: "End poverty in all its forms everywhere"

Goal 2: "End hunger, achieve food security and improved nutrition and promote sustainable agriculture"

Goal 3: "Ensure healthy lives and promote well-being for all at all ages"

Goal 4: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"

Goal 5: "Achieve gender equality and empower all women and girls"

Goal 6: "Ensure availability and sustainable management of water and sanitation for all"

Goal 7: "Ensure access to affordable, reliable, sustainable and modern energy for all"

Goal 8: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"

Goal 9: "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"

Goal 10: "Reduce inequality within and among countries"

Goal 11: “Make cities and human settlements inclusive, safe, resilient and sustainable”

Goal 12: “Ensure sustainable consumption and production patterns”

Goal 13: “Take urgent action to combat climate change and its impacts”

Goal 14: “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”

Goal 15: “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”

Goal 16: “Promote peaceful and inclusive societies for sustainable development, provide Access to justice for all and build effective, accountable and inclusive institutions at all levels”

Goal 17: “Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development”

Sustainable Development Goal 3: “Ensure healthy lives and promote well-being for all at all ages” clearly emphasises health targets. These targets are related to neonatal and child mortality, maternal mortality, noncommunicable diseases, infectious diseases, fatalities in road traffic accidents, substance abuse, sexual and reproductive health, environmental health, universal health coverage, medicines and vaccines, tobacco control, health financing and workforce and emergency preparedness. The achievement status of the targets is assessed employing several indicators such as maternal mortality ratio, neonatal mortality rate, under-5 mortality rate, traffic-related death rate, suicide mortality rate, smoking prevalence and coverage of essential health services.

The aim of this study is to compare the achievement status of Sustainable Development Goal 3: “Ensure healthy lives and promote well-being for all at all ages” in Cyprus and Türkiye. Hence, this study is of importance in indicating whether considerable progress has been made on the sustainable development goal focusing on health in Cyprus and Türkiye. For this purpose, this study uses data mainly gathered from the European Statistical Office (Eurostat).

## **Determinants of Health Care Avoidance and Avoidance Reasons in Turkey**

**Seher Nur Sülkü**

**Background** Avoiding or delaying seeking medical care has irrevocable health consequences for the patient and puts financial stress on the health system as well. Patient delay can be defined as the time lag between the onset of symptoms and seeking appropriate medical care for the patient. Avoiding visiting the doctor even when deemed necessary has negative effects not only on health outcomes but also treatment of the diseases. Avoidance of medical care may have more complex consequences, especially for risky groups and the elderly. Disadvantaged groups are more likely to delay or avoid health care. Thus, all countries should apply effective public health policies both on personal and institutional levels to overcome negative effects of avoidance behavior. Despite its importance, avoidance behavior and its reasons have not been adequately investigated in literature.

**Aim** This study aimed to identify predictors of avoiding or delaying seeking outpatient clinic level health care service and reasons for avoidance even though treatment is deemed necessary in Turkey.

**Subject and methods** Analysis of data on 12,032 participants aged 15 and older was carried out using 2012 Health Research Survey data collected by TurkStat. Univariate and multivariable logistic regression models were used to identify predictors of avoiding medical care. In addition, multivariable logistic regression models were used to identify reasons for this avoidance. . In the 2012 Health Survey data set in the part considering primary health care services/outpatient services the question was asked “whether during the past 12 months the respondent avoided visiting the specialist doctor even though they needed to consult a specialist for health care service.” The next question was only for the avoiders and asked the respondents’ reason for avoiding specialist doctor visits. Therefore, we have constructed nine dependent variables. The first dependent variable, Avoid, takes 1 if the individual avoids medical care even though deemed necessary and zero if they do not avoid. The remaining eight dependent variables are named Avoid reasons  $i$ ,  $i = 1, \dots, 8$ , and each of them is defined in the same manner that it takes 1 if the avoider’s reason for avoiding was reason  $i$  and takes 0 otherwise. In addition, a huge number of possible independent variables were considered, and they were grouped as demographics, geographic, socioeconomic, perceived health, and personal health.

**Results** Compared to non-avoiders, the avoiders are more likely to be female. Being +45 age and being employed increases the probability of avoidance, but having insurance and higher income decreases the probability. Both feeling pain (odds ratio = 2.053, 95% confidence interval 1.735–2.429) and using non-prescription medications (odds ratio = 2.105, 95% confidence interval 1.823–2.430) increase the odds of avoidance. Having any-chronic disease, back musculoskeletal system disorders and mental diseases related to higher avoidance probability but cancer is opposite. Female,

under 45 age, married, and using non-prescription medications participants are more likely to cite “high cost” and “not enough time” as a reason for avoidance. The reason “late appointment date” is significantly associated with rural and income level. Being +45 age is significantly associated with citing “fear” and being unmarried increases the chance of avoidance since “nobody to accompany.”

## **Sustainable Development and Gender Equality:**

### **An Evaluation in Terms of the Turkish Economy**

**Fahriye Öztürk**

Sustainable development is defined as a development model that aims to meet today's economic, environmental, and social needs without endangering the potential of future generations to meet their own needs. In other words, sustainable development is a set of regulatory principles that aim to meet the goals of human development while also ensuring the provision of necessary natural resources and ecosystem services needed by current and future populations. The principle of "sustainable development," which was first defined in the United Nations Brundtland Report in 1987, has three fundamental dimensions: i) Economic sustainability: Ensuring long-term economic growth and reducing income inequalities; ii) Environmental sustainability: Protection of natural resources, combating climate change, and ensuring the continuity of ecosystems; iii) Social sustainability: Ensuring equality, human rights, social welfare, and justice. These environmental, economic, and social dimensions of the principle of sustainable development, which work simultaneously, will ultimately create a common value such as "sustainability."

At the "Sustainable Development Summit" held in 2015, the "2030 Agenda for Sustainable Development" document, which was created to promote sustainable development goals worldwide until 2030 and includes a comprehensive set of policies, was adopted by the United Nations General Assembly. In the document titled "Transforming Our World: The 2030 Agenda for Sustainable Development," defined as an action plan for sustainable development, 17 global Sustainable Development Goals (SDGs) and a total of 169 sub-goals under these main goals were identified, with the implementation process starting on January 1, 2016. Therefore, within the scope of the SDGs, which include 17 main and 169 sub-goals, the economic, environmental, and social dimensions of development are addressed.

With the Sustainable Development Goals (SDGs), the principle of human rights for all is emphasized on a global scale by 2030, and it is aimed to shape the development plans and policies of countries, reduce interpersonal inequality, ensure justice, and share prosperity fairly. The principle of human rights for all also includes gender equality and the empowerment of all women and girls. With the pressure of feminist and various women's groups, Goal 5, titled "gender equality," was included in the 2030 Agenda within the scope of Sustainable Development. Goal 5 is stated as "Achieve gender equality and empower all women and girls." Under the main goal of gender equality, there are nine sub-goals: 5.1. Ending all forms of discrimination against women and girls; 5.2. Ending all forms of exploitation and violence against women and girls; 5.3. Eliminating practices such as child marriage

and female genital mutilation; 5.4. Recognizing the economic value of unpaid care work and domestic labor and sharing household responsibilities; 5.5. Ensuring full participation of women in decision-making mechanisms in political, economic, and social life; 5.6. Ensuring universal access to sexual and reproductive health rights; 5.a. Ensuring women's equal rights to economic resources, ownership of land and other types of property, and financial services; 5.b. Developing the use of technology by women; 5.c. Creating applicable legislation for achieving gender equality and updating existing legislation.

On the other hand, it is seen that gender equality is also related to other SDGs and sub-goals. Gender equality and the empowerment of women and girls are addressed both as a goal in itself (Goal 5) and directly in the sub-goals of 10 out of the other 16 goals within the SDGs. All practices aimed at fully achieving the goals such as reducing poverty (Goal 1), ending hunger (Goal 2), access to health (Goal 3), quality education (Goal 4), clean water and sanitation (Goal 6), decent work and economic growth (Goal 8), reducing inequalities (Goal 10), sustainable cities and communities (Goal 11), peace, justice and strong institutions (Goal 16), should be implemented through a gender perspective.

The obligation of intergenerational justice places the issue of gender relations directly at the center of sustainable development discussions. In this context, justice between women and men is undoubtedly a fundamental prerequisite for sustainable development. Gender refers to a structure that determines the roles, responsibilities, and opportunities of individuals in society and is socially and culturally constructed. In this context, achieving gender equality is critically important and an indispensable condition for reaching all sustainable development goals such as reducing poverty, access to health, and peace and justice. For this reason, all implementations regarding the achievement of the 2030 SDGs should be carried out with a focus on gender equality. In this study, the sustainable development goals will be evaluated through a gender perspective in terms of Turkey, and in this context, the progress made and the obstacles and challenges encountered in Turkey's sustainable development policies regarding gender equality will be discussed.



## **A Research on the Contribution of Companies in the Bist Sustainability 25 Index to SDG 9**

**Gülten Şenkul, Deniz Umut Doğan**

Companies included in the BIST Sustainability 25 Index create economic value and take important steps in the field of environmental sustainability with environmentally friendly technologies and innovative industrial processes. Companies' sustainable infrastructure investments increase efficiency and optimize resource use not only in their own sectors but also in the overall economic structure. Therefore, it is important to examine how the companies included in the BIST Sustainability 25 Index fulfill the SDG 9 (Industry, Innovation and Infrastructure) target through environmentally friendly technologies, innovative industrial processes and sustainable infrastructure investments, what kind of impacts are created at the sectoral level and how these companies contribute to sustainable development processes.

The purpose of this study is to examine how companies included in the BIST Sustainability 25 Index in Turkey contribute to SDG 9 (Industry, Innovation and Infrastructure). In this context, the level of companies' compliance with SDG 9 through strategies such as sustainability practices, digitalization and environmentally friendly investments will be analyzed.

The existing literature highlights the increasing importance of sustainability practices within industrial sectors. Sardjono et al. (2023) provide a comprehensive overview of sustainable (environmentally friendly) practices in the Information Technology (IT) sector, introducing the concept of Green IT. Their work emphasizes the methodologies for designing and implementing sustainable IT strategies, highlighting the role of ecological balance and operational efficiency. Furthermore, they stress the significance of measuring sustainability and promoting the sustainable design and use of hardware and software as critical components of a Green IT framework that can yield competitive advantages. Similarly, Luo et al. (2023) explore the role of technological innovation in enhancing environmental information disclosure within the IT sector, underscoring the sector's contribution to sustainability.

The following outlines the contributions of selected companies in the BIST Sustainability 25 Index to specific targets of SDG 9 examples are as the below:

- Target 9.1 (Develop quality, reliable, sustainable and resilient infrastructure):
  - o TAV Airports: Implementation of digital transformation and sustainable infrastructure projects at airports.
  - o Doğu Otomotiv: Development of green building projects, enhancement of energy efficiency, and reduction of carbon emissions.
- Target 9.2 (Promote inclusive and sustainable industrialization):
  - o Arçelik: Production utilizing 64% renewable energy and implementation of circular economy practices.
  - o Çimsa: Production of low-carbon cement and sustainable construction materials.
- Target 9.3 (Increase access of small-scale industrial and other enterprises):
  - o İşbank: Support for small-scale agricultural enterprises through digital agriculture solutions.
  - o Garanti BBVA: Provision of green financing packages for small and medium-sized enterprises (SMEs).
- Target 9.4 (Upgrade infrastructure and retrofit industries to make them sustainable):

- o Arçelik: Utilization of recycled materials and execution of energy efficiency projects.
- o Çimsa: Low-carbon cement production and waste recycling initiatives.
- Target 9.5 (Enhance scientific research, upgrade the technological capabilities of industrial sectors):
- o Koç Holding: Implementation of Industry 4.0, Internet of Things (IoT), big data, and artificial intelligence projects.
- o Şişecam: Development of digital twin projects and smart production systems.
- Target 9.a (Facilitate sustainable and resilient infrastructure development):
- o Akbank: Provision of green financing and sustainable loan products.
- o Garanti BBVA: Financial support for sustainable industrial investments.
- Target 9.b (Support domestic technology development):
- o Koç Holding: Utilization of big data analytics and IoT-supported production processes.
- o Şişecam: Implementation of digital twin projects and technology-driven innovation in glass production.
- Target 9.c (Significantly increase access to information and communications technology):
- o Turkcell: Implementation of digital operator projects and investments in fiber infrastructure.
- o Akbank: Enhancement of accessibility through digital banking solutions.

The findings of this study demonstrate that companies within the BIST Sustainability 25 Index are actively promoting economic and environmental sustainability through the modernization of industrial infrastructure, implementation of environmentally friendly production processes, and investments in innovative technologies. These companies make significant contributions in areas such as sustainable infrastructure investments, environmentally responsible industrial processes, integration of SMEs into industry, research and development (R&D) and innovation efforts, and enhancement of access to information and communication technologies.

Consequently, it is recommended that these companies further invest in digitalization and green production processes and adopt Industry 4.0 technologies. Technologies such as big data, artificial intelligence, and the IoT play a crucial role in improving the efficiency of industrial infrastructure. Moreover, the integration of SMEs into low-carbon production processes should be facilitated through green finance and sustainable innovation programs. This research provides a strategic roadmap for both companies and policymakers to accelerate sustainable development in industry, innovation, and infrastructure within Turkey.

## **Navigating from Shadow to Sustainability: How Black, Grey, Pink, Yellow, White, and Green Economies Influence the Blue Economy in Small Island Developing States**

**Remy Jonkam Oben, Mehdi Seraj, Şerife Zihni Eyüpoğlu**

**Purpose:** This research examines the complex interrelationships among diverse color-categorized economic spheres (black, grey, pink, yellow, white, and green economies) and their connections to the blue economy within Small Island Developing States (SIDS). The study aims to quantify how these different economic dimensions influence the development and sustainability of marine-based economies in vulnerable island nations, which are disproportionately affected by climate change and economic volatility.

**Design/Methodology/Approach:** The investigation analyzes yearly data spanning 2000-2019 across a representative sample of SIDS. We employ Method of Moments Quantile Regression (MMQR) to account for heterogeneity in blue economy development across different quantiles, complemented by Driscoll-Kraay standard errors (DKSE) estimation methodologies to address potential cross-sectional dependence and autocorrelation in panel data. The research operationalizes each economic dimension through established proxies: the black economy through shadow economy estimates as percentage of GDP; the grey economy through carbon dioxide emissions per capita; the pink economy through gender equality and social inclusion indices; the yellow economy through life expectancy and human capital measurements; the white economy through health expenditure as percentage of GDP and healthcare accessibility metrics; the green economy through renewable energy consumption and sustainable development indicators; and the blue economy through fisheries production volumes and sustainable marine resource management practices.

**Findings:** The empirical results reveal nuanced relationships between various economic dimensions and blue economy performance in SIDS. Specifically, black (shadow) economy demonstrates a positive relationship with fisheries production, suggesting informal economic activities may supplement formal marine resource utilization in resource-constrained settings. The grey economy (measured through carbon dioxide emissions) shows a positive correlation, potentially indicating that increased economic activity, even when generating emissions, supports blue economy development in the short term, though raising sustainability concerns. The yellow economy (life expectancy) exhibits a positive association, confirming that improved human capital and longevity contribute to more effective marine resource management. Similarly, the green economy (renewable energy consumption) demonstrates strong positive linkages with blue economy performance, highlighting synergies between sustainable energy transitions and marine resource conservation.

Conversely, the pink economy (social inclusion measures) exhibits a negative association with blue economy metrics in the studied period, suggesting potential trade-offs between immediate social inclusion initiatives and marine-based economic development. The white economy (health expenditure) also shows negative correlations, possibly indicating resource allocation constraints in SIDS where healthcare investments may temporarily divert resources from blue economy development. Importantly, our quantile regression results demonstrate that these relationships vary significantly across different levels of blue economy development, with lower-performing regions showing different sensitivity to these factors compared to higher-performing ones.

**Research Limitations/Implications:** Data availability constraints for certain SIDS limited the comprehensiveness of our sample. Future research should incorporate additional indicators and emerging data sources to further validate the complex interrelationships identified.

**Practical Implications:** These findings underscore the need for integrated policy approaches in SIDS that recognize the interconnected nature of different economic dimensions. Policymakers must carefully calibrate interventions across these spheres to maximize blue economy potential while ensuring long-term sustainability and social welfare.

**Originality/Value:** This represents the pioneering comprehensive study exploring the intricate, evolving interactions between multiple economic dimensions and the blue economy specifically within SIDS contexts. By employing sophisticated quantile regression techniques, the research captures heterogeneous effects across different development stages. Based on these findings, the research offers numerous implementable policy directives for sustainable blue economy advancement in SIDS, including the imperative for policymakers to acknowledge the intricate, interconnected nature of economic dimensions while striking an equilibrium between economic growth, human capital development, social inclusion, resource allocation, and environmental sustainability.

# **Government Expenditure, Government Effectiveness and Sustained Poverty Reduction in Nigeria**

**Zhila Abshari**

This study explored the connection among government social spending, government effectiveness, and sustained poverty reduction in Nigeria, using time series data spanning from 1981 to 2023. The study employed the ADF structural breakpoint unit root, Granger causality, autoregressive distributed lag (ARDL), and diagnostic models. There is a paucity of extant literature on government social expenditure, government effectiveness, and sustained poverty mitigation in Nigeria (a disaggregated approach) and also other developing countries, but checking the combined influence of government spending (social recurrent and capital) and government efficiency on sustained poverty reduction in Nigeria has not been previously explored in past studies. What makes this research unique also is using the test for serial correlation, heteroskedasticity, stability, and adopting both the conventional causality and ARDL Bounds estimation method to test the hypotheses; some noteworthy results were obtained. Nearly all the studies reviewed concentrated on the influence of pecuniary policy (particularly public spending) on poverty alleviation in Nigeria, which ignited the stimulus for this research work.

Sustained poverty reduction, assessed through household final consumption expenditure, is influenced by various factors. These include government spending on social services (both recurrent and capital expenditure), the effectiveness of governance as measured by the worldwide governance indicator, the unemployment rate, annual population size, the consumer price index, and the human development index. Poverty reduction is sustained by government social spending, governance quality, economic indicators like inflation and unemployment, population dynamics, and overall human development. That government social recurrent spending, symbolized as LNGSREXP, exerted a substantial short-term and long-term encouraging influence on household consumption expenditure (proxy for poverty level) in Nigeria. On the other hand, the research revealed that government social capital expenditure, denoted as LNGSCEXP, had an insignificant short-run and long-run negative effect on poverty level (measured by final consumption expenditure of households). Finally, the research revealed that as LNGSREXP and LNGSCEXP equally share a long-run significant one-directional causality relationship with LNPOV, WGI shares no significant direction of causality with LNPOV in Nigeria over the period of this study.

It was realized from the ARDL output that government social recurrent spending (LNGSREXP) exerted a substantial ( $p\text{-value} = 0.00$  &  $0.00 < 0.05$ ) positive influence on poverty level in Nigeria both in the short-term and long-term. Government social capital spending (LNGSCEXP) and consumer price index (CPI) exerted a substantial ( $p\text{-values} = 0.00$  &  $0.00 < 0.05$ ;  $0.01$  &  $0.02 < 0.05$ ) and

negative influence on poverty level both in the short-term and long-term. Worldwide governance indicator (WGI), total population per year (LNPOP), and human development index (HDI) exerted an inconsequential negative influence on poverty level in Nigeria both in the short-term and long-term. Unemployment rate (UNEMPLr) exerted an inconsequential ( $p\text{-values} = 0.31 \text{ \& } 0.30 > 0.05$ ) positive influence on poverty level. Granger causality test results indicated that LINGSREXP, LINGSCEXP, LNPOP, and HDI share a significant one-directional causality relationship with LNPOV, while WGI and CPI share no significant causality relationship with LNPOV. Sequel to the findings, it was suggested that there is a dire need for effective monitoring and evaluation of the various recurrent income channels to the Nigerian populations, including social transfers, remunerations, other social benefits, etc., so as to ensure that the vulnerable ones (especially the less privileged ones) should through these means enjoy the dividends of democracy and good governance in the country.

Looking at the insignificant negative influence of social capital spending of the government on poverty level in Nigeria, judging from the results, it suffices to provide that the government is yet to perform and/or discharge its core mandate of providing life-sustaining infrastructures to reach the vulnerable ones. By so doing, there would be an effective multiplier-acceleration effect in the economy, as well as the effective redistribution of resources and incomes across Nigerian households.

## **Determinants of Mental Health and Self-Rated Health Among the Elderly:**

### **Application of a Recursive Bivariate Probit Analysis**

**Kübra Coşar**

The rapid aging of the global population is an undeniable reality. According to the World Health Organization, the number of people aged 60 and over was 1 billion in 2020, and it is projected to reach 1.4 billion by 2030 and 2.1 billion by 2050. Between 2020 and 2050, the number of individuals aged 80 and above is expected to triple, reaching approximately 426 million. As the world population ages at an accelerating pace, this demographic shift gains increasing importance, as aging is not merely a personal matter affecting the individual but also a social and economic phenomenon with widespread implications. While some individuals may age in good health, aging is often accompanied by inevitable health problems. Many older adults face increased risks of mental health issues such as depression and anxiety, as well as chronic diseases, chronic pain, and dementia. Regardless of whether a country is developed or developing, the potential strain that population aging may place on healthcare systems necessitates careful attention and policy planning. Furthermore, health is not solely defined as the absence of disease; it encompasses a holistic state of physical, mental, and social well-being. This perspective aligns closely with the United Nations Sustainable Development Goals (SDGs)—particularly Goal 3: Good Health and Well-Being and Goal 10: Reduced Inequalities—which emphasize universal access to health services and the reduction of inequalities in health outcomes. Assessing the mental and physical health of older individuals together, and identifying their socioeconomic determinants, is therefore essential for building age-friendly and sustainable social policies. The primary objective of this study is to examine the mental and general health status of elderly individuals in Türkiye and to identify the key socioeconomic and demographic factors influencing these outcomes from a holistic perspective. Due to the endogenous relationship between mental health and self-rated health, this study employs a recursive bivariate probit analysis. The analysis is based on the microdata from the 2023 Türkiye Older Persons Profile Survey Micro Data Set conducted by the Turkish Statistical Institute. The dataset is nationally representative and provides extensive information on older adults' health conditions, socioeconomic status, life satisfaction, family relations, and social participation. Two dependent variables are 1) Mental health status is assessed using the Geriatric Depression Scale (GDS). This scale is a widely used, reliable, and valid tool for identifying depressive symptoms in elderly populations, 2) Self-rated health status is measured using a self-reported health assessment, where individuals rate their health on a five-point Likert scale ranging from “very good” to “very poor.” The explanatory variables are selected to reflect such as individuals' demographic characteristics, socioeconomic status, and lifestyle factors. Consistent with prior research, we anticipate that mental and general health statuses

among elderly individuals will vary significantly across socioeconomic and demographic characteristics. For instance, lower income levels, female gender, and living alone are expected to be associated with poorer mental health outcomes. Educational attainment is likely to positively influence both mental and general health perceptions. Retirement status and access to social support may also emerge as significant predictors of perceived health status. The findings are expected to contribute to evidence-based policymaking for older populations in Türkiye, with a particular emphasis on supporting the achievement of SDG 3 and SDG 10. Policy recommendations may include expanding mental health services tailored to the elderly, strengthening social support networks to combat loneliness, and improving healthcare access for economically disadvantaged and rural populations. Additionally, promoting health literacy and integrating social care with health services can enhance the well-being of older adults and help reduce disparities in health outcomes.



# Timing of Generative AI-Based Chronotopic Services in Luxury Retail in Alignment with Consumer Expectations: An Examination of Experiential Value and Perceived Service Quality

Nurettin Parıltı, Ömer Faruk Şarkbay, Murat Başal

As digital technologies continue to evolve, generative artificial intelligence (AI) is playing an increasingly transformative role in the luxury retail sector. Luxury retail, characterized by high-quality products, exclusivity, and symbolic value, is not only defined by the goods offered but also by the immersive and emotionally charged experiences delivered to consumers. This study investigates how generative AI-supported chronotopic services—interactions that are contextually aware of both time and space—align with consumer expectations and how this timing affects perceived service quality and experiential value. Data were collected through an online survey of 390 luxury retail consumers in Istanbul. The results show that chronotopically optimized AI services significantly enhance both emotional and functional aspects of luxury experiences, suggesting that brands must integrate time-sensitive AI strategies to remain competitive in this experience-driven market.

**Introduction:** Luxury retail has increasingly adopted digital innovations to enhance consumer engagement, with generative AI emerging as a key player in delivering personalized and timely services. Chronotopic services, which reflect sensitivity to time and space, are becoming essential in crafting seamless and resonant luxury experiences. In this context, the timing and personalization of AI-driven services serve not only functional purposes but also reinforce the symbolic and emotional dimensions of luxury. This study explores the role of logical timing in AI service delivery and its influence on experiential value and perceived service quality, highlighting the expectations of high-end consumers who prioritize instant, tailored interactions.

**Literature Review:** Generative AI contributes to retail innovation by creating context-aware, real-time service engagements (Dwivedi et al., 2023). In luxury sectors, where experiences are hedonic and symbolic (Kapferer & Bastien, 2012), AI enables brands to deliver immersive services that align with both spatial and temporal consumer expectations (Huang & Rust, 2021). The concept of chronotopic services stems from Bakhtin's work on time-space relations (Bakhtin, 1981), and in luxury retail, these are used to design service interactions that resonate emotionally and contextually. The literature emphasizes the importance of perceived service quality (Parasuraman et al., 1988) and experiential value (Schmitt, 1999) in fostering customer loyalty. Digital personalization, when well-timed, enhances both, especially among digitally savvy consumers who expect emotionally resonant and immediate brand interactions (Ko et al., 2019).

**Methodology:** A quantitative research design was employed. Data were collected using a structured online questionnaire distributed via Google Forms to 390 consumers in Istanbul who have experience with luxury retail. A 5-point Likert scale was used to measure variables such as perceived service quality, experiential value, satisfaction with AI timing, and temporal expectations. The sample was selected using convenience sampling, targeting digitally active and experience-oriented consumers.

**Data Analysis:** Data were analyzed using IBM SPSS 26.0. Exploratory Factor Analysis (EFA) confirmed construct validity ( $KMO = 0.879$ , Bartlett's  $p < 0.001$ ). Reliability was established with Cronbach's alpha values above 0.80 for all constructs. Regression analysis revealed that AI timing significantly predicts perceived service quality ( $\beta = 0.36$ ,  $p < 0.001$ ) and experiential value ( $\beta = 0.42$ ,  $p < 0.001$ ), with strong correlations between real-time AI responsiveness and emotional brand attachment.

**Findings and Conclusion:** The study finds that AI services aligned with the right time and place significantly enhance the luxury shopping experience. Consumers reported greater satisfaction and emotional engagement when service timing was personalized and responsive. These findings underscore the importance of temporal optimization and suggest that brands can strengthen loyalty and differentiation through AI systems that understand and adapt to consumers' contextual needs.

**Limitations and Recommendations:** This research was limited to Istanbul and a digitally literate sample. Future studies should consider cross-cultural comparisons and include longitudinal or qualitative approaches to capture deeper emotional responses. Further, integrating emotional intelligence modules into AI systems could enhance responsiveness to mood and context, while segmenting consumers by their time-sensitivity can help tailor AI strategies more effectively.

## **A Climate Change: Security Threat?: North Cyprus as a Case Study**

**Hıfsiye Ruh**

Climate change has emerged as one of the most pressing and complex global threats of the 21st century, with wide-ranging implications not only for the environment but also for human security, economic stability, and geopolitical dynamics. Increasingly, it is being recognized not just as an environmental challenge, but also as a significant security threat. Around the world, environmental organizations have played a pivotal role in shaping the discourse around climate change, helping to reframe it as an issue of national and international security. In this context, environmental groups have become influential actors in bringing attention to the multifaceted risks posed by environmental degradation and climate variability. In the case of North Cyprus, the role of environmental organizations in securitizing environmental concerns has become particularly pronounced in recent years. Among the most active groups in this domain are Kıbrıs Türk Biyologlar Doğayı Koruma ve Yaşatma Derneği (Cyprus Turkish Biologists Association for Research and Protection of Nature), commonly referred to as BİO-DER, and the Yeşil Barış Hareketi (Cyprus Green Action Group), known as YBH. These organizations have taken on a critical role in framing environmental issues—particularly those related to water scarcity and the degradation of agricultural areas—as existential threats to society. This study investigates how environmental organizations in North Cyprus have contributed to the securitization of climate change, especially with respect to water resources and agricultural land, since 2021. The analysis is grounded in the securitization theory developed by the Copenhagen School of Security Studies, which offers a valuable framework for understanding how certain issues are socially constructed and elevated to the level of security threats through specific forms of communication, or "speech acts." According to the securitization theory, an issue becomes a security threat not simply because of its objective characteristics, but because it is presented and perceived as such by relevant actors. Through speech acts, securitizing agents—such as political leaders, civil society actors, or environmental groups—can frame an issue as an urgent threat that requires extraordinary measures. This framework is especially useful for analyzing how non-state actors, like environmental NGOs, shape public discourse and influence policy agendas. Using qualitative research methods, this article employs discourse analysis to examine the language, narratives, and rhetorical strategies employed by BİO-DER and YBH in their public communications, reports, campaigns, and advocacy work. The research draws on both primary sources—such as statements, press releases, social media posts, interviews, and campaign materials—and secondary sources, including academic articles, policy documents, and news coverage, to provide a comprehensive view of their securitizing practices. BİO-DER has issued multiple warnings about the degradation of ecosystems and the mismanagement of natural resources, especially water. They have

called for sustainable water policies and stronger regulation of agricultural practices, emphasizing the long-term security implications of inaction. Similarly, YBH has engaged in public awareness campaigns that link environmental degradation to threats to community well-being and national resilience, often invoking a sense of emergency in their messaging. Through their strategic use of language and their active engagement with both the public and policymakers, these organizations have contributed significantly to the reframing of environmental issues as matters of security. Their efforts aim not only to raise awareness but also to influence the political agenda and push for structural changes in environmental governance. The case of North Cyprus illustrates how environmental organizations can act as key securitizing actors in the context of climate change. By employing speech acts and leveraging the tools of civil society, groups like BİO-DER and YBH are helping to shift perceptions of climate change from a distant environmental issue to an immediate and tangible security concern. Their actions demonstrate the growing relevance of non-state actors in the securitization process and underscore the importance of interdisciplinary approaches to understanding climate change in both academic and policy-making circles.

# A Qualitative Research on Equal Opportunity in Performance Evaluation in Universities

Aysun Doğan

With this research, academics' perceptions of equal opportunity in the academic performance evaluation process were examined. Qualitative research was used as the research method and phenomenology was used as the research design. The sample of the study consisted of 12 academicians working in different units of different universities. Research data were collected through face-to-face interviews using a semi-structured interview form. Interview questions were prepared to understand academics' perceptions of equal opportunity in performance evaluation. The data were coded thematically and divided into meaningful categories. The findings of the research show that academics' perceptions of inequality of opportunity are high and that this situation negatively affects their academic motivation and career development processes. The results of the research show that although equal opportunity is provided legally in higher education institutions, there is no equal opportunity in terms of working conditions. It seems important to update the performance evaluation criteria of the higher education system to include more inclusive features in order to ensure equal opportunities.

**Introduction:** Building peaceful, just and strong universities requires an understanding of higher education that focuses not only on academic achievement but also on social peace, equality and ethical values. Academic freedom and freedom of expression are at the heart of such universities. The ability of faculty and students to freely conduct research and express their ideas is a prerequisite for critical thinking and scientific productivity (Altbach, 2001). A just university structure develops inclusive policies that take into account social disadvantages based on equality of opportunity. It is a requirement of social justice that factors such as gender, ethnic identity and socioeconomic status do not pose obstacles to access to education (Fraser, 2009). Strong universities should be governed by participatory and transparent governance principles. Involving students, academics and other stakeholders in decision-making processes increases institutional legitimacy and trust (Marginson & Considine, 2000). Commitment to scientific ethics guarantees the credibility of the academic structure (Resnik, 1998).

The sociologically based concept of equality of opportunity refers to the principle that individuals should not be disadvantaged due to their differences and that everyone should benefit from opportunities under equal conditions (Rawls, 1971). Equality of opportunity is seen as one of the cornerstones of social justice (Sen, 1999). In business life, equal opportunity is defined as having equal employment and career opportunities (Reskin, 2000). Equal opportunity in business life promotes inclusiveness and positively affects individual well-being and organizational productivity (Folger & Cropanzano, 1998). Therefore, it is important for organizations to establish policies to improve equal opportunities in terms of inclusion and sustainability.

Although legal regulations are essential in ensuring equal opportunities, they are not sufficient and disadvantaged individuals need to be supported (Rawls, 1971). Although higher education institutions

legally provide equal career opportunities for all academics, there are no effective solutions for disadvantaged working conditions. In particular, academic performance evaluation criteria focus on scientific publications that bring universities to the top of international rankings. However, these criteria may not be equally applicable in different fields such as social sciences and sciences (Waltman, 2016). In addition, factors such as education and training and societal contribution may be a source of injustice (Macfarlane, 2017). In addition, inadequate consideration of factors such as education and training and community contribution can also be a source of injustice (Macfarlane, 2017). Fair evaluation in academia can only be possible if merit is taken as the basis for recruitment, appointment-promotion and all other processes (Macfarlane, 2017). Unfair evaluations can negatively affect academic motivation and productivity (Folger & Cropanzano, 1998).

The concept of equality of opportunity, which needs to be evaluated in a multidimensional way, was examined in this study by examining academics' perceptions of equality of opportunity in academic performance evaluation processes. The results obtained from this study are important in terms of providing data on the perception of equal opportunity to policy makers in the higher education system and administrators in higher education institutions.

**Methods:** In the study, qualitative research method and phenomenology as a research design were used. The sample of the study was selected by purposive sampling method. The sample consists of 12 academicians working in different units of public and foundation universities in Turkey. In the study, the saturation criterion used in qualitative data analysis was taken into consideration and the data collection process was terminated at the point where similar themes were repeated in the interviews. The interviews lasted approximately 30 minutes through semi-structured interviews. Content analysis method was used in the data analysis process (Krippendorff, 2013). The data were analyzed with open coding technique and inductive themes were created (Leonard & Mc Adam, 2001).

**Conclusion:** This study examined academics' perceptions of equal opportunity in the academic performance evaluation process. Through content analysis, themes and codes were determined for the issues that academics felt disadvantaged. Content analysis revealed two main themes as (1) factors hindering scientific production and (2) hindering factors in the education and training process, and five codes as inadequacy of unique academic working environments and resources, excessive administrative workload, changes in student quality, excessive job expansion strategies, and inadequacy of career development opportunities. It has been observed that situations that create inequality of opportunity in university performance evaluation processes negatively affect academics' work motivation and career development processes.

## **Is It Possible to Eradicate Poverty under the 2030 Sustainable Development Goals?**

**Mustafa Durmuş**

In poverty literature, concepts such as Absolute Poverty, Relative Poverty, Chronic Poverty, Rural and Urban Poverty, Regional Poverty, Racial/Ethnic Poverty and Multidimensional Poverty are widely used. The most prominent of these is “Absolute Poverty,” which refers to the situation where a household or individual does not have sufficient income to meet the most basic needs necessary to maintain a minimum standard of living. “Relative Poverty” defines poverty in terms of an individual's ability to meet their needs in relation to other members of society. It refers to the situation where an individual's standard of living falls below the average level of well-being in the society in which they live. “Chronic Poverty” is poverty that persists over a significant portion of an individual's life and is largely passed on to their children and subsequent generations. Contrary to what institutions such as the World Bank claim, poverty is not decreasing worldwide, nor is the gap between the poor and the rich narrowing. In Turkey, there has been a significant increase in poverty, especially since 2015. The thesis that “poverty is decreasing” is based on an erroneous calculation. The global poverty threshold used by the World Bank is deliberately kept low, which results in a numerical decrease in the number of poor people. For example, setting the extreme poverty threshold at \$2.15 per day is unrealistic. According to many scientists, this threshold should be between \$5.0 and \$7.15 per day, adjusted for inflation. Additionally, China's success in reducing poverty is the primary factor in halving the global poverty rate.

International organizations such as the United Nations (UN) have so far failed to draw up an alternative framework for eradicating poverty. The UN's 8 “Millennium Development Goals” for development, which focus on issues such as poverty and education, are results-based targets that extend to the year 2000. Although these were replaced in 2015 by 17 “Sustainable Development Goals” expected to be achieved by 2030, both programs have failed to go beyond being a broad set of goals lacking a fundamental theory or program. Sustainable Development Goal 1, defined as “End poverty in all its forms everywhere,” defines the international poverty line as living on less than US\$2.15 per day and aims to “end extreme poverty for all, everywhere” by 2030. Goal 1.2 aims to reduce poverty by at least 50% by 2030. It is widely accepted that these goals are impossible to achieve. Some economists describe the Sustainable Development Goals as “the new opium of the masses,” arguing that they mask systemic problems and shift responsibility from corporations and politicians to individuals. For example, although it is accepted that the success of the Sustainable Development Goals (SDGs) lies in international aid allocated for development, there is currently a shortfall of \$4 trillion per year in the funds needed to achieve the SDGs by 2030. Developed countries have not kept their promises in this regard.

The truth is that it does not seem possible to completely eliminate or alleviate poverty under neoliberalism. The fight against poverty has become empty rhetoric. This is because capitalist development aims to gradually eliminate small-scale production and thus expand the capitalist sector. This also means the elimination of small-scale agriculture and peasantry in favor of multinational corporations.

In conclusion, although poverty is defined by certain material measures such as calories consumed or food items, it is in fact a result of social relations. In this context, how economic growth affects poverty depends on the nature of the social relations in which this growth occurs. The social relations that give rise to economic growth under neoliberalism are relations that increase poverty even when economic growth increases. In other words, the increase in poverty and hunger during economic growth is a result of the nature of social relations that characterize neoliberal capitalism. This is because the neoliberal order causes great damage to small-scale production and national agriculture and industry. This is not a coincidence, but a situation specific to the neoliberal regime. Because the functioning of this regime is based on the dominance of global financial capital. This leads to the submission of nation states to the whims of international financial capital and their abandonment of support for small peasant agriculture and local production, thereby causing input costs to rise. The lack of sufficient support for agricultural products exposes farmers to fluctuations in world prices, ultimately leading to the collapse of this sector. Therefore, even if sustainable in an ecological context, under neoliberalism, the elimination of poverty is impossible regardless of the rate of GDP growth. This being known to governments, the practical approach is not to eliminate poverty but to manage it.



**Graduate Theses on Sustainability in Turkey:**  
**Academic Trends and Distributional Analysis (1999-2025)**

**Ilker Kocaoğlu, Esma Ergüner**

Sustainability is an interdisciplinary concept that addresses economic growth, environmental protection, and social development in a balanced manner. The environmental, economic, and social issues experienced on a global scale necessitate the adoption of sustainable development policies, making academic research in this field increasingly important. With the growing academic interest in sustainability in Turkey, there has been a noticeable increase in research related to this area in graduate theses. Graduate theses are significant academic sources that enable the identification of academic trends on a specific topic, gaps in research areas, and scientific developments.

This study aims to conduct a comprehensive analysis of graduate theses on sustainability in Turkey to understand the development of sustainability research in the country, identify academic trends, research area concentrations, and research gaps. The study examines graduate theses published in Turkey between 1999 and 2025, analyzing the types of theses, distribution across academic fields, changes over the years, geographical concentration trends, and keyword usage. In this context, factors such as how academic productivity in the field of sustainability has evolved over the years, which universities and regions have produced more research, and which topics have been most frequently addressed are evaluated.

The sample of the study was determined using the criterion sampling method, one of the purposive sampling techniques. The sample consists of 2,186 graduate theses that use the keyword "sustainability" from the YÖK National Thesis Center. The primary data collection method employed in the research is document analysis, a scientific research method that involves the collection, review, querying, and analysis of various documents. The analysis of the collected thesis documents was carried out using the Python programming language.

As a result of the analyses conducted on the obtained data, an exponential increase in the number of theses was observed starting from 2015. It was noted that there was a temporary decline in 2020, but after this decline, the upward trend in the number of theses continued. Of the theses, 1,687 are Master's theses, 483 are Doctoral theses, 2 are in Medical Specialization, and 14 are in Proficiency in Art. It was observed that the majority of the theses were conducted at the Master's level, while Doctoral theses were comparatively fewer in number. An exponential increase in the number of theses has been observed since 2015, and therefore, the analysis of the topics studied has been conducted with a focus on the last 10 years. During this period, the highest number of theses was written in the field of Business (721 theses), followed by Architecture (259), Economics (218), Tourism (168), and

Public Administration (119). In the graph, dark colours represent a high number of theses written in the respective field, while light colours indicate a lower number. In this context, it is observed that the highest number of theses in the Business field was written in 2019 (146 theses). When examining the keywords used in the theses, it was determined that a total of 3,455 different keywords were employed over the past ten years. These keywords have been classified under 15 main categories. When the distribution of the main categories by year was analyzed, it was found that the highest number of theses was published under the main category "Sustainability and Environment" in 2022, with a total of 361 theses published in that year in the relevant index.

Istanbul stands out as the city with the highest number of theses, with 758 theses. Following it, Ankara ranks second with 319 theses, while Izmir holds the third position with 191 theses. Eskişehir and Konya follow with 54 theses each. These data reflect the level of academic activity and the prevalence of research activities in each city. The thesis studies belong to a total of 189 different universities. In this context, Marmara University stands out as the university with the highest number of theses, with 115. Istanbul Technical University ranks second with 96 theses, while Dokuz Eylul University holds the third position with 87 theses. Istanbul University is in fourth place with 83 theses, and Hacettepe University ranks fifth with 66 theses. These data reflect the academic productivity and research activity of the respective universities.

The analyses show that there are more graduate studies conducted in fields such as business, architecture, economics, and tourism regarding sustainability, whereas there is very little research in more technical areas, such as nuclear engineering, biotechnology, bioengineering, and marine engineering. Additionally, there are a limited number of theses in fields such as health management, social services, public health, and certain branches of engineering. This indicates that sustainability is mainly addressed in the fields of management, social sciences, and general engineering, while there is a gap in specialized engineering fields such as biotechnology, mechatronics engineering, and polymer technology. These gaps can be seen as areas lacking in-depth studies directly related to sustainability.

The fact that the top three cities with the most theses (Istanbul, Ankara, and Izmir) are metropolitan areas with a higher number of universities and established institutions suggests that these cities naturally have more research activities. These cities are more advantageous in terms of research infrastructure and financial resources. The topic of "Sustainability and Environment" has been prominently studied in all three cities; however, the secondary topics differ depending on each city's economic structure and sectors. It has been observed that Istanbul has focused more on studies related to "business and corporate management," while Ankara and Izmir have directed their sustainability research towards tourism.

## **The Future's Economic and Environmental Transformation Tool: Carbon Tax**

**Müslüme Narin**

Global warming, climate change, and environmental sustainability are among the most important global problems of our day. Various tools are used to prevent climate change, which significantly affects life. One of these tools is the carbon tax. Carbon tax is a market-based fiscal policy tool that is levied according to the type and amount of fossil fuel used in order to reduce greenhouse gas emissions and minimize environmental damage. Carbon tax acts on the principle of internalizing environmental externalities by directly targeting carbon dioxide (CO<sub>2</sub>) emissions released as a result of burning fossil fuels that contain carbon. This tax is determined in relation to the carbon footprint of the products. Carbon footprint is a concept that measures the total amount of carbon released into the atmosphere during the production process of products, from raw materials to recycling. This tax is essentially a tax that "the polluter pays".

The carbon tax is a market-based tax and aims to direct businesses and consumers to cleaner energy sources, increase energy efficiency, and reduce carbon footprints by encouraging sustainability. While achieving this goal, it also aims to ensure the efficient use of resources, fair income distribution, and economic stability. With the carbon tax implemented, a cost is imposed on businesses and consumers due to the natural resources they use. The desire to avoid this cost will provide a significant reduction in greenhouse gas emissions. On the other hand, it is expected that this tax will encourage cleaner energy use and increase energy efficiency. In addition to these advantages, it also has benefits such as reducing the demand for carbon-containing fuels, increasing the use of fuels with less or no carbon density, and substituting energy with other production factors. However, the carbon tax also has negative aspects such as creating an additional tax burden, making it difficult to apply this tax internationally, uncertain emission reductions, disrupting price stability, and causing inflation and unemployment.

The basis of the carbon tax is based on Arthur Pigou's proposal in the 1920s that activities that harm the environment should be taxed and that these taxes should be reflected in market prices as costs. Pigou's approach aimed to direct individuals and companies to more sustainable behaviors by taking into account the social costs of environmental pollution. This idea was reconsidered in the context of climate change in the late twentieth century with the work of environmental economists such as William Nordhaus, and it was argued that carbon emissions should be priced. Nordhaus's models showed that carbon taxes were a cost-effective method of reducing emissions. Thus, Nordhaus laid the foundation for modern carbon pricing policies. Consequently, the idea of pricing carbon emissions emerged in the late twentieth century. The establishment of the Intergovernmental Panel on Climate Change (IPCC) in 1988 and the publication of the First Assessment Report in 1990 revealed that

greenhouse gas emissions needed to be addressed urgently. These developments increased interest in policy tools such as carbon taxes and trading systems.

The carbon tax was first implemented in Finland in 1990. Sweden and Norway followed in 1991. Countries that implemented this tax early demonstrated the feasibility of the carbon tax to other countries. Over the last thirty-five (35) years, carbon taxes have been implemented in various forms, at various rates and scopes around the world. Following this, various carbon pricing mechanisms have been put into effect in other Scandinavian countries and Europe. International environmental agreements such as the Kyoto Protocol (1997) and the Paris Agreement (2015) have played an important role in the spread of carbon pricing.

Developments regarding carbon taxes in North America have progressed more slowly. In 2008, the “revenue-neutral carbon tax” was implemented in the Canadian province of British Columbia. This tax attracted attention with the return of the collected revenues to the citizens. This application aimed to increase the social acceptance of the tax. Thus, the carbon tax application was accepted throughout Canada, and in 2018, the “Greenhouse Gas Pollution Pricing Act” was adopted in order to implement the revenue-neutral carbon tax. In addition to these developments, the Canadian province of Quebec became the first province to implement a carbon tax in 2007, but this tax remained very limited.

In the US, the carbon tax has not yet been implemented at the national level, but proposals have been made by various states and members of Congress. In 2018, targets were set for directing carbon tax revenues to infrastructure and environmental projects, but they could not be enacted. This situation highlights the difficulties that carbon taxation has faced in gaining political and social acceptance in the US.

Carbon taxation practices in developing countries began later but have accelerated in recent years. Costa Rica was a pioneer in this field by introducing a 3.5% carbon tax on hydrocarbon fuels in 1997. China launched the world's largest carbon market in 2021. This practice is based on emissions trading as an alternative to carbon taxation. South Africa became the first country in Africa to adopt this policy by implementing a carbon tax in 2019. However, there is no official carbon tax practice in Türkiye yet.

This study examines the history of carbon taxes, their practices around the world, and the situation in Türkiye.

## **Packed Cell Volume (PCV) of Women Attending Antenatal Clinic in Kafin Hausa General Hospital**

**Zurki Ibrahim**

The body of pregnant women goes through significant changes, the level of blood in their body is usually increased by about twenty to thirty percent which elevated the supply of iron and vitamins that the body needs to make hemoglobin. Many women lack the sufficient amount iron needed for the second and third trimesters respectively. The other causes of iron deficiency are: Insufficient quantity of iron-rich foods and 'iron enhancers' in the diet (foods rich in vitamin C, such as citrus fruits) and low bioavailability of dietary iron, excessive quantity of 'iron inhibitors' in diet, especially during mealtimes (e.g. tea, coffee; calcium-rich foods), iron loss during menstruation, poor iron stores from infancy and childhood deficiencies, iron loss from postpartum hemorrhage, increased iron requirement due to tissue, blood and energy requirements during pregnancy and, in some areas, due to heavy workloads, teenage pregnancy, repeated pregnancies with less than 2 years' interval, iron loss due to parasite load (e.g. malaria, intestinal worms), poor environmental sanitation, unsafe drinking water and inadequate personal hygiene. The major consequences of anemia in pregnancy are maternal mortality and morbidity as well as low birth weight leading to increased infant mortality. Indeed, it is a known risk factor for many maternal and fetal complications. Maternal risks during antenatal period are poor weight gain, preterm labors, PIH, placenta previa, accidental hemorrhage, eclampsia, premature rupture of membrane (PROM). Maternal risks during intra and postnatal period are postnatal sepsis, subinvolution, and embolism. Fetal and neonatal risks include prematurity, low birth weight, poor Apgar score, fetal distress, neonatal distress requiring prolonged resuscitation and neonatal anemia due to poor reserve. Infants with anemia have higher prevalence of failure to thrive, poorer intellectual developmental milestones, and higher rates of morbidities and neonatal mortalities than infants without anemia. Moreover, babies whose mothers had AIP during their first trimester in utero experienced higher rates of cardiovascular morbidities and mortalities in their adult lives than babies whose mothers did not have. To tackle the problem of increased maternal mortality in the developing world international agencies and leaders from 45 countries established the safe motherhood initiative in 1987, with the goal of reducing half of maternal deaths by the year 2000. However, the maternal death due to postpartum hemorrhage is still a leading factor. Despite these consequences, anemia continues to be a major challenge. There is little attention given at global and country levels to tackle this and, even after a decade, deaths due to hemorrhage indirectly related to anemia still remains the same. Maternal anemia control programs are the primary maternal nutrition program worldwide, but these programs are not well-funded and have therefore failed to significantly reduce maternal anemia in developing countries, being anemic elevate the risk of blood loss during

labor and making more difficult to fight infections as well. This research project aims to assess the prevalence of anemia among pregnant women attending the antenatal clinic at Kafin Hausa General Hospital in Nigeria. A cross-sectional study was conducted from June to August 2024. A stratified random sampling method was employed to ensure a representative sample of pregnant women attending the antenatal clinic. Data were collected through a detailed questionnaire and blood samples to assess PCV levels. The questionnaire covered demographic information, obstetric history, dietary habits, and knowledge about anemia. Ethical approval was obtained prior to the study, ensuring participant confidentiality and informed consent. Descriptive statistics and Pearson Chi-square tests were used to analyze the data. Preliminary findings indicate that 25% of pregnant women are anemic, aligning with global estimates from the World Health Organization. The demographic data reveals a diverse group of respondents, primarily Hausa Muslims, with varying educational backgrounds and income levels. Many respondents reported experiencing anemia in previous pregnancies and complications such as low birth weight. Dietary habits show low consumption of meat and iron supplements, with most respondents having a low dietary diversity score. The study highlights various factors contributing to anemia, including nutritional deficiencies, infections, and limited access to healthcare. The state government and other non-governmental organizations should provide measures and support in order to reduce the rate as well as level of anemia in pregnant women within the state.

## **The Importance of Professionalization in the Tourism Sector**

**Mete Ünal Girgen**

The tourism sector has become one of the most dynamic and growth potential sectors of the world economy today. This sector, which is of great importance in terms of economic development, cultural interaction and international relations, offers multidimensional contributions such as creating employment, providing foreign exchange inflow and revitalizing local economies in both developed and developing countries. However, this great potential is not discovered and realized equally in every country. Especially in countries such as Northern Cyprus, which largely bases its economic structure on tourism, the potential of the sector has not been fully utilized. One of the main reasons for this situation is that professionalism and professional qualifications in the field of tourism are not sufficiently developed. The concept of professionalism refers to an understanding that is not limited to doing just one job; it is blended with knowledge, experience and moral values, and aims for continuous development and high performance. Professionalism is the fulfillment of a person's duty with a superior intellectual character, receiving training in self-development and being open to lifelong learning. This definition also necessitates competencies such as leadership, decision-making ability, the ability to use initiative and time management in today's business world. Especially in sectors such as tourism, where customer-oriented and service quality are at the forefront, professional approaches directly affect the efficiency, profitability and overall performance of companies.

When evaluated specifically in Northern Cyprus, although the role of the tourism sector in economic development is quite critical, the professionalism level of the human resources in the sector has not yet reached the desired level. In particular, the human resources departments of hotels should pay special attention to this issue. Because professionalization ensures not only individual development but also the sustainability of institutions. Therefore, in order for the tourism sector to increase its global competitiveness, certification systems should also be put into effect rapidly along with professionalization processes.

Today, the tourism sector is an area that requires competition not only in the local market but also at the global level. In order to be successful in this competitive environment, it is of great importance to document the professional competencies of the sector employees. At this point, certification programs should be increased, educational institutions should develop academic programs for the sector and relevant public institutions should support this process. Certified education programs, especially supported by the Ministry of National Education, will both increase the professional skills in the sector and increase the social prestige of the employees.

Making the tourism sector more attractive to young people will ensure the training of a qualified workforce that will secure the future of the sector. By directing the young population to this sector, both the interest in the sector will increase and new employment opportunities will emerge. In this context, it is important to activate guidance services, increase career counseling and provide vocational guidance.

In addition, vocational certificate programs to be organized through vocational high schools and universities that provide tourism education will make significant contributions to the increase of professional competence in the sector. For example, certificates given by institutions such as OTEM (Hotel Management and Tourism Education Center) allow individuals to be specialized in areas such as housekeeping, food and beverage services, and front office. The widespread use of such training programs will not only increase the knowledge and skills of individuals, but will also strengthen the competitive power of Northern Cyprus in the global tourism sector.

As a result, it is of great importance to spread professionalization and certification processes as soon as possible in order for the tourism sector to develop in line with sustainable development goals. In order to support the professional development of tourism employees, increase service quality and increase the prestige of the sector, educational institutions, public authorities and the private sector need to work in cooperation. Northern Cyprus has the potential to become a strong tourism country with its natural, historical and cultural riches. The full utilization of this potential will only be possible with an educated, professional and competent (in short, qualified) workforce.



## **Accelerating Progress Towards SDG 5 and SDG 8 in Palestine:**

### **What Has Changed After the Ratification of CEDAW?**

**Asma Hanoun, Feyza A. Bhatti**

Women's participation in the labor market has been historically very low in Palestine due to restrictive legal frameworks, gendered social norms, and political and economic instability. The ratification of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 2014 marked a significant step in Palestine's commitment to gender equality, particularly in the labor market which is also aligned with the Sustainable Development Goals (SDGs), specifically SDG5 (Gender Equality) and SDG 8 (Decent Work and Economic Growth). While CEDAW provides a crucial framework for advancing women's labor rights in Palestine, its effectiveness depends on robust legal reforms, institutional commitment, and cultural shifts. This paper investigates the influence of the CEDAW ratification on women's status in the labor market in Palestine. What is the status of women in the Palestinian labor market? To what extent is the CEDAW being implemented in Palestine and what is its role in moving toward gender equality in the Palestinian labor market?

Utilizing existing labor market datasets, legislative and government documents, and semi-structured interviews with government representatives, the paper will provide a snapshot of women's position in the labor market and assess the legal and legislative measures taken by the Palestinian government to harmonize labor laws with CEDAW principles and the legal, social, and institutional challenges that hinder the full realization of gender equality in the labor market.

It also investigates the effectiveness of government policies, labor laws, and institutional mechanisms in fostering a gender-equitable labor market by evaluating the progress made through legislative reforms and policy interventions since the ratification of CEDAW.

The findings of the study highlight that the absence of a legislative council, economic and political instability, and restrictive cultural norms hinder the effective application of CEDAW's principles.

The key barriers to gender equality in the Palestinian labor market mainly include legal and policy gaps, protracted actions of the government due to financial and political constraints, limited influence of NGOs and civil society due to cultural and institutional resistance, high participation of women in the informal economy where regulation is limited, and cultural constraints that support traditional gender roles and how women experience the labor market (discrimination in hiring, wage, lack of support for care responsibilities).

This paper underscores the need for coordinated efforts between the government, civil society, and international stakeholders to create an equitable and inclusive labor market for Palestinian women

through strengthening the legal frameworks, enhancing government accountability and monitoring, raising awareness through campaigns, extending labor protections and social security to the private sector and incentivize companies to take gender inclusive actions.

Accelerating progress toward SDG 5 and SDG 8 requires a comprehensive approach that integrates legal amendments, enforcement mechanisms, and awareness initiatives in Palestine.

## **Corporate Social Responsibility and Sustainable Business Models in Universities in the Turkish Republic of Northern Cyprus**

**Bengü Kayıarslan, Burak Demir**

It is seen that corporate social responsibility and sustainable business models are included in the development strategies implemented by companies as well as the education provided by universities, especially businesses. As stated in Ovalı's (2024) study, 'The concept of Corporate Social Responsibility (CSR) was first introduced in the academic literature in the 1950s'. This concept has also become an integral part of business strategies. CSR practices are generally analysed under the components of economic responsibility, legal responsibility, ethical responsibility and voluntary social responsibility. In this framework, by supporting sustainable development, businesses both strengthen their reputation and become more reliable in the eyes of the society.

Within the scope of corporate social responsibility, companies can use environmentally friendly production techniques, improve employee rights, support social projects and promote ethical business practices. It has been revealed that CSR practices provide competitive advantage to businesses in the long run and increase consumer loyalty. We can say that one of the reasons why CSR is gaining importance today is the global sustainability goals and changing consumer expectations.

In conclusion, CSR is not only an ethical responsibility in today's business world, but also a strategic approach that provides competitive advantage. By fulfilling their social and environmental responsibilities, businesses contribute to the protection of both society and their own long-term interests.

Sustainable business models are seen as business strategies that address economic, environmental and social sustainability together and aim to create long-term value. Unlike traditional business models, sustainable business models, according to Başoğlu (2024), are 'not only profit-oriented, but also social benefit' and ecological balance. These models help businesses to gain competitive advantage, such as CSR, without harming the environment and fulfilling their social responsibilities.

The main components of sustainable business models include environmental sustainability, social justice and economic resilience. In order to ensure sustainability in universities as well as businesses, they set out with the circular economic model. In addition to business models that minimise waste production and reuse resources, the sharing economy model is also effectively included in the strategies of universities. An approach that encourages the efficient use of resources and increases joint consumption is based on the sharing economy model. Green business models are implemented by companies that adopt environmentally friendly production processes and aim to reduce their carbon footprint. On the other hand, social entrepreneurship models are initiatives that aim to provide

both financial gain and social benefit. Social enterprises usually operate to support disadvantaged groups or to solve environmental problems. Business strategies that consider not only shareholders but also all stakeholders (employees, customers, suppliers and society) are defined as stakeholder-centred business models. Therefore, we can say that CSR practices are directly related to sustainable business models such as circular economy, sharing economy, green business models and social entrepreneurship.

Especially today, sustainable business models are shaped in line with the United Nations Sustainable Development Goals (SDGs) and are considered as an important factor supporting the long-term success of companies.

This study aims to reveal the theoretical basis of the CSR concept, to examine the connection of higher education institutions in the Turkish Republic of Northern Cyprus (TRNC) with sustainable business models and to evaluate the effects of these approaches on companies. In the research, Gültekin and Argon's (2020) 39-question Organisational Sustainability Scale was used along with 3 demographic questions (age, gender and nationality). It reveals the impact of the integration of CSR and sustainable business models on the performance of universities. It aims to evaluate the perception of CSR practices on academics with brand reputation.

# **Krumboltz's Social Learning Theory and Its Impact on Social Development, Human Capital and Sustainable Development Goal 4**

**Simge Satırlı**

Sustainable Development Goals (SDGs) include 17 goals that are defined by the United Nations in order to end poverty and inequalities and maintain environmental sustainability until 2030. Among these goals, particularly SDG 4, "Quality Education" aims to inclusive and equal education for everyone and promote lifelong learning (United Nations, 2017). Social Learning Theory (SLT) is a comprehensive learning approach that emerges due to some weaknesses of conventional behaviorist educational theories. SLT emphasizes how the individuals acquire knowledge and skills through certain mechanisms, including observation, mimicry, and modeling; therefore, it is shown as a guiding theory. It also stresses the significance of role models and social interaction in the instructional processes. According to this, individuals can improve their learning skills by observing their teachers, peers, and leaders in society. This process can facilitate the disadvantaged groups' accessibility to education, thereby, contributing to equal education (Krumboltz & Nichols, 1990). For instance, the success stories of the educated individuals in the society can be inspiring for the other members of the society, and, as a result of this, they can receive education. According to Krumboltz, SLT plays a significant role in achieving the aims mentioned under SDG 4. SLT explains how the individuals develop their knowledge and skills in interaction with their social environment. Additionally, it points out the impacts of this process on sustainable development and human capital. This contributes to the aim of "lifelong learning" mentioned by SDG 4 (United Nations, 2017). SLT emphasizes that such learning processes are dynamic and continuous. Individuals can continuously improve their knowledge and skills by adapting them into their own lives and restructuring them. This process plays a critical role in the achievement of SDG 4. In this context, human capital means the knowledge, skills, and abilities that individuals possess, and it is acknowledged as the primary aspect for the accomplishment of SDG 4. SLT theory by Krumboltz stresses that social learning processes are important for the development of human capital, and social learning and human capital are intertwined. It helps the individuals to improve knowledge and skills and contributes to the increase of human capital. For instance, the increase in the qualified education level can help the individuals in better jobs and promote economic prosperity. This is closely related to the aim of SDG 4, which is "quality education." This highlights the importance of role models and mentors. Specifically, the fact that the individuals take leadership roles in society facilitates other individuals' receiving education, which, in turn, contributes to the increase in human capital. Social development refers to a society's economic, social, and cultural fields. That is why the accomplishment of SDG 4 is critical for this process. SLT by Krumboltz emphasizes the role of

education in social development processes. According to this theory, it lays the foundation for the transformation of a society and the improvement of individuals in terms of knowledge and skills. Specifically, qualified individuals can promote the prosperity of society and social development. For instance, gender equality might be encouraged by the increase in the education level of the women. This is closely related to the “inclusive and equal education” aim of SDG 4. Additionally, SLT highlights that learning is dynamic and continuous. The individuals apply their knowledge and skills to society and contribute to the social transformation. Therefore, SLT plays a critical role in the accomplishment of SDG 4. Particularly, the increase in the education level of the individuals improves society’s prosperity and contributes to SDG 4. This study will examine Krumblotz’s aforementioned theory by linking it to SDG 4 in the context of social development and human capital. While doing this, important sources such as the OECD, UNESCO, United Nations, and Turkish Presidency of Strategy and Budget, coupled with the related data from the database, will be used. For this reason, this theory can guide policymakers for sustainable development. Therefore, this study is important in discussing the SLT in the context of sustainable development.

## **Prevalence and Determinants of Unemployment in Türkiye:**

### **Evidence from Household Labor Force Surveys**

**Michel Koivogui, Fatih H. Dikmen**

Unemployment is one of the failures of labour markets that significantly affects the economic and social structure of developing economies as well as developed economies. This phenomenon is not a single indicator of labour markets' imbalance but reflects structural challenges related to skills adaptation, sectoral changes and conjunctural fluctuations (ILO 2020; Herz & Van 2011; Berument & Al 2009; Kalyci 2021; McAffe & Brynjolfsson 2014 ). Although the macroeconomic determinants such as economic growth rate, inflation rate, monetary and fiscal policies external shocks and labour market rigidities provide a significant overview of labour market dynamics, they do not capture the subtleties and shades of individual behavior such as shifts in demographic characteristics, regional disparities or sectoral differences that may exist in the labour market. In order to fully capture the dynamics of labour markets, it is prominent to consider why labour forces can experience unemployment even in the absence of major economic shocks and how individual characteristics and behaviors can significantly influence their labour market outcomes (Karanassou & Snower 2000; Giupponi & Machinn 2024; Furceri & Guillaume 2012).

This research intends to examine the relationships between unemployment and social, economic and demographic characteristics of households, using the nationally representative Household Labour Force Surveys (HLFS) data for the period 2018-2023. Therefore, we attempt to answer two questions, which guide our research process: What are the key microeconomic determinants of unemployment in the Turkish economy? And what is the prevalence of the phenomenon? Turkey is an interesting country for investigating unemployment phenomenon due to its demographic characteristic and economic transition. Türkiye reflects the common challenges to emerging countries such as rapid population growth and urbanization pressures while keeping political and economic relationship with developed economies. The Turkish economy has transitioned from an agricultural economy to a more industrial and service-oriented structure. This transition significantly influences the dynamic of labour markets, creating new skills and making some old skills obsolete.

The paper intends to examine the relationship between unemployment and individuals' characteristics that influence their labour market outcome within the Turkish labour market using the nationally representative Household Labour Force Surveys data (HLS) for 2018 2020 and 2023. The HLS are regularly conducted by the Turkish Statistical Institute (TurkStat) since 1988 and all settlements in Türkiye are covered in the sample.

In this study, socio-economic and demographic factors were used as independent variables to explain the unemployment phenomenon in Türkiye. Considering the binomial structure of the dependent variable of the study the Logit Model is employed to examine the relationship between the labour market outcomes of labour forces and their social economic and demographic characteristics. As a statistical model the Logit model is suitable to examine the relationship between a binary dependent variable and one or more independent variables.

According to initial findings, from gender perspective, the coefficient of being male is positive and statistically significant in 2019 and 2021, which means that there is a higher change for male to be unemployed compared to female. In terms of age group, the teenager age group (15-19) is the reference group. The estimation reveals that only the young age group (20-24) displays positive coefficients for the three years, The young are followed by the 25-39 age group in terms of vulnerability to unemployment. Individuals aged 40 and more experience a decreasing likelihood of being unemployed as age increases. This reveals significant age disparities in the unemployment dynamic. As for the educational attainment, individuals with high school or university degree are more likely to be unemployed compared to individuals with master or PhD degree. Considering marital status, married individuals are less likely to experience unemployment compared to single and widowed. Single individuals record the higher change of being unemployed. One of the most significant variables explaining unemployment is the region. In 2019 and 2021, the coefficients of all the regions are statistically significant and negative except Central East and Southeast Anatolia, which are positive. It means that individuals living in Central East and Southeast Anatolia regions are more likely to be unemployed as compared to individuals living in Istanbul which is the reference category.



# **The Impact of Climate Change on Health in Türkiye:**

## **A Panel Data Analysis for Turkish Cities**

**Sedat Ors, Abdullah Teke**

The accelerating pace of climate change has brought about a series of health-related challenges worldwide, with Türkiye increasingly experiencing the consequences of rising temperatures and climate variability. This study investigates the effect of climate change on mortality across 81 Turkish cities between 2009 and 2021, providing a region-specific analysis of the relationship between temperature and health outcomes. While the global literature emphasizes the link between extreme heat and elevated mortality (Barreca, 2012; Deschênes & Greenstone, 2011), empirical studies focusing on Türkiye remain limited. Given the country's diverse climatic regions, uneven healthcare infrastructure, and vulnerable populations—including the elderly and those with pre-existing health conditions—understanding localized health risks is vital for effective climate adaptation. This research builds upon the Becker-Grossman health production model (Grossman, 2000; Becker, 1965), incorporating climate variables to assess survival probabilities as a function of both environmental exposure and adaptive investments. Using annual mortality data from the Turkish Statistical Institute and temperature data from the Turkish State Meteorological Service, we construct a balanced panel to estimate the effect of temperature on mortality. The empirical model includes city and time fixed effects to account for unobservable characteristics and national trends, enabling a more precise estimation of climate-health relationships.

The statistical analysis reveals a robust association between rising temperatures and mortality rates. In models without fixed effects, temperature increases are positively associated with higher mortality (coefficient = 0.103,  $p < 0.01$ ). The inclusion of year fixed effects strengthens this relationship (coefficient = 0.155,  $p < 0.01$ ), while the full model, including both time and city fixed effects, shows a negative coefficient (−0.215,  $p < 0.01$ ), suggesting the presence of local adaptation or regional heterogeneity in health responses. These findings are consistent with previous international studies demonstrating the complex and nonlinear effects of temperature on health outcomes (Fouillet et al., 2008; Barreca et al., 2016).

To quantify the welfare implications of temperature-related mortality, we apply the Value of a Statistical Life (VSL) approach and compensating variation methods, following the frameworks of Thaler and Rosen (1976) and Carleton et al. (2022). We consider three adaptation scenarios: no adaptation, full adaptation, and climate change with income growth. The results show that without adequate adaptive investments—such as improved healthcare access and infrastructure—the economic cost of temperature-induced mortality can be substantial. Conversely, rising income levels

may offset some of these effects by enabling greater resilience and access to protective resources.

Seasonal trends further highlight the link between temperature and mortality. The data show that average temperatures peak in the summer months, corresponding with periods of increased mortality risk, particularly in regions with limited access to air conditioning, emergency care, or public health services. These findings underscore the need for targeted health interventions during high-risk periods and in high-risk areas.

This study contributes to the growing body of literature emphasizing the intersection of climate change and health, particularly in middle-income countries with variable adaptive capacity. Türkiye's case illustrates the importance of localized, data-driven approaches to climate adaptation. By identifying the regional and temporal patterns in mortality linked to temperature, this research offers actionable insights for policymakers aiming to design climate-resilient public health systems. Future extensions of this work will incorporate daily-level data on temperature, mortality, and respiratory infections to provide higher-resolution estimates of health impacts. Additionally, we will examine the effectiveness of recent climate-related regulations and public health investments in Türkiye, which remain underexplored in the empirical literature. Finally, advanced econometric techniques, such as Poisson and panel data models suited for count outcomes, will be applied to refine the methodology and account for overdispersion.

In conclusion, the results demonstrate the significant public health risks posed by climate variability and reinforce the urgent need for adaptive strategies in vulnerable urban and rural areas. As global temperatures continue to rise, developing a robust empirical understanding of climate-related mortality remains essential for ensuring sustainable and equitable public health outcomes.

# **The Role of Stakeholder Theory in Enhancing the Credibility of Sustainability Reporting: A Theoretical Review in the ESG Era**

**Burcu Nazhoğlu**

Viewed from a sustainability reporting perspective, it is clear that it becomes increasingly central to corporate accountability, the expectations placed on firms to address a broad range of environmental, social, and governance (ESG) concerns have never been higher. Stakeholders – ranging from investors and regulators to local communities and NGO’s – demand transparency, action, and credibility in sustainability disclosures. Sustainability reporting, as it is about to be mandated in many countries, rests on fundamentally different concepts from those underlying financial accounting. Yet, the diversity of stakeholder interests often leads to fragmented reporting practices. This paper explores sustainability reporting from the perspective of Stakeholder Theory, providing a theoretical framework for understanding how firms respond to and prioritize stakeholder demands in the ESG context. The main objective of this paper is to examine how Stakeholder Theory can inform the development and delivery of credible sustainable reporting. Rather than focusing only on compliance or symbolic disclosure, the paper highlights how firms can use stakeholder engagements as a strategic tool to enhance legitimacy, trustworthiness, and relevance of their sustainability reports.

This study contributes to theory by proposing a stakeholder-oriented reporting framework, which integrates principles of accountability, inclusiveness and responsiveness. It also contributes to practice by suggesting conceptual insights that could inform standard-setting efforts and corporate strategies in managing ESG disclosures.

Stakeholder Theory (ST), first argued by Edward Freeman (1984), articulates that firms must consider the interests of not only just shareholders but also all parties, affected by their actions. ST, is a profound theory in business ethics and organizational management. In the context of sustainability reporting, this theory provides a robust perspective to explore why and how firms report on ESG issues. Unlike agency theory, which emphasizes shareholder value, Stakeholder Theory focuses on relationships, ethical obligations, and balancing of diverse and often conflicting interests. As ESG considerations have evolved, so too have the expectations of stakeholders. Investors are increasingly interested in material ESG risks; employees demand safe and equitable workplaces; consumers seek environmentally responsible products; and governments push for standardized, comparable disclosures. The mentioned arising complexity makes Stakeholder Theory more relevant, suggesting a way to conceptualize sustainability reporting not as a simple activity but as a communication tool between the firm and its wider environment.

The relevance of this theoretical inquiry is heightened by current global trends. Regulatory developments such as the EU's Corporate Sustainability Reporting (CSRD), the SEC's climate disclosure principles, and the rise of standards like GRI and ISSB highlights a change toward mandatory and stakeholder engagement. Meanwhile, trust in corporate sustainability disclosures is being questioned, especially allegations of greenwashing and ESG performance claims. This paper argues that, placing Stakeholder Theory into sustainability reporting practices can address these challenges by promoting transparency, ethical reporting behaviour, and responsiveness to stakeholder concerns. It provides a timely response to ongoing debates about the purpose, quality and trustworthiness of sustainability disclosures.

As a theoretical paper, this study conducts a structured literature review and critical analysis of the application of Stakeholder Theory in sustainability reporting research. It synthesizes findings from accounting, management, and ESG literature to develop a conceptual framework: the Stakeholder Engagement – Reporting Credibility Model. This model outlines how stakeholder evidence, Engagement process, and feedback mechanisms can enhance the credibility and utility of sustainability reports.

In conclusion, Stakeholder Theory provides an important yet practical theoretical perspective for understanding and improving sustainability reporting in the ESG era. This paper suggests a timely and theory driven perspective for researchers, practitioners, and policy makers committed to advancing sustainable business practices.

## **Fostering Well-Being in Academia:**

### **Solutions for Faculty Burnout and Alignment with Sustainable Development Goals**

**Asieh Akhlaghi Mofrad**

Faculty well-being is hampered by the academic environment. The inherent stress in academia's climate can lead to burnout and mental and physical health challenges. Oftentimes, being overwhelmed by intense competition, research, lecturing, and mentoring can lead to various complications regarding health issues (Smith & Johnson, 2018; Brown et al., 2017). Academia's climate may be improved by considering the significance of academics' well-being in higher education institutions (Williams, 2019). As suggested by Davis (2020), incorporating a collaborative environment rather than a competitive one, along with the provision of work-life balance programs and cultivating inclusivity, could be some solutions. By acknowledging the mentioned cultural issues, higher education institutions can enhance their future success by focusing more on faculty members' well-being (Taylor & Harris, 2016).

This study approaches the mentioned problems by breaking down the issues into the following study questions that need to be answered:

- 1- How are the faculty's burnout and mental health related to intense competition in academia's environment?
- 2- What are some strategies and policies that universities could implement to improve faculty well-being,  
and how these strategies comply with the UN's sustainable development goals.
- 3- How can support offered by higher education institutions help in improving faculty's mental health?

Furthermore, the following study uses a qualitative method approach for the collection and analysis of data, open-ended questions are asked using interviews with faculty members from business and economics faculty members of 3 universities in Northern Cyprus.

Producing more research papers online has become the keystone of academicians' achievement and gaining personal gratitude. This has created a stressful culture affecting faculty well-being (Brown et al., 2017). Although such achievements are indispensable, one cannot deny the stress, and oftentimes the burnout experienced due to fierce competition in the culture (Walker & Reed, 2020). A culture leaning towards higher collaboration shared goals, and teamwork for providing support incorporated by educational institutions would be a solution (Davis, 2020). Moreover, to lessen the prevalent stress, other joint activities such as implementing a support system, more diversified research, collaborative

teaching, and joint professional development can be considered (Smith & Johnson, 2018). Besides cultivating a collaborative culture, higher education institutions need to pay close attention to the mental health issues faced by academics, such as depression, high-stress levels, and perhaps some anxiety (Davis, 2020). Workshops and counseling for discussing mental health issues among faculty members could be a part of the faculty development program offered by the institutions (Walker & Reed, 2020). To encourage faculty members to open up about their mental health problems and avoid ignoring issues, it's best to persuade and engage them in discussions, along with ensuring the availability of necessary resources (Smith & Johnson, 2018). The solution would be developing policies regarding flexibility and work-life balance programs by institutions (Taylor & Harris, 2016). Strategies leading to better work-life balance in academia, such as the provision of work-leave periods or reduction of teaching loads, could be implemented (Davis, 2020). By encouraging a culture that values not only academic achievement but also personal well-being, a more sustainable work-life balance can be maintained (Walker & Reed, 2020). The inclusivity of marginalized and underrepresented faculty members who are possibly discriminated against and face a lack of support from the system needs more attention (Taylor & Harris, 2016; Davis, 2020). Furthermore, overall well-being can be improved by providing inclusion, diversity, and equal opportunities for everyone for professional growth (Smith & Johnson, 2018). Academia's climate can be further bolstered by implementing diversity training programs, and mentorship programs, along with holding open discussions on inclusion in general (Williams, 2019).

By referring to Sustainable Development Goal 3 of the UN: Good Health and Well-being, which was issued by the United Nations in 2015 among other sustainable goals, Walker and Reed (2020) argue that some cultural issues in academia negatively impact academics. Furthermore, by mitigating these issues, the institution can benefit from having healthier academics and consequently a more enhanced quality of education. Universities should address these cultural issues to contribute to more sustainable global goals aligned with Sustainable Development Goal 3. By addressing the cultural factors that negatively impact faculty health, universities contribute to this goal. Moreover, faculty well-being, in general, leads to enhanced interactions with students, the production of impactful research, and better service to their societies (Smith & Johnson, 2018).

In conclusion, implementing the mentioned strategies will eventually help accomplish the sustainable goals mentioned by the UN in support of the well-being of all faculty and, the long-term success of educational institutions, and the community (United Nations, 2015).

## **Foreign Direct Investments and Uncertainty: An Empirical Analysis and Policy Recommendations in Context of Growth and Development for Turkish Economy**

**Emre Güneşer Bozdağ, Cenap Mengü Tunçay**

Foreign direct investment in the economy is one of the important factors that promote growth and development. Especially, when national savings and investments can not bring about the desired growth and development, foreign direct investments can fulfill this function since they are usually long-term investments in economies. Foreign direct investments are also a source of foreign savings that generate quick and direct income for economies and increase production capacity. They bring high quality and standard production norms to countries globally. Thus, they help countries gain knowledge and experience about technology and production management. If foreign direct investments increase over time, it allows the production of important imported capital and intermediate goods within the country and then the export of these goods. When we consider the variables affecting foreign direct investments in the literature of economics; it can be claimed that profit rates, interest rates, trade barriers, technology, growth, labor productivity, tax rates, GDP, GDP per capita, risks and uncertainties, availability of raw material resources, market size, labor costs, inflation rate, import tariffs, net exports, exchange rate, financial development, economic freedom index, property rights index, economic stability, public expenditures, corporate tax rates, and net international reserves are usually used. In the current literature, it can be said that one of the less commonly used variables as a determinant of foreign direct investments is the uncertainty.

In economics, unpredictable variables are defined as uncertainty and uncertainty is measured by Uncertainty Index, which is an index that covers the important political and economic developments of each country and is based on country reports. Some of the determinants of the Uncertainty Index are; trade flows, financial flows and the level of GDP. These determinants are closely related to exchange rates, interest rates, and price levels.

The increase in foreign direct investments in the economy can be a symbol of confidence in the economies and usually flows in periods of low uncertainties in economies. However, the increase in uncertainty can also be a incentive factor in terms of investments, and the resulting volatility in exchange rate and price level may cause willingness and determination in foreign direct investments. According to the theories that explain the relationship between foreign direct investments and uncertainty; increasing in macroeconomic uncertainties may increase prices and exchange rates in the economy, which may increase foreign direct investments. On the other hand, macroeconomic uncertainties in the economy may also cause a decrease in foreign direct investments. For this reason,

depending on the increase or decrease in uncertainty, there may be a mutual negative or positive relationship between uncertainty and foreign direct investments.

In this study, theories that establish a relationship between foreign direct investments and uncertainty are discussed. Empirical studies in the literature are referred. In the empirical analysis, the uncertainty index of the Turkish Economy and foreign direct investments are used. It is tried to test by making empirical analysis whether the foreign direct investments in the Turkish Economy demonstrate a relationship in line with the theories that deal with the relationship between uncertainty and foreign direct investments in the literature.

In addition, in line with the results obtained, policy recommendations are developed on the impact of foreign direct investments on growth and development in connection with the determinant of uncertainties, which are trade flows, financial flows and the level of GDP that have developed for the Turkish Economy. Control of these basic variables in a balanced way forms the basis of economic policies in terms of improving growth and development in the economy. In this context, monetary policies, fiscal policies and structural measures that affect uncertainty will play an important role in developing countries such as Turkey.



# **Compulsory Remote Learning Perceptions and Experiences of Students After The 2023 Earthquake in Turkey**

**Halil Ersoy**

Compulsory remote teaching (CRT) is an inherited expression after the COVID pandemic school brakes. It used to define the distance education activities carried out to compensate disrupted education at all levels. In 2023, the similar breakouts happened in Turkey because two very strong earthquakes in the same day hit a region covering ten cities, caused more than 50.000 lives lost and thousands of houses or buildings were destroyed. The face-to-face learning at higher education institutions (HEIs) were cancelled and teaching was converted to remote compulsory teaching all over the country. All undergraduate students stayed at homes and expected to join the remote online teaching for a semester. As with the COVID pandemic, it is important to explore the experiences and expectations of these students so that HEIs and stakeholders can develop strategies for successful adaptation of compulsory remote teaching in future crises.

Therefore, the aim of this study is to examine the experiences and expectations of those undergraduate students during CRT in Turkey. For this aim, a descriptive study was administrated with 73 undergraduate students learning computer programming course at an engineering faculty. Four research question was targeted: 1. What physical facilities did they have during the CRT? 2. What were the perception of students toward the synchronous online lectures? 3. What were the students' opinions CRT in general? 4. What was the students' preference for teaching methods after such an experience.

To answer questions, a survey with three sections was created by the researchers based on the literature about CRT during COVID19 pandemic. The first section has 6 questions about the demographical information of the participants. The second section has 16 Likert-type questions, asking about the perceptions toward CRT. These questions were created by Deepika Nambiar in 2020. The third section has 4 open-ended questions about opinions about CRT. The data was collected via an online survey at the end of CRT semester (2023 June). Totally 84 engineering students were invited to the study and 73 of them were agreed to participate. After data collection, while descriptive statistics for demographical data and Likert-type questions were calculated, a content analysis process was executed for open-ended items. The first finds, to be shared with the audience is what facilities the students had during the CRT. The devices like computer or smart phones and Internet connections are important resources to join CRT. The second findings about the perceptions toward live online lectures. The online live lectures are very important to keep learning motivation high and keep student-learner and student-student interaction. The last findings will be about students' opinions about CRT in general. All aspects of

CRT is a strange experience for the students which may affect their future preference of teaching mode. That is, some of them may consider advantages of joining online lectures and learning at home so that they may prefer online learning on normal period.

For HEIs and stakeholders, the findings and discussions may provide clues to develop teaching environments, strategies and resources compatible with such CRT period. As local and global crisis happen more frequently than before, not only Turkey but also other countries should consider the potential risk resulting CRT periods.

Moreover, the students' opinions about CRT and online learning may encourage the HEIs or instructors to change some face-to-face teaching activities into online synchronous or asynchronous formats where feasible. To adapt technology into their pedagogic and administrative tasks for successful transformation, digital competency and readiness of learners and instructors in institutions should be taken into account as a valuable parameter. Understanding students' perceptions and expectations in such cases might yield creating effective strategies to targeting suitable digital competencies proper ways of acquiring digital competencies.

## **Public Service Delivery by Local Governments at the Verge of Critical Space:**

### **A Comparative Study of Adana and Mersin**

**Uğur Sadioğlu, Emre Ezin**

Public service continues to be one of the most debated and ambiguous concepts in public law. The term “service public,” borrowed from the French literature, poses challenges in its direct translation into Turkish, which complicates the establishment of a consensus on its definition. Nevertheless, in its simplest form, public service is regarded as a set of activities carried out by public legal entities with the aim of ensuring public interest, within the framework of the principles of continuity and regularity. The primary characteristic of these activities is their orientation towards the public good and their frequent subjection to public law regulations. However, the boundaries of this classical approach have gradually loosened in line with transformations in administrative paradigms. Especially since the 1980s, the emergence of the New Public Management (NPM) model has promoted the restructuring of public services in accordance with market principles. This approach, by centering on concepts such as efficiency, effectiveness, and performance, has profoundly transformed the nature of public services. Nevertheless, it has been criticized for marginalizing democratic values and citizen-centric governance, leading to the emergence of the New Public Service (NPS) model in the 1990s. The NPS approach emphasizes that the primary objective of public service is “serving the citizen,” and places concepts such as governance, accountability, transparency, and participation at the heart of public administration. While the traditional structure of public administration prioritized centralization and bureaucracy, contemporary approaches highlight the autonomy, effectiveness, and citizen engagement capacities of local governments. In particular, the localization trend evolving within the European Union framework has necessitated a reconsideration of task and authority distribution, revenue allocation, and administrative tutelage mechanisms. In Turkey, although local governments still operate under the shadow of the central administration, recent years have seen growing efforts to develop more autonomous and effective structures, especially in light of increasing service diversity and digitalization trends. The pandemic period revealed the structural deficiencies of local governments in the delivery of public services. During the COVID-19 response process, local governments played a key role in addressing basic needs; however, the dominance of the central government often limited local initiatives. This has been interpreted as a consequence of the failure to decentralize public policies. Despite their potential for unique and rapid interventions at the local level, the centralized nature of legal frameworks has frequently rendered local governments ineffective. This situation underscores the importance of strengthening local capacities, particularly in times of crisis. Significant transformations have also occurred in the methods of public service delivery. Alternative methods such as privatization, public

procurement, and public-private partnerships have enabled local governments to gain both financial and institutional flexibility. However, the extent to which these methods serve the principle of public interest should be critically examined in terms of service quality, cost, and accountability. Additionally, the digitalization process has facilitated e-municipality applications, accelerating service delivery and enhancing citizen interaction.

According to Lefebvre, in the post-industrial era, urbanization has ruptured the relationship with nature and initiated a “critical space” process. Migration from rural to urban areas, population density, and the subjugation of nature to urban development have led to significant issues concerning environmental sustainability. The replacement of nature with its symbols—particularly in the form of symbolic green spaces in cities that no longer represent genuine nature—demonstrates how modern urbanization is intertwined with environmental crises. In conclusion, the role of local governments in the delivery of public services has evolved beyond that of mere implementers and has assumed a strategic, governance-oriented, and participatory position. However, for this transformation to be sustainable, the relationship between central and local administrations must be redefined, legal frameworks should be decentralized, and local capacities must be strengthened. Today, the provision of public services is no longer merely a technical activity; it has also become an integral component of the democratization process. In this study, the effectiveness of local governments in the delivery of public services is examined within the framework of central-local relations. The analysis is based on the 1003 TÜBİTAK Project titled “Sustainable Urban Policies: Urban-Regions in Turkey in Terms of Quality of Life” (Project No: 218K355). Using the document analysis method, a comparative analysis of the 2020–2024 Strategic Plans and the 2020 Activity Reports of the relevant metropolitan municipalities was conducted through the Atlas.Ti Qualitative Data Analysis Program. Additionally, in-depth semi-structured interviews were carried out with representatives from both central and local governments in the provinces of Adana and Mersin, and the findings were compared with the results of the document analysis.

## **Conflict Prevention Strategies in the Gender Context: The Example of Peer Mediation**

**Cahide Göğüsdere, Nejdet Göğüsdere**

Gender is the roles and duties assigned to women and men by society, and this concept emerges especially in social differences between the two sexes. These differences between the sexes are social, cultural, etc. and change over time. Gender roles regulate authority, responsibilities, rights and access to resources. Men's domination over women is legitimized by social, cultural and economic norms. This domination positions women unequally compared to men. Domination and violence normalized in the context of gender cause conflicts. These conflicts will end permanently when they are resolved by negotiations facilitated by a neutral third party who will participate voluntarily and by the parties finding a common solution. One of the strategies that should be implemented to prevent conflicts is the institution of mediation. The participation of women in mediation is important for a lasting peace. Such an inclusive mediation process will bring creative and holistic solutions. United Nations Women supports the participation of women in conflict resolution processes and works to ensure that the results obtained are gender sensitive. It supports the development of networks of women mediators to achieve gender equality. Gender equality is essential for both the security and stability of countries. In addition, as an important element of economic development, such equality is an indispensable element in conflict prevention efforts. The participation of women in peace processes increases the permanence of agreements and prevents conflicts from recurring. In order to prevent conflicts in society, it is necessary to work primarily on the basis of family members. Because the basic unit that constitutes society is the family. There are methods used worldwide such as family mediation and peer mediation aimed at conflict prevention. Thanks to the institution of mediation, disputes that can last for many years and are brought to court will end with the parties finding their own solutions in a short time. Thanks to the conflicts and disagreements that arise on the basis of differences, new ideas can be developed and creative solutions can be put forward. Especially thanks to peer mediation, disputes can be resolved without using violence. Thus, young individuals can acquire various skills such as negotiation, active listening and anger management. Such skills acquired at a young age will turn into behavioral patterns over time and social peace can be achieved. In this process, young individuals will contribute to the resolution of conflicts by establishing peace not only in school but also in their families and social environments. Therefore, the target audience of peer mediation is society. Thanks to young people who can solve problems, express themselves and learn empathy, all kinds of violence experienced in schools, families and society, especially violence against women, domestic violence and disputes arising from differences will decrease.

The Peer Mediation Project, conducted by the Peer Mediation Association (Akran-Der) throughout Turkey, is the main theme of this study. The aim of the association is to implement “Peer Mediation” programs and trainings in schools to ensure constructive and peaceful resolution of disputes without using violence. School administration, teachers, students and parents are important participants in this project. Before providing training to students on “Dispute Resolution and Peer Mediation”, detailed information about the project should be provided to teachers and school administrators first. Because the teachers who will be in the project team must also be mediators. Then, these teachers provide mediation training to students. The physical conditions of the school where the project will be implemented are examined and peer mediation rooms are created. Care is taken to ensure that the rooms have windows and are visible from the outside. However, necessary precautions are taken to prevent what is being said from being heard. In addition, there is a triangular table, three chairs, a bookshelf and mediation brochures in the room. The number of rooms is determined according to the number of students. After the physical conditions are met, the trainings begin. “Peer Mediator” promotion is made to the classes where the project will be implemented. This promotion is made by mediators registered in the registry kept by the Mediation Department. In the following process, students are provided with mediation training through guidance training. After mediation is introduced, students choose mediators among themselves. Six mediators are selected from each class, three girls and three boys. Peer mediators, who are selected by students, not teachers, play key roles in resolving conflicts. This study will focus on the social peace that is desired to be established in the triangle of gender equality, conflict and mediation, in the family as the building block of society and on a student basis. In this context, data on peer mediation obtained throughout Turkey will be analyzed comparatively.

## **The Deepening Problems in the Turkish Education System Thoughts on Sustainable Education**

**Nejla Kurul**

We can establish very close links between education, namely school and university education, and development and sustainability. Without quality education, it is impossible for a society to develop, grow stronger, and ultimately become free. Amartya Sen states in his seminal book, “Development is the process of expanding the real freedoms that people enjoy.” He is not referring to the liberation of a small minority, but rather the inclusion of all segments of society, especially children and young people, in the development process in all its diversity.

Amartya Sen's views on development, which do not discriminate on the basis of social class, gender, religion, race, color, ethnicity, or political opinion, are a guide for sustainable development. In the context of education, we establish the connection between freedom and the development process for children and young people, who constitute a significant proportion of society.

Violations of children's right to life are a major problem. In addition, issues such as children outside the education system being deprived of an empowering and developmental education, insufficient resources allocated to education, and educational inequalities are rapidly increasing. In the 2023-2024 academic year, approximately 613,000 children of compulsory education age were out of school. The vast majority (73.9%) of these children are aged between 14 and 17 and should be attending secondary school.

Millions of children and young people in Turkey's education system are being deprived of science, art, liberating education policies, and a democratic school environment where they can feel valued by participating in decision-making processes. The components of education are being subjected to a journey that could lead to the loss of their freedoms and the creation of divisions, hierarchies, and inequalities. As schools lose their public character and the grassroots forces of education retreat under pressure and threats, education is being turned into a sphere of control and discipline for neoliberalism, patriarchy, and political power! This process is not only affecting students but also teachers.

We are living in a period of serious tension between the philosophy of political power in the field of education and educational practices that encompass public, secular, and scientific education and carry on the traditions of the century. The opening of schools to religious foundations and associations, the modification of weekly lesson schedules without democratic participation, and the removal of secularism from education and its replacement with religious education, attempts to reflect this transformation in all course content, textbooks, and teacher behavior through the so-called “Maarif

Model”, the selection of school administrators based on their proximity to political power rather than their qualifications, and the establishment of union-like structures that have become the authorized union within 22 years through their ties to political power and their dominance in schools through school principals are just a few examples of what is happening.

Although the total budget allocated to education has increased every year, it appears to have increased by 137.2% in nominal terms compared to 2023, but the budget is rapidly eroding in the face of inflation. The ratio of the total education budget to the central government budget was 14.61%, and the ratio to GDP was 3.94

Inequalities between schools are increasing. There is a serious divide between private and public schools in the distribution of educational opportunities. The privatization and commercialization of education are being increasingly encouraged. Inequalities between public schools have also reached a serious level. The distinction between privileged state schools and schools for the urban poor has become apparent. In neighborhoods where the urban poor live, problems such as crowded schools and classrooms, weak cultural, artistic, and sports activities, difficulties in accessing schools, and inadequate guidance services can be listed.

As a result of Turkey's reality, children are among the groups most affected by poverty. According to poverty data from the Turkish Statistical Institute (TÜİK), the poverty rate among children was 31.3% in 2023, while the rate of children living in material deprivation was 33.3%. In Turkey, 4 million 733 thousand students are enrolled in branches with more than 30 students. Approximately 40% of primary school students in Turkey are enrolled in double-shift education.

For sustainable education, Amartya Sen's statement that those who benefit from education should strive to expand their real freedoms should be the starting point. Putting this perspective into practice requires a commitment to participatory and democratic processes from the outset. Access to education, transportation to school, ending hunger and poverty within schools, access to clean water within schools, improving school environments and teacher qualifications for quality education, and developing an educational approach that recognizes and addresses differences between students and teachers are all essential.



## **Black Sea Economic Cooperation (BSEC) Organization as the Economic Union of the Black Sea Region in the 21st Century**

**Türel Yılmaz Şahin, Marziye Memmedli**

When the world reached the end of the 1990s, the Cold War, which started between two different ideologies after World War II, was about to end. The USSR's leadership over the Socialist states ended, the socialist governments in Central Europe were overthrown, eight states with this ideology transitioned to capitalism, and the USSR became a state struggling with ethnic and economic problems within itself. As the country closest to these events, Türkiye tried to take part in the new world order and organize its foreign policy according to the changes in the region. Considering the fact that the disintegrating USSR was located in the region close to the energy resources, Turkey's energy needs and the fact that these states were a market for food and food products, the beginning of ethnic problems in the Caucasus, and the states in the Socialist Federation of Yugoslavia were being dragged towards war in the Balkans, as a signal that the Black Sea region was also in danger, Turkey tried to ward off this danger by gathering the states within the region and its neighbors under one roof, in an international organization with economic integration.

Upon the proposal of Turkey, considering this security in close economic cooperation in accordance with the demands of the period, the first meeting was held in Ankara on December 19, 1990, and the Black Sea countries Romania, Bulgaria and the USSR delegation also participated in this meeting. The Black Sea Economic Cooperation Organization, consisting of 13 member states and containing most of the world's oil and natural gas reserves in this geographical area with a population of 350 million, was established on June 25, 1992. The most important feature of the Black Sea Economic Cooperation, which includes the Balkans and the Caucasus region with a surface area of 20 million km<sup>2</sup>, is that not only the states bordering the Black Sea but also other states neighboring the region are included in the organization. Among the founding states, we acknowledge the Black Sea states of Turkey, Russia, Georgia, Romania and Bulgaria, as well as Azerbaijan, Armenia, Moldova, which do not have a coast on the Black Sea, and Greece, Serbia and Albania, which were later included in the membership. The Black Sea Economic Cooperation Organization received international regional organization status in 2019. The current activities of this organization, which still exists today, do not reflect the activities expected from it when it was first established. The problem between Armenia and Azerbaijan, members of the organization, and the subsequent transformation of this crisis into a war; the wars between Russia and Georgia in 2008 that started with Russia's attack on Ukraine in 2022, and the ongoing tense situation in foreign policy between Turkey and Greece have weakened the activities of the Black Sea Economic Cooperation Organization. In addition, the Greek Cypriot Administration of Southern Cyprus, which applied for membership in the organization, was vetoed

by Türkiye and the Greek Cypriot Administration of Southern Cyprus remained outside the organization. When North Macedonia, whose membership in the organization was blocked by Greece, after resolving its problems with this state, Greece gave up the veto it used against North Macedonia and approved the admission of this state into the organization. Although the organization has many structures, these structures cannot operate actively due to these tense relations between the states that are members of the organization. Although the problem between Armenia and Azerbaijan was resolved by Azerbaijan expelling Armenian armed forces from the occupied territories in 2020, the BSEC's activity is not expected to reach the desired level in the near future, as the Russia-Ukraine war continues today.

## **Northern Cyprus Gastronomy Tourism Marketing Strategies and its Impact on Sustainability**

**Mete Ünal Girgen, Recep Çağlaş**

One of the alternative tourism types that has come to the fore in the tourism sector in recent years, gastronomy tourism is of great importance not only in terms of providing a taste experience but also in terms of introducing the cultural identity of a destination and supporting its economic development. Gastronomy, which has become one of the important factors determining the destination preferences of tourists worldwide, provides significant contributions to local economies with the appeal of regional tastes and food culture. In this context, Northern Cyprus has a great potential in terms of gastronomy tourism with its rich and unique culinary heritage. Northern Cyprus cuisine has been influenced by many different civilizations throughout history and this cultural diversity has deepened its culinary culture. Northern Cyprus cuisine, shaped by the influence of Venetian, Genoese, Arab, Italian, English and Greek cultures; It has a rich range that reflects the traditional structure of Mediterranean cuisine based on fresh, natural and healthy nutrition, while also incorporating modern culinary trends. Local flavors such as hellim cheese, kolokas (golevez), peach kebab, molehiya, pilavuna and nor börek stand out among the gastronomic values of the island. Gastronomy tourism is of strategic importance not only in terms of economic gain but also in terms of preserving cultural heritage and transferring it between generations. Keeping traditional recipes alive, ensuring that local products continue to take part in the agricultural production cycle and gaining gastronomic value from these products form the basis of sustainable tourism. In this process, cooperation between different stakeholders such as local people, academics, tourism professionals and public institutions is very critical. In particular, women's cooperatives, producers in rural areas and local businesses are important actors in terms of spreading gastronomic tourism to the social base. The development of gastronomic tourism in Northern Cyprus will not only diversify the tourism sector, but will also encourage rural development, revitalize the agricultural and food sectors and increase the visibility of local culture. There are various strategies that can be implemented in this direction. It is of great importance to promote local cuisine (by the state and other sector stakeholders) and the tastes specific to Northern Cyprus at national and international levels. The brand value of geographically indicated products such as halloumi should be increased, and the geographical indication processes of other local products should be supported. Encouraging authentic experience venues is also an important strategy in this context. Supporting restaurants and cafes offering authentic food experiences in villages and city centers allows tourists to be offered a more local and real experience. The scope of existing festivals such as the Olive Grove Festival should be expanded, and gastronomy tourism should be diversified with events such as new festivals, tasting days, and cooking workshops. Local producers and women's cooperatives should be actively involved in such

events. Awareness programs on gastronomy and local culinary culture should be organized in schools, and the young generation should be encouraged to embrace local values. At the same time, sector employees should receive training on issues such as sustainability, hygiene, and the use of local products. The stories of local flavors can be announced worldwide through social media campaigns, gastronomy vlogs on YouTube, influencer collaborations, and digital content with chefs. Gastronomy themed branding studies such as “AdaKıbrıs” can be effective in this area. Adopting sustainable tourism standards is very important, difficult to implement and always a trendy topic. Integrating ecological accommodation units with gastronomy will create a tourism model that respects nature and offer tourists a more holistic experience. Organic farming, permaculture, concepts that bring local products from garden to table should be encouraged in this direction. Strengthening local product chains is another strategy. In order for local products to take their rightful place in the economic chain from agricultural production to table, the producer-marketing-business triangle should be supported. The implementation of all these strategies will enable Northern Cyprus to become a center of attraction in gastronomy tourism and will contribute to the region being more visible in the international arena. In addition, this development will support the spread of economic benefits to the base and the spread of tourism to the entire island without being limited to coastal areas. Gastronomy tourism is not just a taste experience; it is a cultural journey, integration with local values and the process of creating economic diversity. By managing this process well, Northern Cyprus can both introduce its culinary culture to the world and become one of the exemplary destinations of sustainable tourism.

# From Growth to Green: The Role of Green Finance, Innovation, and Policy in Shaping OECD Sustainability

Mumtaz Ali, Suhaib Ahmed Soomro

**Introduction:** Environmental degradation is the most urgent global concerns today. Environmental degradation refers to the decline of the environmental quality through exhaustion of natural resources, the destruction of habitat, and contamination of air, water, and soil. The human activities adversely affect natural ecosystem resulting environmental. Additionally, industrialization, urban development, deforestation, and unsustainable forming practices drives this degradation. These activities not only diminish Earth's capacity to sustain biodiversity and furnish vital ecosystem services but also enhances significantly greenhouse gas emissions, principle component of climate change. Climate change, in turn, exacerbates environmental damage by recalibrating weather patterns, intensifying natural catastrophes, and stressing already fragile ecosystem. Moreover, rising global temperatures are expediting glacier melt, resulting in sea level rise and heightened intensity of droughts, floods, and heatwaves. These changes escalate land degradation, reduce agriculture productivity, and jeopardize fresh water resources, endanger human health, economic stability, and global development. Confronting these intertwined issues require immediate and coordinated efforts at local, national, and international levels.

Moreover, in the face of escalating environmental challenges, the transition towards economy has become a global priority (Jahanger et al., 2024). Therefore, OECD nations are string to balance economic growth and environmental sustainability (Ali & Seraj, 2022), to achieve sustainable development goals. To do so, OECD nations are utilizing emerging tool such as green finance, policy stringency, and innovation to deal with intensifying environmental challenges. Therefore, this research aims to assess the effect of green finance, economic growth, policy stringy, innovation, and industrial structure on the environmental quality in case of OECD nations for the time period spanning from 2000 to 2023. Moreover, this study employed load capacity (LCF) factor to assess the environmental quality following Ali et al. (2024) as compared to previous studies which focused on carbon emission (He et al., 2025; Ma & Bu, 2025) and ecological footprint (Nikou, 2025; Sethi et al., 2025; Zhang et al., 2025).

**Methodology:** Methodology of this research is divided into three stages: **Stage 1; Preliminary tests:** First, this research employed Cross Sectional Dependence (CD) and Weak (CD) to assess the cross-sectional dependence in the nations. Second, on the bases of CD test, this research employed second generations unit root tests such as CIPS and CADF to assess the stationarity of variables. Third, Slope Heterogeneity test is employed to investigate the slope of coefficients. Finally, Westerlund cointegration tests is utilized to assess the long run association in the modeled variables. **Stage 2;**

**Model Estimations:** Based on the characteristics of data evidenced in the stages one, this research utilized the Cross Sectional Autoregressive Distributed Lag (CS-ARDL) model to assess the effect of explanatory facets on the explained facet. The advantage of using CS-ARDL model is that it accounts for cross-sectional dependence in panel data, capturing both short-term and long-term relationships. It is robust to heterogeneity and useful for non-stationary time series data.

**Stage 3; Robustness Check:** This study employed DH Granger Causality to assess the robustness of CS-ARDL model outcomes.

**Results:** The outcomes of the CS-ARDL shows that green finance and innovation promotes the environmental quality in studied nations in long run as compared in short run having insignificant effect. Whereas, policy stringency, economic growth, and industrial structure have positive effect on the environment quality. Moreover, outcomes of DH causality show bidirectional effect among green finance, policy stringency, innovation, and environmental quality. However, the economic growth, industrial structure, and environmental quality have the bidirectional effect.

**Conclusion:** Based on the outcomes of this research, we have suggested the valuable policy recommendation to OECD nations. The governments OECD nations must inject more funds in green finance project such as renewable, solar, hydro, and wind energy initiatives. The OECD nations must guide and strict banks to lend industries focusing on industrial shifts to balance environment and economic growth. Finally, the OECD nations must invest in research and development (R&D) to develop environmentally friendly innovative solution.

**Business Crisis Management in Wartime:  
Insights from Palestine Qualitative Thematic Analysis**

**Jehad Omar Abualrob**

**Introduction** This study delves into the critical area of business crisis management among Palestinian Small and Medium-sized Enterprises (SMEs) amidst the severe challenges posed by the war that commenced on October 7, 2023. Palestinian SMEs are currently navigating an environment marked by unprecedented disruptions, including severely impacted supply chains, significant restrictions on mobility, profound economic instability, and pervasive uncertainty stemming from the ongoing conflict. This research is motivated by the urgent need to understand how these vital economic actors can not only survive but also sustain their operations under such dire and rapidly evolving conditions. Furthermore, the study aims to establish the direct relevance of these observed business adaptive strategies to the broader framework of the United Nations Sustainable Development Goals (SDGs), with a particular focus on Goals 8 (Decent Work and Economic Growth), 9 (Industry, Innovation, and Infrastructure), and 16 (Peace, Justice, and Strong Institutions), recognizing the acute crisis context in which these businesses operate.

**Methods** Adopting a qualitative research approach, this study investigates the specific mechanisms and strategies employed by Palestinian SMEs to navigate the multifaceted challenges imposed by the ongoing war. The research design centers around the use of semi-structured interviews conducted with top management representatives from 16 companies. This method allows for in-depth exploration of the experiences, perceptions, and adaptive strategies of entrepreneurs and business leaders within the Palestinian SME sector. The rich qualitative data gathered from these interviews was analyzed using thematic analysis by NVivo 15 software. This rigorous analytical technique enables the identification of recurring patterns, key themes, and underlying dynamics in the crisis management approaches utilized by the interviewed companies, providing a nuanced understanding of their resilience and adaptation processes in a wartime context.

**Results** The findings of this study show that Palestinian SMEs largely rely on crisis management strategies developed from past and ongoing crises, such as resilience, creative improvisation, and strong community support networks. A key factor is the crucial role of effective SME leadership in fostering agility and maintaining hope during extreme adversity. The study illustrates how these SMEs strive to sustain operations and preserve employment despite conflict, contributing to economic stability and supporting SDG 8 (Decent Work and Economic Growth) and some of its targets, the study addresses sustaining per capita economic growth (Target 8.1), enhancing productivity through diversification and innovation (Target 8.2), promoting youth employment and training (Target 8.6),

and protecting labor rights and safe working environments (Target 8.8). Their adaptive strategies, especially amid disrupted supply chains and damaged infrastructure, highlight resilience and innovation aligned with SDG 9 (Industry, Innovation, and Infrastructure) and some of its targets, it emphasizes resilient infrastructure development (Target 9.1), upgrading industries for sustainability (Target 9.4), advancing research and technology (Target 9.5), facilitating sustainable infrastructure (Target 9.A), and supporting domestic technology and diversification. Additionally, the study highlights the vital role of SMEs in promoting stability and peace in conflict-affected regions, directly supporting SDG 16 (Peace, Justice, and Strong Institutions), particularly in promoting the rule of law and equal access to justice (Target 16.3), building effective and transparent institutions (Target 16.6), and ensuring access to information and protection of fundamental freedoms (Target 16.10).

**Conclusions** The results of this study demonstrate that Palestinian SMEs, through their adaptive crisis management strategies and resilient leadership, not only sustain their own operational continuity but also contribute meaningfully to broader development goals. Importantly, the study reveals the persistent interconnections among different SDGs and some targets are supported. Promoting decent work and economic resilience mainly will lead to strengthens innovation capacities and supports the development of resilient infrastructures, which, in turn, creates conditions conducive to peacebuilding and institutional trust.

Moreover, these findings suggest synergies with other SDGs beyond those explicitly analyzed. For instance, maintaining employment and social stability contributes to reducing poverty (SDG 1), advancing gender equality by sustaining inclusive economic participation (SDG 5), and fostering inclusive and sustainable urban environments (SDG 11). The SMEs' role in protecting workers' rights and promoting safe working conditions also aligns with promoting good health and well-being (SDG 3).

Thus, the actions taken by SMEs in conflict-affected settings exemplify how localized economic resilience strategies can generate broader developmental impacts, reinforcing the indivisible and integrated nature of the 2030 Agenda. Strengthening SMEs under crisis not only advances specific targets but also accelerates progress across multiple, interconnected SDGs, underlining the need for holistic and cross-sectoral policy support.



# **Embedding Cultural Transformation Through Transdisciplinary Research and Education for Sustainability in Higher Education**

**Terin Adali, Serdar Yurtsever, Celal Sakka**

Sustainability problems from local to global scales and across geographical and cultural contexts has become an important task for sustainability research and education. Transnational collaborations between universities offer opportunity to connect global and local research and educational formats to study sustainability in different locations, making use of digital technologies for collaboration.

In the face of accelerating ecological, social, and economic challenges, higher education institutions (HEIs) are uniquely positioned to act as leaders in the global sustainability transition. However, achieving meaningful change requires more than technical adjustments or isolated initiative; it demands a profound cultural transformation within the Academy.

This study explores how sustainability in higher education can be effectively advanced through transdisciplinary sustainable research, leading to long-lasting changes in knowledge creation paradigms, educational frameworks, and institutional culture.

Drawing on cross-institutional case studies, policy analysis, and practitioner insights, this presentation examines the role of HEIs as catalysts for sustainable development. The claim that sustainability must be incorporated as a fundamental institutional value-infusing teaching strategy is at the heart of this investigation, research, operations, and community engagement—rather than being treated as an add-on or compliance – driven agenda. This research specifically highlights the transformative potential of transdisciplinary research, which crosses conventional disciplinary lines and involves a variety of stakeholders from industry, government, and civil society in the co-creation of knowledge that can be put to use.

Transdisciplinary approaches challenge prevailing academic norms by prioritizing systemic thinking, inclusivity, and real – world relevance. They invite epistemological pluralism, drawing on scientific, local, indigenous, and experimental knowledge to address complex sustainability problems. This research approach fosters international collaboration, reflexivity, and creativity in academic practice, which not only increases the societal effect of HEIs but also acts as a catalyst for internal reform.

Fundamentally, this transformation is the need for a cultural shift that redefines academic success, values cooperation over competition, and promotes sustainability as a guiding institutional ethos. So, through analysis, this research identifies the conditions for such change, and alignment with global UN Sustainable Development Goals (SDGs) frameworks. This calls for the implementation of

curriculum design, governance frameworks, funding strategies, and incentive programs to align with the principles of ecological responsibility and social justice.

Nonetheless, the pathway toward institutional sustainability is fraught with structural and ideological barriers. Significant barriers to reform include academic silos, resistance to transnational and transdisciplinarity, and the exploitation of knowledge under neoliberal constraints. This study critically reflects on these challenges, reimagining the role of HEIs – not merely as active agents and centers of knowledge dissemination in shaping a just and sustainable future.

The presentation provides key recommendations and concludes by offering a strategic framework for embedding sustainability in higher education through cultural and structural transformation, capacity-building initiatives, inclusive policy progress, and the cultivation of long-term affiliations beyond the academy.

By embracing transnational, transdisciplinary sustainable research and fostering cultural transformations, HEIs can fulfil the potential as a driver of global sustainability, contributing to more resilient, equitable, and regenerative societies.

## **Sustainable Transitions:**

### **Evaluating the Role of Renewable Energy in Inclusive Economic Development**

**Abdullah Genco, Sinem Sinangil**

This study aims to examine the relationship between inclusive growth and the use of renewable energy, with a particular focus on evaluating the public policies formulated in this area. Inclusive growth refers to economic development that encompasses all segments of society, while renewable energy refers to energy derived from natural resources that do not harm the environment. This article analyzes the impact of renewable energy on inclusive growth and provides an in-depth review of the relevant literature.

The initial section defines renewable energy sources and explains how they differ from conventional energy sources. Various renewable energy sources—such as solar, wind, hydroelectric, and biomass—are discussed, with particular emphasis on their environmental, economic, and social benefits. The concept of inclusive growth underscores the necessity for economic development to offer equal opportunities to all members of society, rather than benefiting only a select segment. According to findings from the literature, the use of renewable energy emerges as a significant instrument in fostering inclusive growth.

Another major focus of the study is the economic contribution of renewable energy. In this context, the employment generation potential of the renewable energy sector, its positive effects on local economies, and its role in stabilizing energy prices are highlighted. The synergy created by these sources in promoting economic growth and ensuring energy security is supported by various scholarly studies.

The article also explores the social impacts of renewable energy. Access to energy remains a major challenge, particularly for low-income groups in developing countries. Renewable energy projects have the potential to enhance energy access for these groups, thereby playing a critical role in reducing social inequalities and empowering communities.

Environmental sustainability is also one of the key advantages of renewable energy. Its use not only supports economic development but also contributes to the protection of ecosystems and biodiversity, making it a crucial component of sustainable development strategies.

In terms of energy access, renewable energy solutions are particularly significant for populations living in remote and rural areas. The findings obtained from the literature review demonstrate how renewable energy helps to combat energy poverty and contributes to the development of local communities.

The role of policies and investment incentives is also examined in this study. Government policies regarding renewable energy—along with investment incentives and subsidies—play a critical role in accelerating the transition to renewable energy. In this regard, strategies implemented at the global level and successful case studies serve as valuable references for other countries. Through policy transfer, the dissemination of best practices is possible.

The article also addresses the challenges and barriers associated with the transition to renewable energy. Issues such as the lack of technological infrastructure, financial constraints, and difficulties in community integration can hinder the effective implementation of renewable energy projects. Proposed strategies for overcoming these barriers are compiled from various academic sources.

Finally, the article discusses how the relationship between renewable energy and inclusive growth may evolve in the future, particularly in the context of technological innovations and sustainable development goals. It is emphasized that renewable energy holds great potential for supporting economic development in a sustainable and inclusive manner. This study identifies renewable energy sources as a critical tool for inclusive growth and provides valuable insights for policymakers, investors, and researchers involved in the energy transition process.

## **Sustaining Social Services in Türkiye:**

### **A Policy-Making Perspective in the Context of the 12th Development Plan**

**Sinem Sinangil**

Social services constitute a vital pillar of Türkiye's welfare state, aiming to protect vulnerable populations, promote social cohesion, and enhance human well-being. However, ongoing challenges such as rapid urbanization, demographic shifts, economic volatility, technological disruption, and environmental crises pose significant threats to the sustainability of these services. Against this backdrop, the 12th Development Plan of Türkiye (2024–2028) emphasizes the need for more resilient, efficient, and inclusive social service systems. The role of strategic, forward-looking social policy-making has become increasingly critical to ensuring the long-term viability of social services.

This paper explores how sustainable social services in Türkiye can be secured through proactive, adaptive, and rights-based social policy-making, particularly in alignment with the priorities set forth in Türkiye's 12th Development Plan. It analyzes current challenges, assesses policy responses, and proposes directions for embedding sustainability into social service provision.

The study adopts a qualitative approach based on a comprehensive review of academic literature, national policy documents—including the 12th Development Plan, the Social Services Strategy Paper, and various sectoral strategies—and international frameworks such as the United Nations Sustainable Development Goals (SDGs). Comparative insights are drawn from OECD and EU member states to contextualize Türkiye's policy efforts.

The analysis reveals several critical factors influencing the sustainability of social services in Türkiye:

**Policy Integration and Cross-Sectoral Coordination:** Fragmentation among sectors such as health, education, social protection, and employment reduces the effectiveness of social services. The 12th Development Plan emphasizes the need for better inter-institutional coordination, which is crucial for building resilient service ecosystems.

**Participatory Governance:** While Türkiye has expanded service access, mechanisms for user participation and community engagement in policy-making remain limited. Strengthening participatory governance is vital to enhance policy responsiveness and sustainability.

**Investment in Professional Capacity:** Sustainable service delivery requires systematic investments in the training, well-being, and professional development of social service workers, a dimension increasingly recognized in national policy debates.

Digital Transformation: Digitalization initiatives, promoted under the 12th Development Plan, offer opportunities for more efficient service provision. However, without robust strategies for digital inclusion, there is a risk of deepening social inequalities.

Crisis Resilience: The COVID-19 pandemic and major natural disasters, such as earthquakes, have demonstrated the urgency of designing social service systems that can withstand shocks and adapt rapidly to changing needs.

Strengthen inter-agency collaboration through integrated policy frameworks that address social, economic, and environmental dimensions simultaneously.

Institutionalize participatory mechanisms that empower service users, local communities, and civil society organizations in social policy-making processes.

Increase long-term investments in human capital by improving the working conditions, salaries, and continuous education opportunities for social service professionals.

Develop inclusive digital strategies to ensure equitable access to technology-driven social services, particularly for disadvantaged groups.

Achieving the sustainability of social services in Türkiye necessitates a paradigmatic shift in social policy-making: from reactive, short-term measures to strategic, integrated, and participatory frameworks. The 12th Development Plan offers an important roadmap, but its successful implementation requires sustained political commitment, stakeholder engagement, and continuous monitoring. Embedding principles of social justice, digital equity, crisis resilience, and environmental sustainability into all stages of policy design and service delivery will be key to securing the future of social services and upholding the rights and well-being of current and future generations in Türkiye.

Future research could focus on empirical evaluations of local-level sustainability initiatives, especially examining how metropolitan and rural areas in Türkiye adapt to digital transformation and crisis resilience in social service provision. Comparative studies across different regions could provide valuable insights into context-specific challenges and innovative policy solutions.

## **Strengthening Maternal Health in Rural Pakistan via Birth Readiness:**

### **A Health Belief Model Approach for Reaching Sustainable Development Goals**

**Saima Tasneem, Ayesha Wajid, Macide Artac Ozdal**

**Introduction:** The first target of Sustainable Development Goals – 3 (SDG-3) aims to reduce the maternal mortality rate (MMR) to less than 70 per 100,000 births. In 2023, around 87% (225,000) of the estimated global maternal deaths occurred in southern Asia and sub-Saharan Africa. Majority (70% - 182,000) of these deaths occurred in sub-Saharan Africa alone and about 17% (43,000) occurred in southern Asia (43,000).

Pakistan has made a significant improvement in the reduction of cases of MMR from 521 in 1990 to 178 in 2021, which is still highly above the set global target. In addition, these rates are very high in the rural areas of Pakistan, because of inefficient implementation strategies that fail to give tangible results. The lack of monitoring and evaluation methods, furthermore, makes it difficult to track progress and identify areas with significant problems. Since obstetric emergencies account for the majority of maternal mortality in low-income settings, being appropriately prepared for birth and emergency complications can save the lives of mothers and their newborns by reducing the delays associated with seeking care.

**Objectives:** This study aims to evaluate the efficacy of an educational intervention that is based on the Health Belief Model in terms of improving women's knowledge and practices related to Birth Preparedness and Complication Readiness (BPCR) in rural Pakistan. Additionally, the study intends to identify key social determinants that influence the outcomes of BPCR. The study aims to show how strengthening BPCR can help achieve SDG - 3 target 1 in rural areas.

**Methodology:** The study was carried out within the catchment area of a Tehsil Headquarters Hospital (THQ) in Sargodha. This secondary healthcare centre serves 52 villages. The Health Belief Model (HBM) was utilized to plan quantitative research considering the specific goals of the study, and an educational intervention was implemented through community involvement. A quasi-experimental, single-group pretest-post-test design was used.

**Key Findings:** The study included 199 pregnant mothers from District Sargodha's rural areas. 38.7% of women and 37.2% of their husbands had no formal education, 19.6% had monthly family income of less than minimum wage and 78% were living in joint family systems. In the pre-test there was little information regarding birth preparedness and warning signs during pregnancy, labour, the postpartum period, and the neonatal period. After the educational intervention based on the Health Belief Model, all outcomes that were examined showed statistically significant improvements.

Between the pre-test and post-test, the percentage of women who were ready to give birth rose from 39.2% to 93% ( $p < 0.001$ , McNemar test).

Knowledge of danger signs during the pre-test stage and birth preparedness had a positive, moderate-to-strong correlation, according to correlational analysis. At the follow-up in the post-test, these correlations were still statistically significant even though their strength had reduced after the intervention.

Using binary logistic regression analysis several important indicators of improved birth preparedness and awareness of early warning signs were identified. Higher household income, living in a nuclear family, having access to media (such as owning a mobile phone, using the internet, and viewing television), and higher education status of women and their husbands were all positively correlated with more favourable outcomes. A negative correlation with long waiting times, greater distances to healthcare facilities, and readiness for birth and complications was observed.

By enhancing maternal health through improved BPCR and stressing the accessibility and utilization of available services, this study contributes to addressing the targets of SDG 3. The study also emphasizes the significance of empowering women via education and health literacy, both of which are essential for making knowledgeable health decisions, and it, also, supports SDG 5 (Gender Equality). Additionally, by highlighting the need to enhance healthcare infrastructure and transportation networks to improve healthcare access in remote areas, the findings underscore the necessity of SDG 9 (Industry, Innovation, and Infrastructure). The study's primary obstacles, poverty and financial limitations, relate to SDGs 1 (No Poverty) and 10 (Reduced Inequalities), highlighting the necessity of socioeconomic initiatives to promote gains in maternal and new-born health.

Cultural norms, financial difficulties, geographical constraints, and low levels of education and awareness are some of the important variables influencing the use of maternal healthcare services in rural Pakistan, as highlighted by this study. Achieving improved maternal outcomes requires increasing women's education and financial empowerment, providing comprehensive and culturally responsive prenatal services, and improving the perceived quality of care. The study suggests multi-sectoral cooperation to improve midwifery training, promote early and continuous antenatal care, develop infrastructure, and carry out focused educational programs to support Pakistan to fulfil its obligations towards the Sustainable Development Goals.



## **Integration of Local North Cyprus Cuisine into the New Generation Cuisine Concept**

**Filiz Kaniöz**

Nowadays we start to see that culinary cultures are being re-evaluated, reshaped and new forms are being imagined and implemented in order for traditional cuisines to become more modern within the concept of sustainability, we are witnessing that cuisine is not just an identity, but an entity that meets the ecological concerns, consumption ethics and the desire to return to the roots that come with the global gastronomy system. The concept of sustainability in gastronomy has brought us the possibilities to integrate traditional culinary culture into a new generation culinary approach based on innovation, appealing to our senses more and characterized by collaborative design thinking. This new generation culinary approach enables the use of local products, zero waste application, more efficient use of soil and modernization of traditional culinary recipes. This study is carried out to determine how the traditional local cuisine of Northern Cyprus can be re-interpreted within the framework of the concept of sustainability with global gastronomy trends, innovative, creative and modern culinary applications and how it will affect tourism with its new form. In today's world where the transfer of cultural heritage to new generations has become popular, there is a need for re-interpretation of local cuisines with a new generation gastronomy approach. The cuisine of Northern Cyprus, which has a valuable range of food with its culinary culture developed from the civilizations it has influenced, the variety of edible herbs from the Mediterranean vegetation, the variety of local products and traditional cooking methods blended from cultural mixtures and passed down from previous generations, can be defined as a heritage with a strong adaptation potential to be reinterpreted innovatively with contemporary and sustainable techniques. For example, basic foods such as molohiya, hellim, hellim pastry, rose milk, carob molasses, magarina bulli, peach kebab are not only delicious but also valuable for the island cuisine due to their symbolic importance used as a cooking ritual, a social gathering and festivals. Collecting molohiya and drying its leaves by sorting them is a social activity with many participants. While the harvest of carob is also a social activity with many participants, cooking, making must from carob and boiling it into molasses is a process carried out with old traditional methods. This method is passed down from generation to generation during molasses production. It is anticipated that this study, which is conducted by a comprehensive literature review, reviewing gastronomic publications and food-related reports, will determine the first basic elements of modern traditional island cuisine and that the first modern traditional cuisine application steps can be taken. It is thought that it will be concluded that it will increase the attractiveness in destination selection by being more plant-oriented, using fermented products, supported by modern plate presentations, and reinterpreting within the framework of the concept of sustainability. With the use of local ingredients and the reinterpretation of heritage recipes and their integration into modern

gastronomy, both cultural continuity will be ensured and it can be evaluated as an opportunity for tourism and regional branding. As a result, this study will not only protect the local Northern Cyprus cuisine, but will also ensure the continuity of the culture, increase the perceived value of traditional culinary culture both locally and internationally, revitalize gastronomic tourism and ensure that a sustainable Northern Cyprus culinary heritage remains alive by transferring it to new generations in a more contemporary and creative way. It is thought that the study will fill the gap in the literature and shed light on the discussions on this subject.

## **Determinants of Labour Force Participation in North Cyprus:**

### **How Do They Differ by Gender?**

**Feyza A. Bhatti, Fatma Güven Lisaniler**

Attaining gender equality through improving women's economic participation and ensuring women's access to decent work is central to United Nations Sustainable Development Goals (SDGs), particularly Goal 5: Gender Equality and Goal 8: Decent Work and Economic Growth. Achieving gender equality in the labour market is not only a fundamental human right, but also a crucial factor for sustainable economic growth and social wellbeing of countries. When women participate equally, economies can benefit from an increased labour supply and a larger talent pool, leading to increased productivity, innovation and substantial improvements in economic growth. Beyond economic implications, gender equality in the labour market promotes social equity and cultural transformation by confronting traditional gender roles and stereotypes and promoting an environment where individuals are valued for their skills and contributions rather than their gender. This cultural shift not only empowers women but also benefits society as a whole by promoting inclusivity, improved family dynamics and community well-being, as women's economic empowerment often translates into better health and education outcomes for future generations, aligning with the broader objectives of SDGs.

North Cypriot labour market is characterised by persistent gender inequalities and chronic unequal opportunities for women. Women's labour force participation in North Cyprus is low when compared with EU and world averages: in 2023 it was 38.3% as compared to 58% in EU and 49% in the world. Despite closing gender gaps resulting rather from declining men's labour force participation rates, in 2023 there were only 54 women in the labour market for every 100 men, also reflecting systematic differences in the outcomes that men and women achieve in the labour market and persistent barriers to women's labour force participation. More startlingly, macro-level changes happening in the country such as increasing educational attainment levels for women, late marriages, or low fertility rates have not been translated into gains in labour market for women. Labour force participation rates of women have been sluggish between 30-40% since mid-1990s, showing almost no progress over the last 30 years. This stagnation reflects deep-rooted socio-economic and cultural barriers that prevent women from fully engaging in the work force.

The factors that influence the labour force participation of women in a country have historically reflected the influence of several factors including individual, regional, demographic, cultural and institutional factors, as well as wider economic developments such as the transformations in country's employment structures and the impact of economic crises and the neo-liberal adjustment programmes. The limited studies using microlevel data from North Cyprus have also shown demographic and

household conditions including age, educational attainment, marital status, residential area, number and age of the children and spouse income as predictors of women's labour supply. These studies, however, are rather scarce and outdated. In addition, none of these studies have compared the differences in the determinants of labour force participation by gender focusing only on women. These make investigating the factors that determine the participation in labour force in North Cyprus, and how it differ by gender particularly important in order to understand the barriers and enablers of labour supply decisions for both genders. What are the factors determining the labour force participation? Are there differences in these factors by gender? Do both women and men have similar barriers and enablers? are the main questions that are aimed to be answered by this study.

Utilising secondary data from Household Labor Force Survey 2023 conducted by the Statistical Institute of North Cyprus, this paper aims at investigating the supply side factors that determine labour force participation, with a focus on the differences between women and men. The empirical analysis is conducted by a logit model in which being in the labour force is used as the binary dependent variable. The independent variables capture three groups of supply-side factors: own characteristics including educational attainment level, age, marital status, nationality; residential factors including district and urban/rural areas; and family circumstances – household income, spouse's income, number of children in the household and whether there is a young child (ages 0-4). Initial findings highlight a positive role of education and the negative impact of traditional gender roles that hinder women's ability to enter or remain in the workforce. While this paper mainly focuses on supply side factors, it also touches upon the possible factors that severely creates a demand constraint including wage gaps and employment sectors and occupations that are highly segregated by gender in North Cyprus. Breaking the existing traditional gender roles and removing the institutional barriers such as inadequate childcare facilities and inflexible work arrangements are suggested as main policy implications.

# **The Role of Green Finance in Reducing Greenhouse Gas Emissions: Insights from the Most Climate-Affected Nations**

**Peter Oluwasegun Igunnu, Mumtaz Ali**

**Introduction:** Greenhouse gas emissions and climate change represent one of the most urgent global challenge today, resulting in extreme weather phenomena and ecological degradation (Filonchyk et al., 2024). Nations identified in the Germanwatch Climate Risk Index (CRI) confront significant economic, social, and climate-related vulnerabilities due to climate-induced disasters. These nations experience a constrained financial system, complicating the integration of economic growth with environmental remediation (Germanwatch, 2025). For these nations, balancing economic growth with environmental sustainability is crucial, necessitating policies that promote low-carbon development.

Green finance, through support for renewable energy initiatives and enhancements in energy efficiency, has emerged as a crucial movement in mitigating climate change (Ali et al., 2024). It finances the transition to low-emission economies via green bonds, sustainability-linked loans, and other climate-centric investments (Chen et al., 2024). The efficacy of green finance varies by region, influenced by divergent regulations, market development, available support, and existing structures. Similarly, technological innovation is crucial in combating climate change, as developments in clean energy, carbon capture, and intelligent infrastructure can mitigate environmental degradation (Wenlong et al., 2023). Economic growth is a double-edged sword essential for development yet frequently associated with increased emissions, particularly in developing economies that heavily depend on fossil fuels (Cai et al., 2024; de Oliveira & Lima, 2022).

This research aims to examine the impact of green finance and technological innovation, in conjunction with economic growth, on the greenhouse gas emissions of the seven most climate-vulnerable countries (Germanwatch, 2025) from 2000 to 2023. This study empirically investigates the interaction among the specified variables using advanced econometric techniques, including the CS-ARDL model with cross-sectional autoregressive distributed lags, Feasible Generalised Least Squares (FGLS), and several robustness checks. This research seeks to furnish policymakers with information on techniques that promote economic growth while concurrently reducing carbon dioxide emissions through proactive balancing measures.

**Methodology:** The data from 2000 to 2023 is analysed employing rigorous econometric techniques, commencing with Cross-Sectional Dependence (CSD) tests to assess dependency relationships among all countries. The CADF and CIPS unit root tests assess stationarity, whereas the Slope Heterogeneity test evaluates the extent of coefficient homogeneity among countries. The Variance

Inflation Factor (VIF) indicates the absence of multicollinearity. Westerlund cointegration tests are applied to confirm long-run relationships. The Cross-Sectional Autoregressive Distributed Lag (CS-ARDL) model estimates both short-run and long-run effects, and Feasible Generalized Least Squares (FGLS) is used for robustness checks.

Results: Prior to picking the model, we conducted preliminary tests. Commencing with a cross-sectional dependency test, which indicates that the nations chosen for the study are interdependent. Following the results of the CSD test, we employed the second-generation unit root test to evaluate the stationarity of the variables. The results indicate a mixed outcome; some variables are stationed at level while others are at the first difference. Furthermore, the VIF results indicate that there is no multicollinearity issue among the explanatory variables, as the VIF values are below 10. The cointegration of the examined variables across all models is evaluated using the Westerlund (2007) cointegration test. The results indicate the existence of a long-term relationship among the factors.

The CS-ARDL results indicate that green finance substantially decreases GHG emissions in both the long and short term, hence supporting its contribution to environmental sustainability. Technological progress demonstrates a notable negative correlation with emissions throughout time, indicating that advancements in these nations alleviate the detrimental impact of greenhouse gas emissions. Economic growth demonstrates no substantial impact in either the short term or the long term. The adjustment term is negative and statistically significant, proving the existence of a long-term equilibrium relationship. Robustness assessments with FGLS corroborate these findings, demonstrating the stability of the model estimates.

Conclusion: Based on these findings, this study recommends that climate-vulnerable nations increase green finance investments in renewable energy projects such as solar, wind, and hydro power. Additionally, financial institutions should prioritize lending to environmentally sustainable industries. Governments must also invest in research and development to foster innovative, eco-friendly technologies. These measures will help strike a balance between economic growth and environmental preservation in nations most affected by climate change.

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