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11th GLOBAL BUSINESS RESEARCH CONGRESS (GBRC-2025)

GBRC-2025 is an international congress jointly hosted by Işık University, Istanbul, and Istanbul Technical University. GBRC-2025 had participants from 18 different countries, namely; United States of America, Jordan, Philippines, Northern Cryprus, Morocco, China, Uganda, India, Tunisia, Mexico, Italy, France, Vietnam, Iran, Saudi Arabia, Kuwait, Bangladesh and Turkiye. Hence, GBRC-2025 is defined an "International Congress" qualified by the Higher Education Council of Turkiye.

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11th GLOBAL BUSINESS RESEARCH CONGRESS | July 3, 2025 | ISTANBUL

CONGRESS PROGRAM

11th Global Business Research Congress (GBRC.2025) jointly hosted by Işık University and Istanbul Technical University has participants from 18 different countries, namely; China, Uganda, United States of America, Jordan, Kuwait, India, Tunisia, Bangladesh, Mexico, Italy, Vietnam, France, Iran, Saudi Arabia, Northern Cryprus, Morocco, Philippines and Turkiye. Hence, GBRC.2025 is defined an "International Congress" qualified by the Higher Education Council of Turkiye.

https://zoom.us/j/95703914031

OPENING SPEECHES	SESSION 1	July 3, 2025, Thursday	
10.00-10.10	Prof. Oktay Tas, Congress Co-President, Welcoming Speech
10.10-10.20	Prof. Suat Teker, Congress Co-President, Welcoming Speech
10.20-10.40	**Keynote Speaker I:** Dr. Zeki Pagda | Rutgers University, USA *Reimagining business education: Why AI is the wake-up call we can not ignore*
10.40-11.00	**Keynote Speaker - II:** Prof. Tom Gillpatrick | Portland State University, USA *Strategic resilience in a chaotic world*

PRESENTATION SESSIONS	
11.00 - 14.00	**SESSION 2 | July 3, 2025, Thursday** **https://zoom.us/j/95703914031** **Chair: Prof. Oktay Tas, Istanbul Technical University**
11.00 - 11.15	The mediating role of intellectual capital in the ESG–performance relationship: evidence from the US IT industry Enida Demiraj, American College of the Middle East, Kuwait
11.15 - 11.30	Unlocking capital for women social entrepreneurs: gender dynamics in accessing external financing Eser Guven Ozbay, Isik University Dilek Teker, Isik University
11.30 - 11.45	The impact of household consumption and investment on economic growth in Jordan (1980 - 2023) Ghassan Omet, University of Jordan
11.45 - 12.00	Stock repurchase announcements and stock prices: evidence from Romania Rana Torun, Abdullah Gul University

Time	
12.00 - 12.15	**The role of U.S. long-term government bond yields, Bitcoin and gold prices in explaining changes in Turkey's CPI**
	Huseyin Cetin, Bursa Technical Univerity
12.15 - 12.30	**Advanced analysis of risks and threats in inventory and sales cycle and control strategies**
	Reza Mirzaei, Iran
12.30 - 12.45	**Trend in sustainable finance metrics: a bibliometric literature review**
	Sinem Keser, Istanbul Technical University
	Oktay Tas, Istanbul Technical University
12.45 - 13.00	**A comparative analysis of machine learning algorithms on network traffic forecasting**
	Buse Dilan Uslan, Istanbul Technical University
	Ferhan Cebi, Istanbul Technical University
13.00 - 13.15	**Agritourism as a tool to promote rural development**
	Anda Elvan Ak, Isik University
	Dilek Teker, Isik University
13.15 - 13.30	**Leveraging AI for startup success prediction: a data-driven approach**
	Morteza Rokhash Mah, Istanbul Technical University
	Cumhur Ekinci, Istanbul Technical University
13.30 - 13.45	**Crypto integration in portfolios: risk and diversification effects**
	Mustafa Ozyesil
	Dilek Teker, Isik University
	Suat Teker, Isik University
	Ayten Nahide Korkmaz, Istanbul Aydin University
13.45 - 14.00	**Effect of EPUTURKEY and GEPU on stock returns of metal products industry**
	Ozge Bolaman Avci, Aydin Adnan Menderes University

14.00 - 19.30	**SESSION 3| July 3, 2025, Thursday**
	https://zoom.us/j/95703914031
	Chair: Assoc. Prof. Mustafa Ozyesil
14.00 - 14.15	**Tracing digital transformation in creative industries through crisis: a bibliometric analysis on the impact of Covid-19**
	Dilsad Avci, Istanbul Technical University
	Ferhan Cebi, Istanbul Technical University
14.15 - 14.30	**A study on exchange rate and stock market volatility and short-term regulations**
	Yunus Hamza Turk, Galatasaray University
	Destan Halit Akbulut, Galatasary University
14.30 - 14.45	**Women's career barriers in organizations (1929–2025): a social role theory perspective**
	Humeyra Nur Hatipoglu, Istanbul Technical University
	Fatma Kusku, Istanbul Technical University
14.45 - 15.00	**Unveiling gender inequities in retirement savings: a simulation-based analysis for Mexico**
	Maria de Lourdes Trevino Villarreal, Autonomous University of Nuevo Leon, Mexico
15.00 - 15.15	**Real-time sentiment-based risk protection: a behavioral insurance perspective**
	Mustafa Ozyesil
	Suat Teker, Isik University
	Dilek Teker, Isik University
15.15 - 15.30	**Prioritizing the internal audit universe in a pharmaceutical company: an integrated AHP–TOPSIS approach**
	Yusuf Cakiroglu, Marmara University
	Huseyin Selcuk Kilic, Marmara University
	Tugce Kalender, Marmara University
	Nur Beser, Marmara University
15.30 - 15.45	**Understanding AI adoption at organizations: literature review of TOE framework**
	Sena Donmez, Isik University
	Asli Tuncay Celikel, Isik University
	Pinar Soykut Sarica, Isik University
	Evrim Ildem Develi, Istinye University
15.45 - 16.00	**Digital leadership in the post-covid era: examining its relation to job performance through remote work attitude and innovative work behavior**
	Burak Nedim Aktas, Istanbul Beykoz University
16.00 - 16.15	**Seller's Inflation in Turkey**
	Gokberk Inan, Commerce University of Luigi Bocconi, Italy
	Yucel Goksenin Inan, HEC Paris Business School, France
16.15 - 16.30	**Advanced classification of credit risk through hybridized ai techniques: application to the German loan dataseta**
	Susheel Kumar, MVN University, India
16.30 - 16.45	**Industry 5.0, society 5.0, university 5.0: emerging trends and practices**
	Ali Eskinat, Netkent University, Northern Cyprus
	Suat Teker, Isik University
16.45 - 17.00	**The impact of social media and digital marketing on brand awareness and purchasing behavior of millennials in Istanbul**
	Nour Obeido, Isik University
	Suat Teker, Isik University

Time	Session
17.00 - 17.15	**Moderating roles of relational learning and competition intensity on the effect of relationship management capability on the service innovation performance of calabarzon travel agencies**
	Teodorica G. Ani, Batangas State University, Philippines
	Corina F. Patal, San Celestino Integrated National High School, Philippines
17.15 - 17.30	**Consumer perspectives on electric vehicles: barriers, motivations, and future trends**
	Kothamasu Kanaka Sai Charan Kumar, Global Institute of Business Studies, India
17.30 - 17.45	**Evaluating the effect of market noise in the shaping of the performance of the Nairobi Securities Exchange: 20 share indices in Kenya**
	Anouar Bakkali, Autonomous University of Madrid, Morocco
	Juan Ignacio Martin-Castilla, Autonomous University of Madrid, Morocco
17.45 - 18.00	**The determinants of capital structure: evidence from Tunisian banks**
	Mohamed Aymen Ben Moussa, Shaqra University, Saudi Arabia
	Sihem Yahiyaoui, University of Manar, Tunisia
18.00 - 18.15	**The impact of Sino-US tariff war on dollar hegemony and the rise of multilateral currency settlement systems**
	P.Shen, Zhejiang University, China
18.15 - 18.30	**Cultural diplomacy and soft power of China: theory, strategy and application in South East Asia**
	Nguyen Minh Trang, Diplomatic Academy of Vietnam
	Wu Tuan Dat, The Dewey Schools Hai Phong, Vietnam
18.30 - 18.45	**Evaluating the performance of green logistics vs. traditional logistics in efficiency and sustainability across African countries: an SEM analysis**
	Habineza Joseph, Chang'an University, China
18.45 - 19.00	**Insights into how to write a scientific paper**
	Medehi Hasan, University of Asia Pacific, Bengladesh
19.00 - 19.15	**Effect of innovative integrated financial management information systems on financial accountability in Bushenyi district local government, Uganda**
	Matovu Juma, Kampala International University, Uganda
19.15 - 19.30	**Does corporate governance influence auditor choice in an emerging economy? An empirical evidence**
	Sadia Afrose, University of Asia Pacific, Bengladesh
	Medehi Hasan, University of Asia Pacific, Bengladesh

14.00 - 16.00	SESSION 4| July 3, 2025, Thursday
	https://zoom.us/j/91580449784
	Chair: Prof. Elcin Alp, Istanbul Commerce University
14.00 - 14.15	**The impact of inflation announcements on stock returns: The case of Finland -** *Enflasyon duyurularinin hisse senedi getirileri üzerindeki etkisi: Finlandiya örneği*
	Rana Torun, Abdullah Gul University
14.15 - 14.30	**An application for digital transformation analysis in businesses -** *İşletmelerde dijital dönüşüm analizine yönelik bir uygulama*
	Elif Esin Ozpek, Bursa Technical University
	Hasan Sahin, Bursa, Technical University
14.30 - 14.45	**The role of financial development on green logistics in developing OECD countries: a panel ARDL approach -** *Gelişmekte olan OECD ülkelerinde finansal gelişmişliğin yeşil lojistik üzerindeki rolü: panel ARDL yaklaşımı*
	Meltem Yangin, Istanbul University
	Ebru Demirci, Istanbul University
14.45 - 15.00	**The effect of perceived gender discrimination on career expectation and career satisfaction: a study on female employees -** *Algılanan cinsiyet ayrımcılığının kariyer beklentisi ve kariyer memnuniyetine etkisi: kadın çalışanlar üzerine bir araştırma*
	Cansu Naz Oral, Istanbul Beykent University
	Ebru Yildiz, Istanbul Beykent University
15.00 - 15.15	**Determination of human resource identity in finance enterprises through mental metaphors -** *Finans işletmelerinde insan kaynaği kimliğinin zihin metaforlari yoluyla belirlenmesi*
	Hande Gulnihal Gumus, Istanbul Esenyurt University
15.15 - 15.30	**The impact of risk management practices on financial performance: a sectoral study -** *Risk yönetimi uygulamalarinin finansal performansa etkisi: sektörel bir araştırma*
	Sunay Eser, Istanbul Aydin University
	Murat Adil Salepcioglu, Istanbul Aydin University
15.30 - 15.45	**Psychological violence (mobbing) in work life: perceptions and behaviors of different generations towards psychological violence -** *İş yaşamında psikolojik şiddet (mobbing): farklı kuşakların algıları ve psikolojik şiddete dönük davranışları*
	Yasemin Ozcelik Bayraktar, Istanbul Technical University
	Mehmet Ercek, Istanbul Technical University

ABSTRACTS OF THE CONGRESS

THE MEDIATING ROLE OF INTELLECTUAL CAPITAL IN THE ESG–PERFORMANCE RELATIONSHIP: EVIDENCE FROM THE US IT INDUSTRY

Enida Demiraj, American College of the Middle East, Kuwait and American University of the Middle East, Kuwait.

This study aims to empirically investigate the relationship between Environmental, Social, and Governance (ESG) performance and financial performance, with a particular focus on the mediating role of intellectual capital (IC) in publicly traded IT firms in the United States. The research uses a sample of 204 U.S.-based publicly listed IT firms, covering 917 firm-year observations from 2011 to 2022. Descriptive statistics, correlation analysis, and multiple regression models were employed to test the proposed hypotheses and assess the impact of ESG and IC components on Return on Assets (ROA). The results indicate that intellectual capital partially mediates the relationship between ESG performance and financial performance. While IC contributes significantly to explaining the effect of ESG on ROA, it does not fully account for the relationship. This study highlights the importance of considering intellectual capital as a strategic asset in enhancing the financial returns of sustainability-oriented initiatives. The findings provide actionable insights for corporate leaders and policymakers seeking to align ESG practices with long-term financial goals. - based upon the analyisis7Findings it may be concluded that…

Keywords: ESG, intellectual capital, financial performance, IT sector, United States.
JEL Codes: G30, M14, O34

UNLOCKING CAPITAL FOR WOMEN SOCIAL ENTREPRENEURS: GENDER DYNAMICS IN ACCESSING EXTERNAL FINANCING

Eser Guven Ozbay, Isik University
Dilek Teker, Isik University

This study empirically investigates how gender perceptions, institutional norms, and investor biases influence access to external capital for women social entrepreneurs (WSEs) in Türkiye. Grounded on a "Five-Factor Theoretical Model" developed for this research comprising Gender Role Theory, Institutional Theory, Feminist Economics, Human Capital Theory, and Social Capital Theory, the study employs a quantitative research design. The analysis is based on data obtained from an online survey of 101 investors, predominantly male, using 5-point Likert-scale items addressing gender perceptions, decision-making, and investment criteria. Data analysis techniques include reliability and normality tests, descriptive statistics, Spearman correlation, factor analysis, and linear regression. The findings reveal that investors' perceptions of women's difficulty in adapting to male-dominated sectors increase financial bias against WSEs. Additionally, women are expected to provide more evidence of leadership, risk-taking, financial competence, and networking capabilities compared to their male counterparts, reflecting a double standard. While many investors acknowledge the existence of gender bias, this awareness alone does not prevent biased funding decisions. Furthermore, investors who recognize their own biases tend to perceive bias reduction strategies as more effective. In particular, standardized evaluation criteria appear to be more successful in reducing perceived gender bias than institutional policies or diversity efforts alone, whereas transparency and data-driven tools show modest but significant effects. These results highlight the need for both mindset changes and structural reforms to advance gender-equitable investment practices. The study provides actionable recommendations for policymakers, ecosystem builders, and funding institutions aiming to reduce biases and foster inclusive financing for women-led social ventures in Türkiye. Limitations include sample representativeness and reliance on self-reported data, suggesting avenues for future research such as comparative investor analyses, cross-national studies, and the use of neuroscience tools to uncover unconscious biases.

Keywords: Women social entrepreneurs, access to finance, gender bias, investor perceptions, social entrepreneurship.
JEL Codes: G23, L26, J16

THE IMPACT OF HOUSEHOLD CONSUMPTION AND INVESTMENT ON ECONOMIC GROWTH IN JORDAN (1980-2023)

Ghassan Omet, University of Jordan

Household consumption and investment are key drivers of Gross Domestic Product (GDP). Consumption boosts demand for goods and services and encourages production and job creation. Investment increases future productive capacity through spending on assets like equipment and infrastructure. Together, they support both immediate economic growth and long-term development. Within this context, the aim of this paper is to examine the impact of household consumption, domestic investment (and exports and imports) on economic growth in Jordan. To examine the impact of consumption, domestic investment, exports and imports on Jordan's economic growth, this paper uses annual data which covers the period 1980 – 2023. The techniques used include stationarity test, optimal lag structure, co-integration analysis, and vector error-correction (VECM) modelling. In addition, the estimated results are tested for serial correlation in the residuals and structural stability of the estimated models. Based on the estimated one-lag Vector Error Correction Models, the negative and

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significant coefficients of the error correction term confirm the long-run equilibrium relationship between the three variables. These findings indicate consumption, investment, and exports (and / or imports) jointly promote real GDP. Finally, the estimated models do not suffer from serial correlation and dynamically stable Based on the estimated results, we can argue that the Jordanian economy may be resilient in the short term due to steady domestic demand. However, the economy may also be vulnerable to demand shocks, underinvestment, and trade imbalances in the long run. Balancing consumption with robust investment and trade policies becomes crucial for sustainable growth.

Keywords: Jordan, GDP, household consumption, investment, cointegration.

JEL Codes: E21, E22, F11

STOCK REPURCHASE ANNOUNCEMENTS AND STOCK PRICES: EVIDENCE FROM ROMANIA

Rana Torun, Abdullah Gul University

Share repurchases are becoming increasingly common in financial markets across both developed and developing nations. Therefore, the speed at which information is disseminated among investors is crucial, as it directly impacts market efficiency. This study aims to assess the efficiency of the Romanian stock market within the framework of the widely recognized Efficient Market Hypothesis (EMH). This research is grounded in the Efficient Market Hypothesis and employs the event study methodology. The analysis covers a four-year period from 2020 to 2023, with the announcement date of each company's share repurchase program (t0) designated as the event day. The findings indicate that announcements of share repurchase programs have no significant impact on stock prices in the Romanian market, suggesting that the market exhibits semi-strong form efficiency during the analyzed period. The empirical evidence supports the Efficient Market Hypothesis (EMH), indicating that the Romanian stock market operates efficiently. These findings carry important implications for investors

Keywords: Buyback, event study, market efficiency, Romania

JEL Codes: G14, G10

THE ROLE OF U.S. LONG-TERM GOVERNMENT BOND YIELDS, BITCOIN AND GOLD PRICES IN EXPLAINING CHANGES IN TURKEY'S CPI

Huseyin Cetin, Bursa Technical University

The main objective of this study is to investigate comparative short- and long-term impacts of U.S. long-term government bond yields, gold, and Bitcoin prices on the shift in Turkey's Consumer Price Index (CPI) between January 2021 and March 2025. No prior studies were found for the comparative impact of the given variables. Digital assets such as Bitcoin became increasingly important for the global economy after the 2020 pandemic period. Many people bought digital assets to protect themselves from rising inflation. The inclusion of the Bitcoin variable and its effect on inflation in Turkey is another important objective of this research. A two-regime Markov regime-switching model and cointegration analysis using FMOLS and DOLS techniques were employed to examine these relationships. The results indicate that U.S. long-term government bond yields significantly and positively influence Turkey's CPI under both regimes. Gold prices have a significant positive influence on changes in the CPI during regime 2 periods, but Bitcoin prices exhibit a significant negative relationship with Turkey's CPI for the same regime. The FMOLS and DOLS analyses reveal that only U.S. long-term government bond yields have a significant, long-term positive influence on Turkey's CPI. According to this study, both in the short and long term, U.S. long-term government bond yields have a significant and steady positive influence on Turkey's CPI. During regime 2 periods, gold prices have a major impact on Turkey's CPI, whereas Bitcoin has a major negative influence on shifts in Turkey's CPI. Gold exerted a stronger influence on Turkey's inflation than Bitcoin. Overall, the results show that U.S. long-term government bond yields had the most significant influence on Turkey's inflation dynamics over the analysis period. The findings highlight that Turkey's inflation rate is highly sensitive to major international interest rate movements.

Keywords: Bitcoin, gold prices, U.S. long-term government bond yields, Turkey's CPI, Markov Regime Switching Model.

JEL Codes: C22, E31, E44

ADVANCE ANALYSIS OF RISKS AND THREATS IN INVENTORY AND SALES CYCLE AND CONTROL STRATEGIES

Reza Mirzaei, Independent Researcher, Iran

In today's dynamic and complex business environment, effective management of the inventory and sales cycle is vital for maintaining profitability and organizational sustainability. This cycle encompasses processes such as procurement, storage, sales, and receivables collection, each of which can be a source of financial, operational, or even legal risks. Identifying, analyzing, and controlling these risks not only prevent extensive losses but also enhance efficiency, transparency, and customer satisfaction. Inventory accounting methods directly impact the cost of goods sold and gross profit. During price fluctuations, abusing the timing of inventory release to show artificial profits or reduce sales cost can occur. For example, selling items at an old price while the inventory has been charged at a new higher price distorts profit and may lead to tax evasion. The inventory and sales cycle is vulnerable to various operational, financial, and human risks. Accurate risk identification and deploying intelligent controls are managerial imperatives. A transparent, structured, and well-monitored system reduces hidden costs, enhances profitability, and ensures long-term sustainability. Preventing small frauds today protects the organization from large-scale failures tomorrow.

Keywords: Inventory methods, sales cycle, control strategies, organizational profitability

JEL Codes: G30, G39

TREND IN SUSTAINABLE FINANCE METRICS: A BIBLIOMETRIC LITERATURE REVIEW

Nurten Sinem Keser, Istanbul Technical University
Oktay Tas, Istanbul Technical University

This study aims to map the literature on sustainable finance and firm performance by conducting a bibliometric analysis of scholarly publications from 2000 to early 2025. It seeks to identify research trends, key contributors, and major thematic clusters in this rapidly growing field. We retrieved publications from the Scopus database using a comprehensive search query combining terms related to sustainable finance (e.g., "sustainable finance", "ESG", "green finance") and firm performance (e.g., "financial performance", "firm performance"). The final dataset comprised 1,751 documents after data cleaning. We performed descriptive analyses of publication counts by year, country, and journal, and identified the most highly cited works. For content analysis, we processed article titles using text-mining techniques (term frequency–inverse document frequency and Latent Dirichlet Allocation) to uncover key terms and thematic topics. Research output in sustainable finance and firm performance has increased exponentially since the mid-2010s, reflecting major sustainability initiatives and broader ESG adoption in business. Leading contributors include China, India, and other emerging economies, alongside traditional research centers in Europe and North America. Key journals are Sustainability, Corporate Social Responsibility and Environmental Management, and Business Strategy and the Environment. Topic modelling revealed five major thematic clusters in the literature: (1) the effect of ESG performance on financial outcomes, (2) ESG investing and green finance and their impact on firm value, (3) bibliometric and review studies of sustainable finance trends, (4) corporate sustainability strategies and broad financial outcomes, and (5) analyses of individual ESG components and CSR dimensions. Topic prevalence analysis shows that themes focused on ESG impact and green finance have grown strongly in recent years, while review-oriented studies have expanded steadily. The field has matured into a robust, data-driven discipline, and the collective evidence generally supports the view that sustainable practices align with better firm performance – firms often "do well by doing good." However, these benefits are not automatic; they depend on factors such as implementation quality, strategic alignment, transparency, and context. This analysis provides an overview of dominant trends and gaps, guiding future research and informing stakeholders about the evolving relationship between sustainability and corporate success.
Keywords: Sustainable finance, ESG, corporate performance, bibliometric analysis, green finance.
JEL Codes: M14, Q56, G30

A COMPARATIVE ANALYSIS OF MACHINE LEARNING ALGORITHMS ON NETWORK TRAFFIC FORECASTING

Buse Dilan Uslan, Istanbul Technical University
Ferhan Cebi, Istanbul Technical University

Nowadays, the acceleration of digitalization and the widespread use of technology has led to a significant increase in data traffic. Therefore, efficient network management and accurate capacity planning are vital to cope with increasing data traffic. Telecommunication companies use advanced forecasting methods to optimize capacity investments and gain competitive advantage by predicting future network needs. Forecasting errors can lead to overinvestment costs and unmet demand, resulting in lower customer satisfaction. Accurate forecasting of mobile capacity needs in the telecommunications sector is of great importance for providing uninterrupted and high-quality service. Since each network is unique, it is necessary to build a model that best predicts the seasonal traffic changes of the network. In this context, the aim of this study is to identify the most suitable approaches for network traffic forecasting by comparatively evaluating different machine learning algorithms. SARIMA, Prophet, LSTM and a hybrid model (Prophet+LSTM) are analyzed in detail and compared according to the performance metrics.
Keywords: Machine learning, network traffic, SARIMA, Prophet, LSTM, hybrid model
JEL Codes: C32, C53, L96

AGRITOURISM AS A TOOL TO PROMOTE RURAL DEVELOPMENT

Anda Elvan Ak, Isik University
Dilek Teker, Isik University

This research argues that agritourism can be a tool to promote rural development, defeating impoverishment. It explores the perceptions and behaviors of both potential agritourism clients and farmers in Türkiye. Two separate surveys were conducted for this purpose. The first involved a survey replied online by 592 prospective agritourism clients in October 2024, where non-parametric analysis (Mann-Whitney U, One-Sample Wilcoxon Signed-Rank Test, Paired-Sample Wilcoxon Signed-Rank tests) were performed due to non-normal distribution. Results revealed strong consumer interest in agritourism activities in authentic settings, purchasing farm products and handicrafts, heightened environmental awareness, and recognition of agritourism's role in rural development. The second dataset was collected through face-to-face interviews with 56 farmers across various provinces between April-May 2025. Responses were qualitatively coded and analyzed using Chi-Square Goodness-of-Fit Tests. Key findings from the farmer data indicate that farmers prefer daily visitors over overnight stays, favor having household members or third parties serving tourists, and are open to client participation in farm work. However, they also express a strong need for guidance in agritourism practices and training in online marketing and product sales. These findings suggest practical implications: promoting short-distance daily farm visits, supporting farmers through education and digital empowerment, and building trust by demonstrating academic engagement in their well-being.
Keywords: Agritourism, rural development, sustainable tourism, non-parametric analysis
JEL Codes: N50, N80, O13

LEVERAGING AI FOR STARTUP SUCCESS PREDICTION: A DATA-DRIVEN APPROACH

Morteza Rokhash Mah, Istanbul Technical University
Cumhur Ekinci, Istanbul Technical University

The failure rate of FinTech startups remains alarmingly high, with over 70% closing within the first ten years and nearly 75% failing after initial funding stages (Collective, n.d.). Despite their role in shaping financial innovation, only a small fraction achieve high-value exits such as IPOs or Unicorn status—less than 1% according to Dealroom (2025). This study addresses the critical need for predictive tools to assess FinTech startup viability early in their lifecycle. Unlike prior research that reduces outcome prediction to binary classifications (e.g., success vs. failure), this study introduces a multiclass approach, classifying outcomes as IPO, M&A, Closure, or Unicorn. Inspired by the emerging use of Machine learning in business contexts (Kim et al., Te et al., 2023), this research aims at answering three core questions: Can machine learning methods (e.g., XGBoost, Random Forest) achieve high predictive accuracy for multiclass FinTech startup outcomes? How does the use of ADASYN oversampling affect prediction performance for underrepresented classes like IPO and Unicorn? The study uses a labeled dataset of 3,000+ FinTech startups derived from the Crunchbase 2024 snapshot. Scalar features (e.g., team size, funding velocity) are extracted and preprocessed. Two models are trained and evaluated: Random Forest and XGBoost. The ADASYN technique is applied to address class imbalance. Model performance is assessed using macro-averaged F1-score, accuracy, and confusion matrices. Without oversampling, the XGBoost model achieved the highest performance, with a macro F1-score of 0.906 and an overall accuracy of 92.52%. The Random Forest model followed closely, attaining a macro F1-score of 0.89 and 90.67% accuracy. After applying ADASYN, both models showed modest performance gains—XGBoost's macro F1 rose to 0.9186, and Random Forest to 0.9025. Recall improved notably for the IPO and Unicorn classes, enhancing sensitivity to rare outcomes. However, improvements in Acquired and Closed classes were minor, with some misclassifications persisting. These results confirm that ADASYN effectively boosts minority class recognition without compromising overall accuracy. Based on the analysis and results, the study concludes that hybrid deep learning models are effective in predicting startup outcomes and can perform better than traditional machine learning algorithms when temporal sequences are integrated. ADASYN improves minority class predictions without degrading overall performance, and the LSTM-CNN hybrid outperforms CNN in handling combined scalar-sequential patterns. These insights support the use of diverse modeling approaches in startup evaluation and extend the literature beyond binary classifications. Prior research such as Lussier (1995) emphasized qualitative models, while recent work by Gautam & Wattanapongsakorn (2024) showed the efficacy of ensemble methods. This study advances the field by integrating both deep learning and imbalance-aware techniques for multiclass startup prediction

Keywords: Startup, FinTech, survival, machine learning, data analysis
JEL Codes: M13, L25, C53

CRYPTO INTEGRATION IN PORTFOLIOS: RISK AND DIVERSIFICATION EFFECTS

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This study examines the role of cryptocurrencies in portfolio construction by evaluating their performance dynamics, diversification potential, and volatility compared to traditional financial instruments. A comprehensive methodological framework was employed, including classical mean-variance optimization, Monte Carlo simulation, and copula-based dependence modeling. Daily data from 2015 to 2024 for five major cryptocurrencies and various conventional assets were analyzed. The findings indicate that while cryptocurrencies provide higher average returns, their standalone portfolios display suboptimal risk-adjusted performance due to high volatility and low Sharpe ratios. However, when included in mixed portfolios, even with small allocations, cryptocurrencies enhance diversification benefits by reducing overall portfolio risk. Copula modeling revealed symmetric tail dependencies, particularly during market stress. Additionally, GARCH and EGARCH estimations showed significant volatility clustering and asymmetric responses to shocks within the cryptocurrency market. Furthermore, vector autoregression and Granger causality analyses demonstrated that global uncertainty and market fear indices have a significant influence on cryptocurrency volatility.

Keywords: Cryptocurrencies, portfolio optimization, diversification, risk-adjusted performance, copula models, GARCH,
JEL Codes: G11, G15, C58, C63, E44

EFFECT OF EPUTURKEY AND GEPU ON STOCK RETURNS OF METAL PRODUCTS INDUSTRY

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This study examines the effect of both Economic Policy Uncertainty (EPUTurkey) and Global Economic Policy Uncertainty (GEPU) on the returns of nine stocks operating within the metal products industry, which are included in the BIST-100 index. The analysis employs panel quantile regression for the period from August 2007 to December 2024. The findings indicate that EPU has a negative and significant effect on stock returns in the metal products industry across all quantiles, suggesting that stock returns tend to decrease as domestic uncertainty increases. Conversely, GEPU positively affects stock returns only in intermediate and upper quantiles. Given the limited data, general inferences could not be made. However, it can be concluded that investing in Turkey's metal products industry may be profitable if industry stocks are on the rise during periods of increasing global uncertainty.

Keywords: Uncertainty, EPU, BIST, stock markets
JEL Codes: F65, F60

TRACING DIGITAL TRANSFORMATION IN CREATIVE INDUSTRIES THROUGH CRISES: A BIBLIOMETRIC ANALYSIS ON THE IMPCAT OF COVID-10 CRISE

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The purpose of this study is to map and analyze the evolving scholarly discourse on how the COVID-19 pandemic catalyzed digital transformation in the performing arts sector—particularly theatre—by using bibliometric methods to identify key research clusters, trends, and gaps in the literature. The study employs a systematic literature review and bibliometric analysis using the Scopus database to identify and map thematic patterns and research trends on the digital transformation of the performing arts during the COVID-19 pandemic. The analysis reveals that the COVID-19 pandemic accelerated digital transformation in the performing arts, revealing six thematic research clusters focused on education, audience engagement, creative labor, community, digital theatre, and emerging technologies. Based upon the findings, it may be concluded that the COVID-19 pandemic acted as a catalyst for lasting digital transformation in the performing arts, prompting innovation across educational, artistic, technological, and organizational domains.
Keywords: Digital transformation, performing arts, Covid-19, theatre, bibliometric analysis
JEL Codes: Z11, O33, L82

A STUDY ON EXCHANGE RATE AND STOCK MARKET VOLATILITY AND SHORT-TERM REGULATIONS

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In order to maintain economic stability in Türkiye, new economic regulations are often introduced during periods of economic distress. This study aims to determine the impact of such regulations on price fluctuations. The analysis focuses on the volatility in the USD/TRY exchange rate and the BIST100 index in relation to swap limit regulations introduced by the Banking Regulation and Supervision Agency (*BDDK*) in 2018 and 2020. Volatility was examined before and after the implementation of the regulations using ARCH, GARCH, and TGARCH models. Additionally, F-tests were employed to determine whether the variances before and after the implementation of the regulations were statistically different. The ARCH and its extended models indicate that volatility in exchange rates increased following the implementation and subsequent easing of the regulations. The F-tests also confirm that there is a significant difference in variance for both the USD/TRY exchange rate and BIST100 index before and after the relevant regulatory changes. Three main conclusions can be drawn from the results. First, short-term regulatory measures swiftly implemented by the BDDK during times of crisis can provide temporary stability, but do not offer long-term solutions. Second, when the process of removing or relaxing these regulations is not carefully planned, markets may experience renewed volatility. Third, ARCH-based models prove to be highly effective and reliable tools for measuring volatility and analyzing the impact of such regulatory measures during periods of financial instability.
Keywords: ARCH, price volatility, economic stability, BDDK, BIST100
JEL Codes: G28, G21, F31

WOMEN'S CAREER BARRIERS IN ORGANIZATIONS (1929–2025): A SOCIAL ROLE THEORY PERSPECTIVE

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This study analyzes the historical and structural barriers that have limited women's participation in organizational hierarchies and career advancement in Türkiye. It uses the metaphors of the sticky floor and the glass ceiling to explain these inequalities. The sticky floor refers to the overrepresentation of women in low-paid, insecure jobs with little opportunity for upward mobility (European Institute for Gender Equality [EIGE], 2025), while the glass ceiling describes the invisible barriers that prevent access to senior management roles (Taparia & Lenka, 2025). These metaphors offer useful tools for identifying gender-based obstacles that operate not only at the individual and organizational levels but also within broader ideological and institutional structures. To better understand how women's labor is constrained, the study adopts Social Role Theory (Eagly & Karau, 2002) as its main theoretical framework. The purpose of the study is to evaluate the intersection of gender dynamics with structural inequalities in organizational settings and management practices within a historical continuity. In this study, to identify how representations differed across periods and to link them to our theoretical framework, we structured our analysis by synthesizing the thematic analysis method of Squires (2023). This study thematically analyzes 455 news articles published in Cumhuriyet Newspaper between 1929 and 2025, focusing on social dimensions. We used Social Role Theory as the main theoretical framework. Social Role Theory suggests that gender-based behavioral differences stem more from social expectations and norms than from biological factors. It also argues that institutional structures constantly reproduce these norms (Eagly & Karau, 2002). From this perspective, women have traditionally been linked to caregiving and nurturing roles, while men have been associated with authority, competition, and leadership in public life (Eagly & Wood, 2012). This cultural role division forms the ideological foundation of structural inequalities in organizations, including the sticky floor and the glass ceiling. Various studies support this argument (e.g., Chizema et al., 2015; Garcia, 2025; Hanek & Garcia, 2022; Hu & Coulter, 2024; Küskü et al., 2007) We derived the findings from 455 news articles collected from Cumhuriyet Newspaper, which we analyzed in relation to the structural barriers women face in working life. Our findings show that women's presence in management has largely remained symbolic, sustained and reinforced by ongoing social dynamics. Caregiving duties, domestic responsibilities, and the gendered division of labor have continued to limit women's chances of advancing into leadership roles, reinforcing both the sticky floor and the glass ceiling in institutional structures. Our analysis further reveals that women have consistently been positioned as a secondary labor force, which has contributed to the normalization of their marginalization in organizational settings. The analysis of the news articles shows that, despite formal shifts in discourse regarding women's labour force participation, patriarchal norms have maintained their ideological continuity. The recurring dominance of themes such as "motherhood," "domestic responsibilities," "gendered professions," and "lack of women in leadership" across time periods reveals the persistent resilience of gender regimes within organizational structures. The research highlights that, historically, women labours in Türkiye have been positioned either as the "showcase" of modernization projects or as the "reserve force" during economic crises. This perspective legitimizes women's labor in temporary, conditional, and instrumental terms, preventing their sustained integration into organizational hierarchies. The sticky floor effect explains the concentration of women in low-wage, insecure, and stagnant roles, while the glass ceiling metaphor captures the invisible barriers that limit their advancement into upper management positions.

UNVEILING GENDER INEQUITIES IN RETIREMENT SAVINGS: A SIMULATION-BASED ANALYSIS FOR MEXICO

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This study analyzes gender disparities in retirement savings in Mexico by focusing on the differentiated labor trajectories of men and women and their impact on pension accumulation. A key motivation is the observation that the official retirement calculator provided by CONSAR—widely used by workers to estimate their future savings—projects identical retirement amounts for men and women with similar ages and career profiles. This assumption overlooks structural labor market differences, particularly those affecting women. To address this gap, the study combines deterministic estimates using the CONSAR calculator with a Monte Carlo simulation model that incorporates gender-specific characteristics, including variations in education, wage levels, formal employment rates, contribution densities, and career interruptions. Simulations were run for 10,000 individual trajectories per gender to generate a realistic distribution of accumulated balances at retirement age. Findings reveal a pronounced gender gap: on average, women accumulate only 46.6% of the retirement savings of men. Even under identical starting conditions, the calculator yields lower pension payouts for women due to their longer life expectancy. The Monte Carlo simulations further demonstrate how structural labor inequalities—such as lower participation in the formal sector and lower wages—compound over time to significantly reduce women's pension savings. Statistical analysis confirms that the differences in retirement balances by gender are highly significant. The results suggest that the current pension system and its planning tools fail to reflect the real labor trajectories of women, thereby reinforcing long-term financial insecurity among aging females. The study advocates for the integration of a gender perspective in pension policy to improve equity, particularly by addressing informal employment, promoting female labor force participation, and recognizing unpaid caregiving work.

Keywords: Retiement savings, gender inequality, Mexico, Monte Carlo Simulation
JEL Codes: H00, H20, H39

REAL-TIME SENTIMENTBASED RISK PROTECTION: A BEHAVIORAL INSURANCE PERSPECTIVES

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The increasingly aggressive fluctuations in international financial markets necessitate improving protective strategies for individual portfolios. This research presents a new framework of Dynamic Behavioral Insurance Theory (DBIT) that proposes mechanisms for sentiment-sensitive portfolio insurance that adapt in real time to risk coverage based on behavioral sentiment indicators such as fear, optimism, and panic. A comprehensive empirical study is conducted with a panel data analysis applying fixed effects modeling, Granger causality, various robustness checks, and cross-sectional dependency testing. The findings support that the proposed model reduces real-time emotional portfolio losses much more effectively and that increased market volatility worsens losses much more than the decreasing returns on beta leverage. In addition, Granger causality analysis determined that risk attribution based on predictive emotion has unidirectional dependence. Robustness checks showed that the results remain invariant despite other specified model parameters. This evidence supports DBIT as a fundamentally valuable upgrade over traditional approaches that restrict risk management, while also providing strong support for this academic research on strategic emotion-driven financial risk management.

Keywords: Behavioral finance, real-time data modelling, portfolio protection, dynamic risk management, emotional sentiment analysis
JEL codes: G11, G22, G41

PRIORITIZING THE INTERNAL AUDIT UNIVERSE IN A PHARMACEUTICAL COMPANY: AN INTEGRATED AHP–TOPSIS APPROACH

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The purpose of this study is to determine which units should be primarily applied to the internal audit universe in the pharmaceutical company where the application is carried out, with the support of the top management and using analytical decision-making methods. In the study, AHP and TOPSIS, which are MCDM methods, were used together. In the first stage, the criteria affecting the internal audit were weighted with the AHP method; then, the sub-units of the company were evaluated concerning the results of the TOPSIS method. As a result of the analyses, the most critical factors affecting the internal audit universe were determined. These findings reveal the basic elements that should be taken into consideration in the internal audit process and contribute to a more systematic structure of corporate audit practices. In addition, it has been shown that a more efficient and target-oriented internal audit process can be carried out with limited human resources with the application of the TOPSIS method. This approach supports the effective use of resources and organizational stability in audit processes. Based upon the analysis and findings, it may be concluded that objectively weighted criteria with AHP and prioritization with TOPSIS allowed the pharmaceutical company to direct limited audit resources to the highest risk units. The resulting model not only increases stability and efficiency in the existing organizational structure but also provides a transparent, repeatable, and defensible internal audit framework for companies of different sectors and sizes.

Keywords: Audit universe, multi attribute decision making, TOPSIS, AHP, managment.
JEL Codes: M42, C44, L22

UNDERSTANDING AI ADOPTION AT ORGANIZATIONS: LITERATURE REVIEW OF TOE FRAMEWORK

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In today's business world, we are witnessing the emergence and rapid development of Artificial Intelligence (AI), which is fundamentally reshaping organizational practices. These developments mark what can be described as the "Era of AI**,** a significant milestone in technological history. While AI offers benefits, it also presents critical challenges, particularly concerning its adoption and the adaptation processes within organizations. Despite the swift evolution of AI technologies, research on their practical applications in organizational settings remains scarce and underdeveloped. This gap highlights a promising area for further exploration. In alignment with the literature, it can be argued that organizations with higher AI adoption rates tend to achieve better innovation outcomes, which suggests a need to revisit and potentially expand the Technology-Organization-Environment (TOE) framework. Originally developed to explain technological adoption, the TOE framework may not capture the complexities introduced by AI. This study aims to explore whether an expanded TOE paradigm is necessary to better address the contemporary dynamics of AI adoption. This research investigates the historical development and integration of AI within organizations, using the TOE framework as a foundational theoretical look. The study examines whether the existing TOE model sufficiently explains AI adoption or whether it requires augmentation to remain relevant in the age of generative AI. Literature review findings indicate that the traditional TOE framework exhibits limitations when applied to AI adoption. To address these gaps, another study was found in the literature that proposes the inclusion of a human factor—transforming the TOE into a TOEH (Technology-Organization-Environment-Human) model. In our research we would like to integrate critical thinking (CT) skills under Human Factor, as organizations increasingly seek employees who can critically assess and effectively utilize outputs from generative AI (GenAI) tools. The ability to make intelligent and ethical decisions in the context of AI is now a vital competency. The proposed TOEH framework offers a more comprehensive approach to understanding AI adoption within organizations. By incorporating the human element, particularly critical thinking skills, organizations can better prepare to embrace AI in an ethical, effective, and innovative manner.

Keywords: TOE, organizations, artificial intelligence, innovation, critical thinking
JEL Codes: G12, G14, C22

DIGITAL LEADERSHIP IN THE POST-COVID ERA: EXAMINING ITS RELATION TO JOB PERFORMANCE THROUGH REMOTE WORK ATTITUDE AND INNOVATIVE WORK BEHAVIOR

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This study explores the relationship between digital leadership, remote work attitudes, innovative work behavior, and job performance in the post-COVID era. A serial mediation model was employed to explore how digital leadership is related to job performance through the mediating roles of remote work attitudes and innovative work behavior. Given the accelerated adoption of remote and hybrid work models, it is timely and relevant to examine the role of digital leadership in employee attitudes and behaviors in the post-pandemic era. A quantitative research design was employed, collecting data from 266 employees and middle-level managers working at five different private banks in Türkiye. Descriptive statistics, including standard deviation, median, frequency, ratio, and minimum and maximum values, were first computed using SPSS 24.0. Then the validity and reliability of the measurements were assessed, and the hypotheses were tested using Hayes Process Macro. The results showed that digital leadership is significantly related to job performance both directly and indirectly through remote work attitudes and innovative work behavior. Sequential mediation by remote work attitudes and innovative work behavior indicates that employee attitudes toward remote work settings and innovative behaviors are two essential links that translate digital leadership into improved performance. The research contributes to leader-member exchange theory by providing empirical evidence for its application in digital leadership within remote work contexts. It identifies remote work attitudes and innovative work behavior as key mechanisms by which digital leadership is positively related to job performance. Additionally, the findings validate LMX principles in the banking sector, providing cross-contextual insights and highlighting the adaptability of LMX in addressing contemporary leadership challenges.

Keywords: Digital leadership, job performance, remote work attitude, innovative work behavior, leader-member exchange.
JEL Codes: M12, M15, J24, D23

SELLER'S INFLATION IN TURKEY

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This paper introduces Weber's three stage framework of sellers' inflation and focuses on applying it to the Turkish economy. From this exploration, it has become evident that while broad macroeconomic factors like unorthodox monetary policies, trade imbalances, and external events played a substantial role, strategic corporate behavior, particularly among firms with sizable market power, also significantly contributed to the prevailing inflationary trends. In a highly concentrated market structure, firms have been proactive, if not preemptive, in their pricing tactics in a climate of increased uncertainties, affected both by domestic perceptions and investor sentiments. Comprehensive exploration into corporate financial data supports this claim, showing an almost doubling of the average net USD profits of Turkey's 30 largest companies. Considering this rise in profitability despite the economic stress in the country, corporate profit strategies and pricing behaviors seem to be a factor in influencing inflationary trends

Keywords: Inflation, seller's contribution, Turkiye, Weber's framework
JEL Codes: G00, G10

INDUSTRY 5.0, SOCIETY 5.0 UNIVERSITY 5.0: EMERGING TRENDS AND PRACTICES

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The purpose of this study is to reflect the concepts of Industry 5.0 and Society 5.0 as fundamental shifts of societies and economies towards a new paradigm, whose joint impact presented University 5.0, namely Digital University" as a rising product in the era of digital transformation. The study employs a comprehensive analysis of literature review aiming not only to examine trends and practices in these areas, but also to investigate the reasons behind these shifts towards creating new value through digital technologies and contributing to future society with the emergence of a human-centric system. The results indicate that the new environment named as "Super Smart Society" enlightened the way to collaborative and symbiotic relationships between humans and machines as well as improved quality of life and sustainability with the concepts of Industry 5.0 and Society 5.0 respectively. Consequently, these two concepts provided socially and technologically integrated University 5.0 model. This study highlights five main actors as Industry, Government, University, Society and Natural Environment going towards an innovation ecosystem design centered on a truly human centered 5.0 paradigm. The findings reveals that the transformation to University 5.0 should also be considered in line with the demands of the Generations Z and the following Alpha and Beta. Findings may be concluded that University 5.0 will rise and compete with local and traditional universities in all sense targeting all world as a single market and providing all education services in a translocal and transtemporal form globally by the 2030s.
Keywords: Industry 5.0, Society. 5.0, University 5.0, super smart society, digital transformation
JEL Codes: A20, I23, I31, L86, M21, O14, O32, O35

THE IMPACT OF SOCIAL MEDIA AND DIGITAL MARKETING ON BRAND AWARENESS AND PURCHASING BEHAVIOR OF MILLENNIALS IN ISTANBUL

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Suat Teker, Isik University

This research aimed to define the level of brand awareness and the impact on the buying behavior of people due to the usage of social media platforms and digital marketing measures used by the brands. The research was planned to assess the impact on the millennials in Istanbul, Turkiye. The data was collected from the individuals residing in Istanbul with the help of an online questionnaire survey which was filled in by 403 participants. The collected data was analyzed by using SPPS version 21. Descriptive statistics, reliability analysis, mean difference test, correlation test, and regression were performed to get the outcomes of the research. Mavi, a renowned brand, was used to assess the impact on the buying decisions of customers. The findings revealed that the measures of brand awareness namely, "Perceived product quality, Product recognition, Brand recall, and Brand perception" influence the purchasing behavior of millennials. However, the purchasing decisions were not affected based on the demographics of the participants. Thus, the millennials who live in Istanbul and use social media are influenced by the strategies used by marketers to purchase their brands.
Keywords: Social media, digital marketing, brand awareness, purchasing behavior, brand recall.
JEL Codes: D10, D11, D12

ANALYSIS OF THE SITUATION OF CORPORATE SOCIAL RESPONSIBILITY IN THE AUTOMOTIVE SECTOR IN THE REGION OF TANGER: MAIN CHALLENGES

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This research analyses the level of implementation of the seven key corporate social responsibility issues mentioned in the ISO 26000:2010 standard concerning the automotive industry in the Tangier-Tetouan region (Morocco). For this purpose, an empirical analysis was carried out by means of a questionnaire, where all the different aspects addressed are grouped in eight blocks. After analysing the results obtained, areas for improvement are identified in terms of transparency, employee participation, environmental management and community engagement. This study provides a basis for future research and highlights the importance of promoting responsible and sustainable practices in the automotive industry in Tangier-Tetouan.
Keywords: Morocco, automotive, corporate social responsibility, ISO 26000, sustainability
JEL Codes: D02, D11, D16

MODERATING ROLES OF RELATIONAL LEARNING AND COMPETITION INTENSITY ON THE EFFECT OF RELATIONSHIP MANAGEMENT CAPABILITY ON THE SERVICE INNOVATION PERFORMANCE OF CALABARZON TRAVEL AGENCIES

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Relational learning is the process by which partners exchange knowledge, develop a shared understanding, and incorporate this understanding into the memory of the domain (Waheed, W., 2019). It speeds up the sharing of information, common understanding, and creation of a special relationship memory. The two parties' cooperative connection is then further encouraged by the growing volume of information and communication. When the conditions of cooperative relationships shift, the impact of RMC on the performance of businesses will also evolve. Thus, relational learning could moderate the relationship between service innovation performance and relationship management skills (Hadid, W., 2019). Meanwhile, the competition intensity is intimately tied to the activity of innovation within

or across businesses. Competition intensity has either directly or indirectly impacted organizations' technological innovation, corporate performance, product innovation performance, and innovation dissemination efficiency (Huang, 2018). This study assessed the moderating roles of relational learning and competition intensity on the effect of relationship management capability to the service innovation performance of travel agencies in CALABARZON with the goal of developing a relationship management strategic program for leveraging relationship management capability of travel agencies. It utilized a descriptive correlational design and survey questionnaire was used as the main data gathering instrument which was supported by the conduct of unstructured interviews. The instrument was distributed to 142 owners, managers, or supervisors of travel agencies who have direct supervision of the operation of the business. The respondents were selec ted from the total population of 244 through employing the stratified random sampling. The results and findings of the study revealed that the level of service innovation performance is very good (M = 6.09; SD =). Digitalization in tourism is aimed at making the tourism business not only more flexible, consistent with the realities of time, but also more competitive in the developing digital world. Digitalization in the tourism industry ensures a situation where customers get excellent results, and the owners of travel companies get higher incomes (Kayumovich, 2020). Moreover, the results also revealed that travel agencies are also very good in relationship management capability (M = 6.33; SD =). Relationship management capability increases knowledge transfer and resource acquisition by fostering strong ties among partners, while relationship learning assists organizations in identifying and realizing the value of knowledge and resources in service innovation practice (Zhu et. Al, 2022). Additionally, the level of relational learning and competition intensity as assessed by the respondents are extremely high with M = 6.09; SD = , and M = 6.09; SD =, respectively. The findings of the study also revealed that these two variables do not moderate the relationship between relationship management capability and service innovation performance. Based on the results and findings of the study, a relationship management strategic program was proposed to leverage the relationship management capability of travel agencies on the identified areas of improvement that will impact service innovation performance.

Keywords: Relational learning, competition intensity, relationship management capability, service innovation performance, travel agencies

JEL Codes: M10, M15, M31

CULTURAL DIPLOMACY AND SOFT POWER OF CHINA: THEORY, STRATEGY AND APPLICATION IN SOUTH EAST ASIA

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Wu Tuan Dat, The Dewey Schools Hai Phong

As soft power continues to rise in importance on the international stage, China is also rising as a significant influence – not only in terms of economics, but also culture and ideology. In this paper, I examine how China is using soft power in terms of cultural diplomacy in a region that is strategically important to Beijing's foreign policy, namely Southeast Asia. Using Joseph Nye (2004) and other contributions such as Kurlantzick (2007) as theoretical frameworks, the research illustrates that China's soft power strategy is distinctively state-centric and heavily linked to the state's short-term economic or political motivations. By using case studies and data, I will argue that China is building a sizable presence on its image and culture in Southeast Asia, but that it still confronts issues regarding elements of trust, persuasion and long-term sustainability of their soft power strategy.

Keywords: China, soft power, cultural diplomacy, South East Asia

JEL Codes: E00, E10

THE IMPACT OF INFLATION ANNOUNCEMENTS ON STOCK RETURNS: THE CASE OF FINLAND

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The study aims to assess whether the banking sector in Finland is semi-strong form efficient in terms of reactions to inflation announcements between 2015 and 2024. The Efficient Market Hypothesis is taken as the basis, and the event study methodology is used. The analysis covers the period from 2015 to 2024, and the date of the inflation announcement (t0) is determined as the event day. The findings show that the Finnish banking sector reacts to the announcement of monthly inflation data with semi-strong form efficiency. The evidence supports the Efficient Market Hypothesis and shows that the market is efficient. This situation has various consequences for investors.

Keywords: Event study, market efficiency, Finland, banking sector.

JEL Codes: G14, G10

AN APPLICATION FOR DIGITAL TRANSFORMATION ANALYSIS IN BUSINESSES

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Digital transformation has become a strategic necessity beyond being a technological trend for businesses to achieve sustainable competitive advantage. Measuring the level of digital maturity is critical for developing effective transformation strategies. This study aims to analyze the digital maturity of a business in six main dimensions: customer, operations, technology, governance, innovation, and human resources. A structured digital maturity assessment tool consisting of 89 Likert-type items was applied through focus group interviews with internal stakeholders. Current and target Digital Maturity Index (DMI) scores were collected. Descriptive statistics, internal consistency analysis, linear regression, and k-means clustering analysis (k=3) based on consistency with the development gap were conducted. The overall DMI score was calculated as 2.67. The highest score was observed in the Human Resources dimension (2.88), while the lowest was in Innovation (2.46). According to regression analysis, the customer, operations, and governance dimensions have a significant effect on overall digital maturity. In clustering analysis, sub-dimensions were grouped into high, medium, and low priority categories based on the need for improvement and the level of consensus. The findings show that not all dimensions progress simultaneously and equally during the digital transformation process. The proposed model offers a repeatable and scalable framework for data-driven strategic planning, especially for resource-constrained businesses. It emphasizes the need to strengthen internal communication in areas with low consensus.

Keywords: Digital transformation, digital maturity, strategic planning, regression analysis, clustering, focus group interview

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THE ROLE OF FINANCIAL DEVELOPMENT ON GREEN LOGISTICS IN DEVELOPING OECD COUNTRIES: A PANEL ARDL APPROACH

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Ebru Demirci, Istanbul University

The aim of this study is to examine the impact of financial development, foreign direct investment (FDI) and openness on green logistics performance in developing OECD countries. Panel ARDL model is applied using panel data consisting of nine developing OECD countries for the period 2002–2021. Second generation unit root and cross-section dependence tests are performed for econometric robustness. The findings show that financial development has a statistically significant and negative impact on CO_2 emissions from transportation in the long run. On the other hand, openness and foreign direct investment do not show a significant impact. Financial development stands out as a key element in increasing green logistics performance. The environmental impacts of openness and FDI are limited. The findings reveal the importance of financial system depth in developing sustainable logistics practices.

THE EFFECT OF PERCEIVED GENDER DISCRIMINATION ON CAREER EXPECTATION AND CAREER SATISFACTION: A STUDY ON FEMALE EMPLOYEES

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Gender discrimination is a deep-rooted issue that hinders the healthy functioning of social structures and manifests itself in many areas. The different roles and responsibilities historically assigned to women and men have led to stereotypical judgments that form the basis of this discrimination. The aim of this research is to examine the effects of perceived gender discrimination in the workplace on women's career expectation and career satisfaction. The study investigates how visible or indirect forms of discrimination encountered by women throughout their career journeys shape their career aspirations and overall career satisfaction. The research was conducted with the participation of 494 female employees working in various sectors in the Marmara Region, with Istanbul as the central focus. The questionnaire form included a Personal Information Form covering demographic characteristics of the participants (age, marital status, education level, sector, position, length of service in the institution, total work experience), the Perceived Gender Discrimination Scale, the Career Expectation Scale, and the Career Satisfaction Scale. The questionnaire was created via the Google Forms platform, and the survey link was sent to the participants. The data were collected between 21/01/2025 and 12/02/2025. Since all questionnaire forms were completed without any missing data, all forms were included in the analysis process. The obtained data were processed and analyzed using SPSS 25 software. Frequency and percentage analyses were used to determine the distribution of participants' demographic and professional characteristics. Exploratory Factor Analysis (EFA) was conducted to determine the construct validity of the scales. Regression Analysis was used to test the research hypotheses. The findings of the study indicate that perceived gender discrimination has a significant negative effect on the "career continuity and development perception" sub-dimension of career expectation. On the other hand, it was found that perceived gender discrimination does not have a significant effect on the "career advancement expectation" sub-dimension of career expectation. Therefore, it can be stated that the study provides partial support for the negative impact of perceived gender discrimination on career expectation. Additionally, the study revealed that perceived gender discrimination significantly and negatively affects career satisfaction. By revealing the negative effects of perceived gender discrimination on career expectation and satisfaction, this study is expected to contribute to the development of more effective and inclusive policies within organizations.

DETERMINATION OF HUMAN RESOURCE IDENTITY IN FINANCE ENTERPRISES THROUGH MENTAL METAPHORS

Hande Gulnihal Gumus, Istanbul Esenyurt University

The purpose of this research is to reveal how human resource identity is represented and structured through mental metaphors in financial institutions. In this direction, the texts in the human resources sections of the official websites of banks were analyzed and the role of the metaphors used in the formation of human resource identity was examined. Qualitative analysis method was used in the study. In this context, the data of the study were obtained by utilizing the titles such as "human resources", 'career', "people and culture", "talent and culture", "HR Portal" on the official websites of banks. The population of the study consists of banks operating in Turkey. In the sample selection, the texts in the human resources sections of the web pages of 14 banks, including domestic private and foreign capital, were included in the analysis. As a result of the analysis, metaphors were grouped under certain themes, and each theme reflects the meanings that organizations attribute to human resources. Businesses in the financial sector use mind metaphors as a strategic tool in creating their human resource's identity. Through these metaphors, the position, value and meaning of employees in the organization are indirectly defined, thus the basic approaches of the organization regarding human resources are formed.

THE IMPACT OF RISK MANAGEMENT PRACTICES ON FINANCIAL PERFORMANCE: A SECTORAL STUDY

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The primary aim of this study is to analyze the impact of the inclusion of leading firms in the automotive sector in the Corporate Governance Index on their financial performance within the framework of corporate risk management. For this purpose, the financial statements of the companies are used, and the financial data of those with the highest compliance scores with the CMB Corporate Governance Principles are formatted for artificial neural networks and analyzed using SPSS software. Corporate governance is a system that regulates the relationships among stakeholders within a company, aims to resolve conflicts of interest, and seeks to enhance the company's long-term value. Its fundamental principles are fairness, responsibility, accountability, and transparency. In Turkey, corporate governance practices have been developed in line with OECD principles; institutions such as the CMB, BRSA, TÜSİAD, and TKYD have conducted significant work in this area. One of the key regulations is the Corporate Governance Principles published by the Capital Markets Board (CMB). To promote the understanding of corporate governance in line with these principles, the Borsa Istanbul Corporate Governance Index was established in 2007. This index evaluates the degree to which companies comply with the principles. The corporate governance scores of the companies listed in the index are announced annually, and the relationship between these scores and their financial performance is investigated. However, there is still a lack of sufficient research examining the relationship between each of the four fundamental CMB principles and financial performance. Corporate risk management refers to the process of identifying, evaluating, and managing financial, strategic, and environmental risks. It provides a control mechanism aimed at minimizing threats that hinder the achievement of organizational goals. In this study, artificial neural networks (ANN), one of the artificial intelligence applications, are used as a data modeling method. ANN has the ability to simultaneously evaluate the effects of all processing parameters on the specified outputs. The network structure consists of at least three basic layers depending on the nature of the process being analyzed. Artificial neural networks are frequently preferred in statistical analysis and data modeling due to their nonlinear structures and continuous learning capabilities. ANN models serve various purposes such as prediction, function approximation, pattern classification, data association, clustering, data filtering, optimization, and control. Unlike traditional systems, ANN provides effective solutions to complex nonlinear problems and is widely used in fields such as finance, healthcare, defense, automation, and control systems. As a result of the analysis, it was concluded that companies with high compliance with corporate governance principles are more successful in implementing corporate risk management practices, and this success is significantly related to financial performance. Accordingly, strengthening corporate governance practices and prioritizing internal audit and risk management standards are critically important for companies to ensure long-term financial success.

Keywords: Corporate governance practices, corporate risk management, corporate governance principles, financial performance, artificial neural networks

JEL Codes: G34, G32, C45

PSYCHOLOGICAL VIOLENCE (MOBBING) IN WORK LIFE: PERCEPTIONS AND BEHAVIORS OF DIFFERENT GENERATIONS TOWARDS PSYCHOLOGICAL VIOLENCE

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The aim of this study is to measure the perception of psychological violence among different generations in business life and to contribute to the literature by revealing the behaviors they exhibit in response to psychological violence if they have been subjected to it. In this context, data was collected from samples of different generations using a survey method. First of all, examples of psychological violence actions selected from a pool of the 4 most used survey scales in the literature were presented and participants were asked to rate these psychologically violent behaviors. In the second part, two different psychological violence scenarios were prepared and presented to the participants. The aim here was to measure the participants' reactions and to focus on how different generations deal with psychological violence in the workplace. In the last part, the participants were asked about their experiences with psychological violence incidents or incidents with open-ended questions. The research was conducted with 283 participants with at least one year of work experience. 18.4% of the participants were from Generation X, 62.5% from Generation Y, and 19.1% from Generation Z. The average age was 34.5, and the gender distribution was balanced as female (n=145) and male (n=138). 68.9% of the participants lived in Istanbul. The average work experience was 9.76 years, and the average duration of exposure to mobbing was 19.4 months. 32.5% of the participants were in managerial positions. The findings show that Generation X is more resistant to psychological violence at work than other generations and does not see some situations as psychological violence. Generations Y and Z, on the other hand, are seen to consider the work environment as part of their social lives due to the long time they spend at work and their reactions when they experience a problem at this point are mostly towards quitting their job. When the gender variable is examined, it is seen that female participants react more to situations involving psychological violence than male participants and perceive such situations as a more intense psychological violence experience. This finding reveals that women are more sensitive to negative behaviors at work and tend to evaluate psychological violence as a more serious and exhausting process.

Keywords: Psychological violence, work life, mobbing, generations, survey method

JEL Codes: J28, M54, J71

EVALUATING THE PERFORMANCE OF GREEN LOGISTICS VS. TRADITIONAL LOGISTICS IN EFFICIENCY AND SUSTAINABILITY ACROSS AFRICAN COUNTRIES: AN SEM ANALYSIS

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Purpose- The paper analyzes green logistics versus traditional logistics in African countries, with a bias for efficiency (delivery time) and sustainability (CO_2 emissions and energy consumption). Using SEM and Random Forest analyses, it studies the logistics firms' data across Africa. Results indicate that green logistics is superior to the traditional kind in terms of efficiency and sustainability, while technology

adoption and infrastructure quality take the role of mediators in the relationship formed. The study therefore portrays green logistics as a potential panacea to Africa's logistical and environmental problems, with some policy implications.

Methodology- Data from 200 logistics companies from 15 African countries were gathered through surveys from 2022 to 2024 and were complemented by secondary sources, such as the Logistics Performance Index of the World Bank and data from the International Energy Agency. The study relied on Structural Equation Modeling (SEM) to verify the relationships between logistics practices, efficiency, and sustainability, while considering technology adoption and infrastructure quality as mediators. Control variables were considered, comprising economic development, regulatory environment, and population density. Random Forest was applied so as to predict sustainability outcomes, which would also increase the reliability of the results.

Findings- SEM analysis reveals green logistics significantly enhances efficiency and sustainability, reducing delivery time ($\beta = -0.22$, $p < 0.01$), CO_2 emissions ($\beta = -0.28$, $p < 0.01$), and energy consumption ($\beta = -0.23$, $p < 0.05$). Mediation effects show technology adoption influencing delivery time ($\beta = -0.16$, $p < 0.01$), CO_2 emissions ($\beta = -0.18$, $p < 0.01$), and energy consumption ($\beta = -0.15$, $p < 0.05$), while infrastructure quality also mediates these outcomes ($\beta = -0.15$, -0.12, -0.08, respectively). The Random Forest model confirms high predictive accuracy ($R^2 = 0.88$ for CO_2 emissions, 0.85 for energy consumption).

Conclusion- The study confirms green logistics outperforms traditional logistics in efficiency and sustainability across Africa, driven by technology adoption and infrastructure quality. These findings underscore the need for a shift to sustainable logistics to tackle inefficiencies and environmental challenges. Policy recommendations include establishing green logistics corridors, improving infrastructure.

Keywords: Green logistics, traditional logistics, Africa, sustainability, efficiency
JEL Codes: D46, F63, F13

CONTENT

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THE MEDIATING ROLE OF INTELLECTUAL CAPITAL IN THE ESG - PERFORMANCE RELATIONSHIP: EVIDENCE FROM THE U.S. IT INDUSTRY

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ABSTRACT

Purpose- This study aims to empirically investigate the relationship between Environmental, Social, and Governance (ESG) performance and financial performance, with a particular focus on the mediating role of intellectual capital (IC) in publicly traded IT firms in the United States.
Methodology- The research uses a sample of 204 U.S.-based publicly listed IT firms, covering 917 firm-year observations from 2011 to 2022. Descriptive statistics, correlation analysis, and multiple regression models were employed to test the proposed hypotheses and assess the impact of ESG on Return on Assets (ROA) and the potential mediating role of intellectual capital (IC).
Findings- The results indicate that intellectual capital partially mediates the relationship between ESG performance and financial performance. While IC contributes significantly to explaining the effect of ESG on ROA, it does not fully account for the relationship.
Conclusion- This study highlights the importance of considering intellectual capital as a strategic asset in enhancing the financial returns of sustainability-oriented initiatives. The findings provide actionable insights for corporate leaders and policymakers seeking to align ESG practices with long-term financial goals.

Keywords: ESG, intellectual capital, financial performance, IT sector, United States
JEL Codes: G30, M14, O34

1. INTRODUCTION

In an era of knowledge-based deconomy, where growth is driven primarily by creating, distributing, and using knowledge and information, intellectual capital (IC) is considered a vital intangible asset that gives firms a competitive edge and enhances their performance. Rather than relying solely on physical assets such as land and raw materials, or labor, firms are increasingly creating value by accumulating, managing and using knowledge derived from human expertise, organizational processes, and social relationships. Intellectual capital typically consists of human capital, organizational or structural capital, and social or relational capital, each having a different and specific role in the firm's ability to innovate, adapt, and maintain its competitive advantage (Subramaniam & Youndt, 2005; Gogan et al., 2015).

Research has demonstrated that IC positively influences firm productivity, thereby enhancing their financial and market performance. Firms that effectively use their IC are found to outperform their peers financially, while at the same time showing greater potential for future growth, leading to a positive market perception. While this holds across all sectors generally, it is particularly pronounced in knowledge-intensive sectors, such as IT (Tan et al., 2007). However, this relationship varies depending on the growth rate of IC and the industry context. Consequently, understanding and managing intellectual capital is considered a strategic requirement for sustained value creation (Gogan et al., 2015).

On the other hand, Environmental, Social, and Governance (ESG) performance is vital in developing and enhancing a firm's IC. Studies have shown a strong, positive relationship between a firm's ESG practices and its IC. For example, ESG practices that encourage ethical conduct, employee welfare, and community engagement, help firms attract and retain qualified human capital by creating an attractive work environment, thereby contributing to a firm's innovation and competitive position (Pham, Liu, & Chen, 2024).

Given the role of IC in enhancing firm performance in the modern economy, and the ever-growing evidence associating ESG practices with enhanced IC, it is only reasonable to believe that ESG may indirectly influence firm performance through its impact on IC. Although the direct relationship between ESG and financial performance has been extensively researched, the ESG ability to influence firm performance through intangible value drivers such as IC remains underexplored. This study aims to fill this gap by (1) exploring the ESG - financial performance relationship in the U.S. IT sector and (2) examining whether there is an indirect influence of ESG on financial performance through IC.

2. LITERATURE REVIEW

The relationship between ESG practices and firm performance has been extensively studied, but in recent years, the interplay between these variables and IC has gained attention.

When it comes to the direct impact of ESG on firm performance, the literature has reported mixed results. Eriany and Widyawati (2024), for example, found a positive and significant relationship between ESG scores and financial performance measured by ROA. Their findings support the notion that socially and environmentally responsible practices can enhance firm performance, notably through risk mitigation and improved reputation. However, Destyasa and Bustaman (2024) found no significant influence of ESG scores on firm value among Indonesian companies, suggesting that regional factors and market expectations may moderate this relationship. Similarly, Demiraj et al. (2024) showed that country-level governance quality significantly moderates the ESG–performance relationship suggesting that the institutional environment plays an important role in shaping how ESG strategies impact financial outcomes.

Regarding the IC relationship with firm performance, the literature supports a positive relationship between the two. A broad study of S&P 500 companies by Sullivan (1999) showed that knowledge companies rely heavily on both human and organizational intellectual capital to maintain their competitive advantage. Nahapiet and Ghoshal (1998) further established that social capital supports the creation of intellectual capital, which in turn supports organizational advantage. Finally, Pulic (2004) proposed the intellectual coefficient (VAIC) model to measure intellectual capital and found that IC components, particularly human capital efficiency, play an important role in improving firm productivity and value creation.

While ESG and IC relationships with firm performce are well researched, the mediating effect of IC is still a relatively underexplored area. Eriany and Widyawati (2024) analyzed ASEAN-5 companies and found that IC plays a moderating role in the ESG–performance relationship. However, while structural capital enhanced the ESG-market performance relationship, and relational capital improved the ESG-financial performance relationship, human capital was found to weaken the ESG–performance relationship, underscoring the need to examine IC's components individually rather than as a combined score. Similarly, in another study, Fathonah et al. (2024) investigated firms in Indonesia's agricultural sector and found that while ESG and IC together explained 60.97% of variation in financial performance, only human capital had a significant individual effect on performance, suggesting that ESG and IC can jointly impact performance, however the influence of IC components is uneven.

The above studies emphasize the need to understand ESG and IC not only as independent determinants of performance, but also as interconnected variables whose interplay can shape firm performance.

Therefore the hypotheses of this study have been formulated as follows:

H1: There is a positive relationship between ESG scores and the financial performance of U.S. IT firms.

H2: IC mediates the relationship between ESG scores and the financial performance of U.S. IT firms.

3. DATA AND METHODOLOGY

To test the study's hypotheses data were retrieved from Refinitiv (LSEG, formerly Thomson Reuters) database. The sample comprised all U.S.-listed firms in the IT sector for which ESG scores and other relevant data for the study are available in the Refinitiv database. The final dataset was an unbalanced panel of 917 firm-year observations, covering 204 firms over the period 2011 to 2022. Due to the unbalanced nature of the dataset, instead of a panel regression, a two-stage least squares (2SLS) regression is used to test the hypothesized relationships. To mitigate the influence of outliers, the data was winsorized at 2%.

As shown in Table 1, the main variables in this study are the firms' ESG scores as the independent variable, and their financial performance (ROA) (Carnini et al., 2022; Demiraj et al., 2022; Dsouza et al., 2023; Habibniya et al., 2022) as the dependent variable. Additionally, the VAIC (Value Added Intellectual Capital) index, proposed by Pulic (2004), is used as a potential mediating variable, to assess whether the impact of ESG on financial performance is channeled at least in part through intellectual capital. Lastly, seven more variables are used as control variables: firm size, liquidity, leverage, capitalization, tangibilty, GDP and the Covid-19 dummy to capture the effects of the pandemic on firm performance.

Table 1: Variables

Dependent variables	Independent variable	Mediating Variable	Control Variables
ROA	ESG	VAIC (Value Added Intellectual Capital) index	Firm Size Liquidity Leverage Capitalization Tangibilty GDP COVID (Dummy)

To test the study's hypotheses, three regression models are estimated as follows:

$$PERFORMANCE = f(ESG, CONTROL\ VARIABLES)$$

$$ROA_{it} + 1 = \propto_{it} + \beta 1 ESG + \beta 2 CONTROL\ VARIABLES + \varepsilon_{it} \qquad (1)$$

$$IC = f(ESG, CONTROL\ VARIABLES)$$

$$VAIC = \propto_{it} + \beta 1 ESG + \beta 2 CONTROL\ VARIABLES + \varepsilon_{it} \qquad (2)$$

$$PERFORMANCE = f(ESG, IC, CONTROL\ VARIABLES)$$

$ROA_{it} + 1 = \propto it + \beta 1 ESG + \beta 2 VAIC + \beta 3 CONTROL\ VARIABLES + \varepsilon it$ (3)

Where ROA_{t+1} represents firms' performance the following year, capturing the lagged effect of explanatory variables; ESG stands for firms' environmental, social, and governance scores, and serves as the main independent variable in the study; VAIC refers to the Value Added Intellectual Capital index modeled by Pulic (2004) and is the hypothesized mediating variable in the ESG-ROA relationship. The control Variables include firm size, liquidity, leverage, capitalization, tangibility, GDP, and Covid-19 dummy; Ɛ*it* denotes the error component.

Model 1 was used to test the influence of ESG on firm performance. Models 2 was used to test the influence of ESG on firms' intellectual capital. While Model 3 was used to test the combined effect of those variables and assess the potential mediating role of IC in the ESG-performance relationship.

4. FINDINGS

Before continuing with the regression analysis, pairwise correlation among the variables was examined to assess the suitability of the dataset for statistical modeling. The correlation matrix did not reveal any excessively high correlations among the independent variables, and all variance inflation factors (VIFs) were within acceptable thresholds, indicating no issues with multicollinearity. The correlation matrix revealed strong and statistically significant relationships between ESG and ROA, ESG and IC, and IC and ROA, providing preliminary support for the possibility of a mediating effect. However, to draw conclusions on the mediating role of IC in the ESG-ROA relationship we rely on the 2SLS regression models discussed below.

Table 2 summarizes the results of the three 2SLS regression models. In the first model, ESG is the main independent variable and ROA is the dependent variable. The second model uses ESG as the main independent variable and IC as the dependent variable. The third model includes both ESG and IC as the key independent variables, with ROA as the dependent variable.

Table 2: 2SLS Regression Results

Independent Variables	Model 1 Dependent ROA$_{(t+1)}$	Model 2 Dependent VAIC	Model 3 Dependent ROA$_{(t+1)}$
ESG	**0.00240***	**0.115***	**0.00176***
VAIC			**0.00537***
Firm Size	0.0244***	0.819***	0.0198***
Liquidity	0.177***	0.843	0.169***
Leverage	0.00144	1.034***	-0.00516
Capitalization	0.0344	0.681	0.0286
Tangibility	0.275***	4.704***	0.244***
GDP	-0.0117***	-5.123	-0.0120***
Covid Dummy	-0.167*	21.8	-0.168*
Constant	-0.676***	-12.44	-0.552***
Observations	708	917	708
R-squared	0.22	0.25	0.249

*** p<0.01, ** p<0.05, * p<0.1

The regression results from Model 1 reveal a statistically significant and positive effect of ESG on ROA. This indicates that firms in the U.S. IT sector engaging in ESG practices tend to achieve stronger financial performance. These findings suggest that, in this sector, the benefits derived from ESG engagement outweigh the associated costs in this sector. These results support the study's first hypothesis, which states that there is a positive relationship between ESG scores and the financial performance of U.S. IT firms.

The regression results from Model 2 reveal a statistically significant and positive effect of ESG on VAIC, the proxy used for intellectual capital efficiency. These results indicate that higher ESG scores are associated with stronger intellectual capital. This may be attributed to increased investments in employee training, innovation, and knowledge systems, which are often integral components of ESG strategies and contribute directly to human and structural capital development. This also confirms a key precondition for mediation, that the independent variable must significantly influence the potential mediator.

The regression results from Model 3 reveal that when VAIC is included as an independent variable alongside ESG, the coefficient for ESG decreases but remains statistically significant, and at the same time, VAIC shows a significant positive effect on ROA. These results imply that part of the effect of ESG on financial performance is transmitted through improvements in intellectual capital, which in turn enhances ROA. This pattern is consistent with partial mediation. Therefore, the second hypothesis, that intellectual capital mediates the ESG–performance relationship, is also supported by the results.

5. CONCLUSION

In conclusion, this study provides evidence that ESG engagement is financially beneficial for firms in the U.S. IT sector. While prior research has shown mixed results, the positive association between ESG scores and ROA observed here suggests that sustainable practices can enhance, rather than hinder, profitability. The analysis further confirms the mediating role of intellectual capital, as the inclusion of VAIC in the model reduces the direct effect of ESG on ROA while both remain significant. This implies that part of ESG's impact operates through improvements in intellectual capital efficiency, particularly through human and structural capital. ESG-driven enhancements in employee engagement, innovation, and internal processes help explain how firms can transform sustainability initiatives into financial gains. These

findings highlight that investing in ESG is not only ethically responsible but also strategically valuable, and managers are encouraged to align ESG initiatives with human resource development and knowledge management to fully unlock the benefits of intellectual capital.

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TREND IN SUSTAINABLE FINANCE METRICS: A BIBLIOMETRIC LITERATURE REVIEW

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ABSTRACT

Purpose- This study aims to map the literature on sustainable finance and firm performance by conducting a bibliometric analysis of scholarly publications from 2000 to early 2025. It seeks to identify research trends, key contributors, and major thematic clusters in this rapidly growing field.

Methodology- We retrieved publications from the Scopus database using a comprehensive search query combining terms related to sustainable finance (e.g., "sustainable finance", "ESG", "green finance") and firm performance (e.g., "financial performance", "firm performance"). The final dataset comprised 1,751 documents after data cleaning. We performed descriptive analyses of publication counts by year, country, and journal, and identified the most highly cited works. For content analysis, we processed article titles using text-mining techniques (term frequency–inverse document frequency and Latent Dirichlet Allocation) to uncover key terms and thematic topics.

Findings- Research output in sustainable finance and firm performance has increased exponentially since the mid-2010s, reflecting major sustainability initiatives and broader ESG adoption in business. Leading contributors include China, India, and other emerging economies, alongside traditional research centers in Europe and North America. Key journals are Sustainability, Corporate Social Responsibility and Environmental Management, and Business Strategy and the Environment. Topic modeling revealed five major thematic clusters in the literature: (1) the effect of ESG performance on financial outcomes, (2) ESG investing and green finance and their impact on firm value, (3) bibliometric and review studies of sustainable finance trends, (4) corporate sustainability strategies and broad financial outcomes, and (5) analyses of individual ESG components and CSR dimensions. Topic prevalence analysis shows that themes focused on ESG impact and green finance have grown strongly in recent years, while review-oriented studies have expanded steadily.

Conclusion- The field has matured into a robust, data-driven discipline, and the collective evidence generally supports the view that sustainable practices align with better firm performance – firms often "do well by doing good." However, these benefits are not automatic; they depend on factors such as implementation quality, strategic alignment, transparency, and context. This analysis provides an overview of dominant trends and gaps, guiding future research and informing stakeholders about the evolving relationship between sustainability and corporate success.

Keywords: Sustainable finance, ESG, corporate performance, bibliometric analysis, green finance
JEL Codes: M14, Q56, G30

1. INTRODUCTION

Sustainable finance is an evolving field that integrates environmental, social, and governance (ESG) principles into financial decision-making to promote long-term corporate responsibility and economic resilience. With increasing global awareness of climate risks, social inequality, and governance failures, investors and firms are under growing pressure to align profitability with sustainability goals (Clark et al., 2015; Fatemi et al., 2018). ESG frameworks have become widely adopted in investment practices, corporate governance codes, and regulatory mandates. Consequently, the academic community has intensified efforts to examine the relationship between sustainable finance and firm performance, addressing a central question: does sustainability enhance or hinder financial outcomes?

Over the past two decades, studies have attempted to empirically assess the business case for sustainability. While early research offered mixed results (Margolis & Walsh, 2003; Orlitzky et al., 2003), more recent meta-analyses suggest a broadly positive relationship between ESG performance and financial returns (Friede et al., 2015; Busch & Friede, 2018). However, contextual differences – such as firm size, industry, governance structure, and country-level regulation – complicate the interpretation of these findings (Wang et al., 2016; Ameer & Othman, 2012). Moreover, the growth of climate finance, ESG investing, green bonds, and sustainability reporting frameworks has expanded the boundaries of the field, demanding updated and comprehensive synthesis.Despite the rich and growing literature, a systematic bibliometric overview of research trends, geographic patterns, and thematic clusters in sustainable finance is still lacking. This study aims to

address that gap by mapping the intellectual structure of the sustainable finance literature and identifying dominant research themes. Using bibliometric methods and topic modeling on a Scopus-based dataset spanning 2000–2025, the study provides new insights into how the field has evolved and where future research may be directed.

2. LITERATURE REVIEW

The relationship between sustainability and firm performance has been a prominent research topic since the early 2000s. Initial studies explored whether corporate social responsibility (CSR) enhances profitability, with meta-analyses by Orlitzky et al. (2003) and Margolis & Walsh (2003) showing moderately positive effects. Building on stakeholder theory (Freeman, 1984), these studies posited that firms investing in social and environmental responsibility can reduce risk, strengthen reputation, and improve long-term value creation.Subsequent reviews have broadened this scope. Friede et al. (2015) synthesized over 2,000 studies and concluded that approximately 90% report non-negative ESG–performance relationships. Similarly, Wang et al. (2016) emphasized the role of contextual moderators such as firm size and geographic region. Velte (2017) found strong ESG performance positively influenced accounting and market-based measures in German firms. More recent work by Duque Grisales & Aguilera-Caracuel (2021) highlighted the moderating effects of geographic diversification and financial slack on ESG performance outcomes.

Several scholars have shifted focus to ESG disclosure and transparency. Eccles et al. (2014) showed that firms with high sustainability disclosure practices outperform peers in stock returns and ROA. Chen & Xie (2022) argued that ESG disclosures can mitigate information asymmetry and attract long-term investors. Along similar lines, Fatemi et al. (2018) emphasized that the financial value of ESG practices is amplified when firms integrate these strategies into core decision-making and governance mechanisms.Research has also turned to the investment dimension of ESG. Sustainable investing, green bonds, and impact funds have become mainstream topics (Giese et al., 2019; Amel-Zadeh & Serafeim, 2018). Xie et al. (2019) showed that ESG investing improves risk-adjusted returns, particularly in emerging markets. Albuquerque et al. (2020) further demonstrated that firms with strong ESG performance show greater stock resilience during market downturns, suggesting that sustainability can serve as a buffer against systemic risk. Country-specific studies illustrate the role of regulation and institutional context. For instance, Kumar & Mukherjee (2019) analyzed the impact of India's CSR legislation on corporate behavior. Li et al. (2022) explored ESG integration in Chinese capital markets, while García-Sánchez et al. (2021) assessed how mandatory ESG disclosure affects firm valuation in Europe. These findings support the view that local governance environments mediate the ESG–performance relationship.Bibliometric and review studies have begun to map the field more formally. Busch & Friede (2018) conducted a structural review of ESG-finance literature, while Pätäri et al. (2021) applied bibliometric techniques to ESG investing. These studies underscore the need for data-driven syntheses as the field expands.

In summary, the literature indicates a generally positive – though heterogeneous – link between sustainability and firm performance. Theoretical perspectives such as stakeholder theory, resource-based view (Hart, 1995), and legitimacy theory provide frameworks for understanding why ESG may pay off. However, findings remain context-dependent, and emerging issues such as greenwashing, ESG ratings divergence, and data standardization require deeper investigation (Berg et al., 2022; Christensen et al., 2022). Our study builds on this foundation by offering a systematic, bibliometric analysis of research patterns, key themes, and geographic dynamics in the field of sustainable finance.
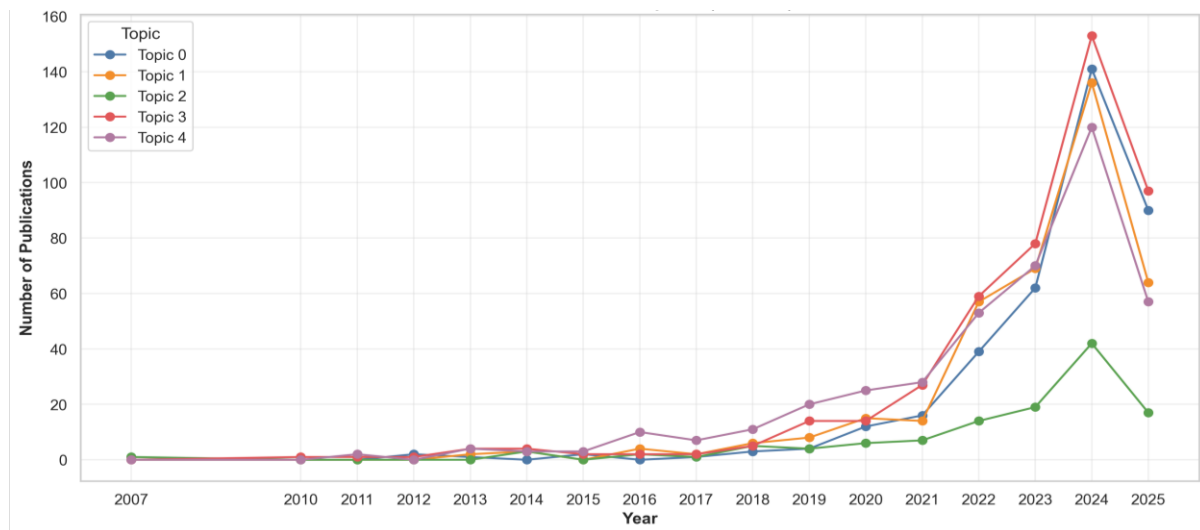
3. DATA AND METHODOLOGY

We applied a range of Python-based bibliometric and text mining techniques to analyze the dataset. We first conducted a descriptive bibliometric analysis to understand the publication patterns. This involved counting the number of publications per year, identifying the top contributing countries and top publishing journals, and listing the most highly cited papers in the dataset. These descriptive statistics set the stage for understanding how the field has expanded and who the major players are. To explore the research focus, we analyzed the titles of all publications as a proxy for core content. Abstracts were not readily available for all records, so we used titles, which are concise summaries of each work's topic. We preprocessed the title texts by lowercasing and removing punctuation, numeric characters, and common English stop words. Using this cleaned corpus of title words, we implemented a Term Frequency–Inverse Document Frequency (TF–IDF) analysis. TF–IDF scoring allows us to identify terms that are not just frequent, but also particularly evident or distinctive across the corpus. We computed TF–IDF scores for words in titles (limited to the top 100 terms by weight) and then summed the TF–IDF weights across all documents to find the overall highest-weighted keywords. In addition to single words, we also extracted common two- or three-word phrases from the titles. To do this, we used a CountVectorizer with an n-gram range of (2, 3). After filtering out stop words and limiting to the top 50 n-grams by frequency, we identified the most frequent phrases in the literature. This helps reveal prevalent research themes or constructs.

To uncover the underlying thematic structure of the literature, we employed Latent Dirichlet Allocation (LDA), a probabilistic topic modeling technique. We set up an LDA model with five topics, based on early testing and to maintain a balance between detail and interpretability, using the titles as input. Before applying LDA, we processed the text using a CountVectorizer to create a document-term matrix. It included 1- to 2-word phrases, removed common English stop words, and kept the top 1000 terms. We then used scikit-learn's LDA algorithm (with a fixed random seed for reproducibility) on this matrix, treating each title as a separate "document" of words. The result is a set of five latent topics, each represented by a distribution of terms. We examined the top 10 most probable terms for each topic to understand its main theme. Based on these terms, we gave each topic a simple, intuitive label. Since we only used titles, the topics are necessarily broad; however, even short texts like titles can still reveal meaningful topic groupings in bibliometric studies, because titles often encapsulate a paper's main ideas.We used the trained LDA model to assign each paper to a primary topic by identifying which topic had the highest probability for that title. This helped us explore how research themes have changed over time. We grouped papers by year to see temporal trends, and by country to identify regional differences. To ensure accuracy, we double-checked key results. However, there are some limits to our method. Our dataset only includes Scopus-indexed papers and is based on specific search terms, so we might have missed some relevant studies. Also, since we used only titles, some detailed topics may be omitted.

4. FINDINGS

Our descriptive analysis shows that research on sustainable finance and firm performance has surged in recent years. From only a few publications per year in the early 2000s, output began accelerating around 2016 and jumped dramatically after 2018. The dataset grew to 92 papers in 2021, then to 222 in 2022 and 592 in 2024. Early 2025 data already include over 300 papers. This exponential growth reflects the mainstreaming of ESG concerns and major global sustainability initiatives. Figure 1 show that top journals in this field and leading countries by publication count are China (256 papers), India (170), Italy (99), and the United States (93), followed by Malaysia, South Korea, Spain, and Indonesia. This distribution highlights strong contributions from emerging economies as well as established Western research centers.

Figure 1: Top ten academic journals and countries by number of publications on sustainable finance and firm performance.

As Figure 2 shows content analysis of article titles highlights the dominant focus on ESG and firm outcomes. The most frequent terms are "ESG", "financial performance", "corporate", "sustainability", and related words such as "impact", "value", "risk", "disclosure", and "investment." Latent Dirichlet Allocation topic modeling revealed five main themes: (1) the effect of ESG performance on financial outcomes (often examining moderators or disclosure practices); (2) ESG investing, green finance, and firm value (often with a regional or industry focus); (3) reviews and bibliometric studies of sustainable finance; (4) corporate sustainability strategies and broad financial outcomes; and (5) analyses of individual ESG components and CSR aspects.

Figure 2: Word cloud of key terms in publication titles, weighted by TF–IDF.

Figure 3 show that tracking these themes over time shows notable trends. Topics 1 and 2 have grown markedly in recent years, reflecting rising interest in how sustainability actions translate into firm value under various conditions. Topic 3 (reviews and bibliometric studies) has steadily expanded, indicating a maturing field that increasingly supports integrative analyses. The core empirical link (Topic 4) remains consistently prominent. Topic 5 (individual ESG pillars and CSR) has declined slightly in relative share, possibly reflecting the shift from CSR

terminology to the broader ESG framing. Overall, the results indicate a broad expansion across topics, with a growing emphasis on integrated and nuanced analyses while retaining the field's central focus on the ESG–performance relationship.

Figure 3: Trend in the number of publications per year for each of the five LDA derived topics

5. CONCLUSION

This study conducted a comprehensive bibliometric analysis of the sustainable finance and firm performance literature from 2000 to early 2025, encompassing 1,751 publications. The findings highlight a field that has grown exponentially in the past decade, moving from early debates on whether "it pays to be green" to more nuanced explorations of how sustainable finance contributes to corporate success. Key contributions of this study include: (1) documenting the publication boom and geographical diffusion of research (with notable leadership from China, India, and other emerging economies alongside Western countries); (2) mapping the topical structure of the field into five themes covering everything from ESG disclosure effects to green finance and CSR initiatives; (3) illustrating how the focus of research has shifted over time toward more integrative and analytical works; and (4) summarizing the influential literature that has shaped consensus views.

In summary, the collective evidence suggests that, more often than not, firms can "do well by doing good" – aligning with the positive link reported in major reviews (Orlitzky et al., 2003; Friede et al., 2015). However, the benefits of sustainable finance are not automatic; they depend on factors such as how sustainability is implemented (e.g., with transparency and strategic alignment) and the context in which a firm operates. As the world grapples with sustainability challenges, the role of academic research in guiding business and policy is crucial. The trajectory of this field – as captured through our bibliometric lens – is one of increasing relevance and sophistication, indicating that future research will continue to provide valuable insights into building a more sustainable and financially sound corporate world.

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A STUDY ON EXCHANGE RATE AND STOCK MARKET VOLATILITY AND SHORT-TERM REGULATIONS

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ABSTRACT

Purpose- In order to maintain economic stability in Türkiye, new economic regulations are often introduced during periods of economic distress. This study aims to determine the impact of such regulations on price fluctuations.
Methodology- The analysis focuses on the volatility in the USD/TRY exchange rate and the BIST100 index in relation to swap limit regulations introduced by the Banking Regulation and Supervision Agency (*BDDK*) in 2018 and 2020. Volatility was examined before and after the implementation of the regulations using ARCH, GARCH, and TGARCH models. Additionally, F-tests were employed to determine whether the variances before and after the implementation of the regulations were statistically different.
Findings- The ARCH and its extended models indicate that volatility in exchange rates increased following the implementation and subsequent easing of the regulations. The F-tests also confirm that there is a significant difference in variance for both the USD/TRY exchange rate and BIST100 index before and after the relevant regulatory changes.
Conclusion- Three main conclusions can be drawn from the results. First, short-term regulatory measures swiftly implemented by the BDDK during times of crisis can provide temporary stability, but do not offer long-term solutions. Second, when the process of removing or relaxing these regulations is not carefully planned, markets may experience renewed volatility. Third, ARCH-based models prove to be highly effective and reliable tools for measuring volatility and analyzing the impact of such regulatory measures during periods of financial instability.

Keywords: ARCH, price volatility, economic stability, BDDK, BIST100
JEL Codes: G28, G21, F31

1. INTRODUCTION

The economic crisis that has gripped Türkiye since 2018 could not be contained for a long period and continues to exert its effects to this day. The implicit inflation targeting regime, adopted temporarily in 2002, initially achieved success thanks to the structural reforms implemented in the aftermath of the 2001 crisis. However, due to a lack of determination in the consistent implementation of these structural reforms, price stability could not be ensured between 2006 and 2017 (Durmuş, 2018). Although various micro-level factors contributed to this situation, macroeconomic factors proved to be predominant. In Türkiye, exchange rates are among the macroeconomic variables that cannot be ignored in studies focusing on inflation.

To understand the link between inflation and exchange rates, the initial question that arises is whether one causes the other. Indeed, research on this topic has demonstrated the impact of exchange rates on inflation, whereas the effect of inflation on exchange rates has been found to be statistically insignificant (TÜRK, 2016). Moreover, econometric studies using data on the real effective exchange rate, unemployment, and the Consumer Price Index (CPI) between 1990 and 2012 have revealed a direct causal relationship between the real effective exchange rate and CPI (Selim & Güven, 2014). The influence of this macroeconomic variable on CPI data — a direct indicator of price fluctuations — is particularly significant for our analysis. In fact, we believe it would be beneficial for finance scholars to examine economic fluctuations in a context where none of the factors influencing inflation data exhibit long-term stability.

Following the economic crises of the late 20th century, Türkiye was able to weather the 2008 global financial crisis relatively unscathed, owing to the structural reforms undertaken since the early 2000s. However, by the early 2010s, exchange rate instability emerged as a key issue on Türkiye's financial agenda, particularly following the sharp depreciation of the Turkish lira in 2018, when the dollar nearly doubled in value — a situation that continues to persist today. The Central Bank of the Republic of Türkiye (CBRT) and various financial authorities have since employed a range of instruments to attempt to stabilize exchange rates and prices.

In order to curb exchange rate volatility, financial authorities have focused on measures such as limiting the role of foreign currency in corporate risk planning and promoting alternative investment instruments, in response to growing interest in foreign currencies driven by

the depreciation of the Turkish lira. Due to exchange rate volatility, both individual investors and corporations have increasingly sought out foreign currency–linked investments to preserve the value of their financial assets. The subsequent implementation of the foreign exchange–protected deposit scheme (FX-protected deposit or "KKM") was initially well received by the market (CBRT, 2021). However, the cost of this measure — aimed at preventing exchange rate fluctuations — was borne primarily by the central bank, resulting in significant monetary expansion. As of September 2023, 860 billion Turkish lira out of the total 1 trillion lira cost of the scheme had been financed by the CBRT (Kartal, 2024). Due to the substantial fiscal burden imposed by the system, the Ministry of Treasury and Finance has announced that the scheme is expected to be phased out in the long term. The effects of such crisis-period measures and ad hoc regulatory frameworks — such as the FX-protected deposit scheme — may trigger further market volatility, particularly when they are not designed with long-term sustainability in mind.

On August 13, 2018, following a two-day surge in exchange rates, the USD/TRY rate experienced a significant fluctuation of 50%, prompting financial authorities to respond with a sudden regulatory intervention, adopting a similar short-term approach. During the week of August 13–17, the Banking Regulation and Supervision Agency (BDDK) imposed various restrictions on banks' currency swap transactions, where one leg was denominated in foreign currency and the other in Turkish lira, and later extended these restrictions to other derivative transactions beyond swaps. This decision, which was originally intended as a short-term measure—similar to the FX-protected deposit scheme (KKM) introduced years later—was in fact maintained for several years, repeatedly eased, revised, and accompanied by various exemptions. It is natural to expect market volatility in response to the introduction of such restrictions. However, it is often overlooked that markets also exhibit significant fluctuations when these short-term regulatory measures are lifted.

The aim of this study is to examine the regulatory decisions taken by the BDDK in August 2018, as a representative example of short-term financial regulations in Türkiye. The scope of our analysis covers the period from the implementation of these measures until their removal in September 2020. To understand the dynamics of market fluctuations, we employ ARCH, GARCH, and TGARCH models to analyze and interpret the periods before and after both the imposition and the removal of these restrictions. Our study places particular emphasis on the volatility observed during the deregulation phases, which has largely been neglected in prior research.

2. LITERATURE REVIEW

The Banking Regulation and Supervision Agency (BDDK) was established on June 23, 1999. Created by Decree Law No. 23734, published in the Official Gazette (1999), the BDDK's mandate is defined by law as "to protect the rights and interests of depositors, to ensure the sound functioning of the credit system by considering confidence and stability in financial markets, as well as the requirements of economic development, and to regulate the principles regarding the establishment, management, operation, transfer, merger, liquidation, and supervision of banks." The BDDK operates with this objective in mind and closely monitors domestic markets. It contributes to economic stability by updating or amending banking regulations when necessary. For this reason, during periods of monetary crisis or economic downturn, the BDDK influences bank policies through regulatory interventions and pursues a strategy aligned with the needs of the economy.

The year 2018 can be considered as the starting point of the recent currency crisis in Türkiye, and as the moment when this issue began to draw substantial public and media attention. Throughout 2018, the value of the U.S. dollar increased by nearly 40% against the Turkish lira, and the exchange rate exhibited significant volatility. A similar trend was observed with the euro exchange rate. August 2018 was the month with the most pronounced fluctuations. These developments were mainly attributed to Türkiye's widening current account deficit, declining investor confidence, growing concerns over the erosion of institutional independence in economic governance, and, most notably, escalating geopolitical tensions. From March to July 2018, foreign and total capital flows declined significantly. However, the negative impact of this contraction was mitigated to some extent by 'improvements' in April and July. In August 2018 and thereafter, capital flows reversed again, and their negative effects on the economy began to emerge in the following two months (Boratov, 2019). On August 10, 2018, the Turkish lira lost approximately 15% of its value against the dollar in a single day, prompting financial authorities to swiftly adopt measures aimed at stabilizing the markets.

Tablo 1: Normalization and Easing Decisions on Swap Transaction Limits by the BDDK

Date / Type of Regulation	Scope of Regulation
BDDK (August 13, 2018) / Restrictive (tightening)	Banks' FX-TL swap transactions were limited to 50% of their regulatory capital. No new transactions or renewals would be allowed in case of breaches.
BDDK (August 15, 2018) / Restrictive (tightening)	The limit on banks' FX-TL swap and similar transactions was further reduced to 25% of their regulatory capital, imposing a significant constraint.
BDDK (August 17, 2018) / Restrictive (tightening)	All derivative transactions involving TL purchases at maturity (including forwards and options) were included within the previously introduced 25% limit.
BDDK (September 17, 2018) / Partially easing	A more flexible calculation method was introduced: transactions with maturities of 90–360 days would be counted at 75%, and those above 360 days at 50%.
BDDK (February 9, 2020) / Restrictive (tightening)	The existing 25% limit on FX-TL derivative transactions was tightened further to 10% as of February 8, 2020.
BDDK (April 12, 2020) / Highly restrictive	Due to financial risks arising from COVID-19, the limits on TL purchase and sale derivative transactions with non-residents were significantly reduced and maturity-based restrictions tightened.
BDDK (September 25, 2020) / Easing	Within the post-COVID normalization framework, the BDDK loosened the strict limits on banks' TL derivative transactions with non-residents.
BDDK (November 11, 2020) / Easing	The limits on TL-selling derivative transactions with non-residents were further increased, allowing for greater operational freedom.

In Table 1, regulatory limits based on banks' legal capital regarding TL-selling currency swaps, forwards, options, and other derivative transactions with non-resident counterparties are employed as a significant regulatory tool. On 25 September 2020, with Decision No. 9169 issued by the Banking Regulation and Supervision Agency (BDDK), these limits were increased based on maturity durations, starting from 2%

and reaching up to 20%. Subsequently, with Decision No. 9248 dated 11 November 2020, the limits were further expanded to 5% for transactions maturing in 7 days, 10% for those maturing in 30 days, and 30% for those with a one-year maturity. Under these regulations, if the specified limits are exceeded, banks are not allowed to initiate new transactions, renew maturing ones, or modify existing ones before maturity without obtaining prior written approval from the authority. These implementations are evaluated and applied within the framework of normalization measures taken in response to the global market uncertainties and increasing financial risks triggered by the COVID-19 pandemic, with the aim of supporting financial stability.

3. DATA AND METHODOLOGY

In this study, we used the daily USD/TRY closing exchange rates published by the Central Bank of the Republic of Turkey (CBRT) for the years 2018 and 2020, and the daily BIST100 index closing prices, obtained from the financial platform Investing.com.

The first method developed to examine time-varying variance behavior in financial return series, as opposed to constant variance, was the ARCH model (Autoregressive Conditional Heteroskedasticity) introduced by Engle (1982). Later, Bollerslev (1986) generalized this model and introduced the GARCH model, which provides a more effective analysis of long-term memory effects. However, the GARCH model does not account for asymmetric volatility, which refers to the phenomenon where bad news increases volatility more than good news. To address this issue, Jean-Michel Zakoian (1994) developed the TGARCH model (Threshold GARCH), which introduces a threshold-based conditional variance response and allows for the modeling of both positive and negative shocks with different weights.

Each of these three models—ARCH, GARCH, and TGARCH—has strengths and weaknesses in terms of capturing accurate data dynamics. Due to its simple structure, the ARCH model is useful for modeling short-term volatility. The GARCH model extends this by incorporating lagged variances, enabling a more comprehensive analysis of volatility. The TGARCH model goes further by distinguishing between the impact of positive and negative shocks, making it a particularly useful tool in detecting asymmetric volatility and long-term fluctuations. In this study, we employ all three models simultaneously in order to minimize the risk of misinterpretation and to obtain a more robust picture of market volatility during regulatory periods.

The results obtained from these models were further evaluated using the F-test, focusing on the 60-day windows before and after the regulatory changes listed in Table 2.

An F-test is a statistical method used to compare the variances of two datasets, or to evaluate whether the ratios of variances across multiple datasets are significantly different. The test statistics follow an F-distribution, assuming the null hypothesis is true and that the error terms (ε) satisfy standard assumptions (Berger et al., 2018).

H_0: There is no significant difference in variance between the pre- and post-regulation periods.

H_1: There is a significant difference in variance between the pre- and post-regulation periods.

Table 2: F-test Parameters to be Performed

Parameters	α	df_1	df_2
August 13-15-17, 2018	0,05	59	59
February 9, 2020	0,05	59	59
April 12, 2020	0,05	59	59
September 25, 2020	0,05	59	59
November 11, 2020	0,05	59	59

4. FINDINGS

Another important detail regarding the hypothesis test we conducted in August 2018 is that Turkey is entering a recession. Turkey experienced an economic downturn that lasted from the third quarter of 2018 to the second quarter of 2019. (TÜİK, 2019).

Table 3: Results of F-tests performed on the BIST100 index

Results of hypothesis tests				
Rule	Rejected/Cannot Reject	Variance (Before)	Variance (After)	Variance
August 13-15-17, 2018	H0 cannot be rejected	697,291561	1369,429631	$\sigma_1^2 = \sigma_2^2$
February 9, 2020	H0 rejected	12705,25836	3587,913391	$\sigma_1^2 \neq \sigma_2^2$
April 12, 2020	H0 cannot be rejected	5279,296182	19633,20807	$\sigma_1^2 = \sigma_2^2$
September 25, 2020	H0 rejected	8138,252482	1720,530916	$\sigma_1^2 \neq \sigma_2^2$
November 11, 2020	H0 rejected	9355,25421	1778,243378	$\sigma_1^2 \neq \sigma_2^2$

Using the F-tests, 60-day periods before and after the implementation dates of the regulations were compared, allowing for the assessment of the statistical significance of variance differences. According to the findings of the study, the regulations were found to have a significant impact on market volatility during the vast majority of the period examined. However, the regulation introduced on February 9, 2020, did not exhibit a statistically significant difference, likely due to the exceptional macroeconomic conditions caused by the pandemic.

Table 4: Results of F tests Performed on USD/TL Parities

Results of hypothesis tests				
Rule	Rejected/Cannot Reject	Variance (Before)	Variance (After)	Variance
August 13-15-17, 2018	H0 rejected	0,040518953	0,153354377	$\sigma_1^2 \neq \sigma_2^2$
February 9, 2020	H0 cannot be rejected	0,008736721	0,119276485	$\sigma_1^2 = \sigma_2^2$
April 12, 2020	H0 rejected	0,071677985	0,011212548	$\sigma_1^2 \neq \sigma_2^2$
September 25, 2020	H0 rejected	0,078006173	0,047399856	$\sigma_1^2 \neq \sigma_2^2$
November 11, 2020	H0 rejected	0,115207987	0,055285947	$\sigma_1^2 \neq \sigma_2^2$

5. CONCLUSION

It appears that for short-term regulations to be effective, they must be integrated into a broader, predictable, and structural economic strategy. Instead of temporary interventions, long-term policies should be developed to strengthen market participants' confidence and reduce financial vulnerabilities. Regulatory decisions made by bodies such as the BDDK can only be truly beneficial if they are part of a coherent and comprehensive strategic framework.

The results obtained in this study and the analyses conducted across different domains can also contribute to enriching academic literature. In particular, it would be valuable to perform similar analyses using the XBANK index (BIST banking index) to examine fluctuations observed in the banking sector and address this gap in the literature within the context of BDDK decisions. Moreover, a broader study that is not limited to a single exchange rate could be beneficial; such a study might analyze the euro/TRY parity and the average of the two parities in addition to the dollar/TRY parity.

One limitation of our analysis concerning the BDDK regulations is that the regulations considered were implemented at unusual times. Since the observed fluctuations cannot be solely attributed to BDDK regulations but may also stem from various measures taken by other financial authorities during the period to ensure economic stability, as well as the global recession, isolating the baseline effect of the regulation is challenging. To determine the pure effect of regulation, it would be useful to conduct analyses during periods when the influence of external factors is minimal, which could further contribute to the literature on this subject.

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THE ROLE OF U.S. LONG-TERM GOVERNMENT BOND YIELDS, BITCOIN AND GOLD PRICES IN EXPLAINING CHANGES IN TURKEY'S CPI

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ABSTRACT

Purpose- The main objective of this study is to investigate comparative short- and long-term impacts of U.S. long-term government bond yields, gold, and Bitcoin prices on the shift in Turkey's consumer price index (CPI) between January 2021 and March 2025. No prior studies were found for the comparative impact of the given variables. Digital assets such as Bitcoin became increasingly important for the global economy after the 2020 pandemic period. Many people bought digital assets to protect themselves from rising inflation. The inclusion of the Bitcoin variable and its effect on inflation in Turkey is another important objective of this research.
Methodology- A two-regime Markov regime-switching model and cointegration analysis using FMOLS and DOLS techniques were employed to examine these relationships.
Findings- The results indicate that U.S. long-term government bond yields significantly and positively influence Turkey's CPI under both regimes. Gold prices have a significant positive influence on changes in the CPI during regime 2 periods, but Bitcoin prices exhibit a significant negative relationship with Turkey's CPI for the same regime. The FMOLS and DOLS analyses reveal that only U.S. long-term government bond yields have a significant, long-term positive influence on Turkey's CPI.
Conclusion- According to this study, both in the short and long term, U.S. long-term government bond yields have a significant and steady positive influence on Turkey's CPI. During regime 2 periods, gold prices have a major positive influence on Turkey's CPI, whereas Bitcoin has a major negative effect on shifts in Turkey's CPI. According to the findings, Bitcoin might be able to provide short-term inflation protection in Turkey, but only during specific economic regimes. Gold was found to have a positive significant influence on Turkey's CPI for the short term. Moreover, it was found that gold and Bitcoin are not suitable for long-term safe haven asset classes for Turkey. Overall, the results show that U.S. long-term government bond yields had the most significant influence on Turkey's inflation dynamics over the analysis period. The findings highlight that Turkey's inflation rate is highly sensitive to major international interest rate movements.

Keywords: Bitcoin, gold prices, U.S. long-term government bond yields, Turkey's CPI, Markov regime switching model
JEL Codes: E31, F41, G15

1. INTRODUCTION

Traditional macroeconomic models predominantly focus on domestic variables such as aggregate demand and money supply. However, with increasing globalization and financial interconnectedness, understanding the evolving nature of inflation has become more critical. Turkey has been coping with high inflation since 2020. This spike is because of challenges with its economy and shocks from outside the country. Turkey has a high volume of Bitcoin transactions. Bitcoin is becoming a more common means to invest and buy goods and services. If its value fluctuates, it might directly affect the wealth of households, which could subsequently affect total demand. Because of this, Turkey's inflation models need to be revised to incorporate financial instruments like gold and Bitcoin as probable causes of inflation. The gold price has also been increasing since 2020 due to global market uncertainty. In Turkey, individuals purchase gold as a safeguard against inflation. When gold prices rise, the assets of gold savers can grow rapidly, which may also lead to an increase in Turkey's aggregate demand. That circumstance can also influence inflation. The same case can also exist for Bitcoin. These dynamics may influence inflation through wealth effects associated with both gold and Bitcoin. Moreover, the Federal Reserve interest rate of the USA is an important indicator for global financial markets. When the rate increases, the Turkish economy's external debt value increases. That increase can also lead Turkey to increase taxes on goods and services to reduce budget deficits. This scenario has contributed to an increase in production costs for firms in Turkey. The main objective of this study is to look at how U.S. long-term bond yields, gold prices, and Bitcoin prices affect Turkey's CPI in the short and long run.

2. LITERATURE REVIEW

Baur and McDermott (2010) conduct research from 1979 to 2009 and find that gold protects the US and European stock markets from losses. On the other hand, they also find that Australia, Canada, Japan, and the BRIC countries don't have the same protective association with gold.

Lucey et al. (2017) analyzed the association between gold prices and inflation in the US, UK, and Japan. Their findings suggest that the relationship broke down in the US in the mid-1990s, but the results are less obvious in the UK and Japan.

The demand for gold exchange-traded funds (ETFs) and the yields on US 10-year notes affected gold prices after 2013 (Ergul and Karakas, 2024).

Khan et al. (2024) state that rising interest rates contribute to the increase in inflation in Pakistan.

Selmi et al. (2018) affirm that both Bitcoin and gold serve as effective assets for investors when there is political and economic volatility, but oil does not serve the same function.

Tkacz (2007) looks at how gold can predict inflation in 14 nations from 1994 to 2005. It is found that gold is a highly effective inflation indicator, particularly in countries with official inflation targets. This could be because people start to expect inflation, which makes for faster mean-reverting inflation rates.

Tufail and Batool (2013) analyze how gold influenced inflation in Pakistan between 1960 and 2010. It is shown that gold is a potential cause of inflation and also can have a hedging role against unexpected inflation.

Batten et al. (2014) observes the long-term relationship between inflation and the price of gold. No cointegration is found if volatility from the early 1980s is left out, but there has been a lot of time variation and comovement.

Abaidoo and Agyapong (2022) mention that fluctuations in the prices of gold cause inflation to go up in Sub-Saharan Africa.

The inflation in developing markets is partly caused by a higher interest rate in foreign countries (Kia, 2010). Using a monetary model with Turkish data, Kia (2010) examines the factors that influence Turkey's inflation rate. It was mentioned that inflation is mostly reasoned by government debt, deficits, and other factors, which are influenced by both domestic and foreign factors.

Sarsici (2025) examines the relationship between inflation and interest rates in Turkey from 2012 M01 to 2024 M12. Shocks can cause long-term changes in the economy. The findings demonstrate a long-term positive relationship between interest rates and inflation. The study mentions that inflation is the main cause of problems in the economy.

Conlon et al. (2020) find no evidence that Bitcoin or Ethereum served as safe haven financial instruments for equity markets during the COVID-19 pandemic.

Using GARCH models, Dyhrberg (2016) analyzes Bitcoin's financial asset capabilities and finds that it is comparable to gold and the dollar, indicating that it has hedging potential.

In developed economies, gold is still a viable way to protect against inflation, but due to the volatile pricing structure, Bitcoin is not always a reliable financial tool. Interest rates and inflation exhibit a positive relationship in emerging economies, implying that monetary policy may not be adequate to thwart inflation. To the best of current literature, there is no research that examines the role of USA long-term government bond yields, Bitcoin, and gold prices in explaining changes in Turkey's CPI. The aim of this research is to fill that gap in the finance literature.

3. DATA AND METHODOLOGY

In this research, only secondary data were used. The USA's long-term government bond yield and Turkey's CPI data were retrieved from the St. Louis Federal Reserve database. Gold prices were taken from the gold market website. Bitcoin prices were retrieved from the Investing.com. The main objective is to scrutinize the short-term and long-term influence of the USA's long-term government bond yield, Bitcoin, and gold prices on Turkey's CPI. For the short-term influence, Markov regime switching analysis will be used. FMOLS and DOLS analyses will be performed for the long-term impact. The time frame in this research is between January 2021 and March 2025. Monthly data will be used.

Markov regime switching analysis is an important method for examining the impact of variables across different regimes.

The $Y_t = \alpha_{regime} + \beta_{regime} X_t + \epsilon_t$ equation indicates Markov regime switching analysis for each different regime.

Geopolitical shocks, speculative capital flows, and changes in interest rates around the world all are impacting Turkey's unstable inflation dynamics. Inflation reacts differently in high-stress versus low-stress regimes; Bitcoin and gold prices may impact Turkey's CPI during volatile or crisis periods. Traditional linear models assume average behavior. Applying standard OLS regression analysis can give spurious results. The justification for applying that analysis derives from the given reasons.

FMOLS analysis can be used to measure long-term impact in econometric research. Those analyses are important for the correction of serial correlation and endogeneity bias. The $Y_t = \beta X_t + u_t$ equation shows FMOLS analysis. DOLS incorporates leads and lags of the differenced regressors into the model to address these issues. This helps reduce endogeneity bias and autocorrelation.

The $Y_t = \alpha + \beta X_t + \sum \gamma \Delta x_{t-k} + \epsilon_t$ equation shows the DOLS equation including leads and lags of the differenced regressors.

Those analyses also can be done with non-stationary variables. All of the variables were non-stationary for I(0). For I(1), all data were transformed to stationary variables.

4. FINDINGS

Markov regime switching regression results (Table 1) show that U.S. long-term government bond yields have a statistically significant positive effect on Turkey's CPI in both regimes. During regime 2 periods, fluctuations in the CPI are strongly and positively affected by gold prices, but Bitcoin prices have a strong negative association with Turkey's CPI for the same regime.

Table 1: Markov Regime Switching Regression Results

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Regime 1				
GOLD	-0.006080	0.003230	-1.882665	0.0597
BITCOIN	-4.12E-05	7.38E-05	-0.558196	0.5767
U.S. LONG-TERM GOVERNMENT BOND YIELDS	17.17911	1.499512	11.45647	0.0000
LOG(SIGMA)	2.153824	0.125609	17.14708	0.0000
Regime 2				
GOLD	0.066687	0.008178	8.154657	0.0000
BITCOIN	-0.000287	8.41E-05	-3.410545	0.0006
U.S LONG-TERM GOVERNMENT BOND YIELDS	5.882083	2.023071	2.907501	0.0036
LOG(SIGMA)	0.606899	0.238596	2.543626	0.0110
Transition Matrix Parameters				
P11-C	3.815568	1.155478	3.302155	0.0010
P21-C	-2.137904	1.043997	-2.047807	0.0406

The FMOLS (R-square: 0.529431) and DOLS analysis (R-square: 0.604520) results (Table 2) show that only U.S. long-term government bond yields have a long-term significant effect on Turkey's CPI. Positive changes in U.S. interest rates significantly increase Turkey's CPI.

Table 2: FMOLS and DOLS Analysis Results

Variable	Method	Coefficient	Std. Error	t-Statistic	Prob.
GOLD	FMOLS	-0.013657	0.007956	-1.716640	0.0926
U.S. LONG-TERM GOVERNMENT BOND YIELDS	FMOLS	22.53029	3.209184	7.020567	0.0000
BITCOIN	FMOLS	-3.66E-05	0.000188	-0.194379	0.8467
GOLD	DOLS	-0.012267	0.010532	-1.164723	0.2518
U.S. LONG-TERM GOVERNMENT BOND YIELDS	DOLS	22.31998	3.914361	5.702076	0.0000
BITCOIN	DOLS	-1.27E-05	0.000236	-0.053838	0.9574

The hawkish stance of the Turkish central bank can diminish the inflation rate in the short term. However, in the medium and long term, the Turkish lira plummeted against the USD due to interest rate parity, which made Turkey's imports more expensive. It can be interpreted that when the USA Federal Reserve raises its interest rate, Turkey's interest rate generally responds to U.S. monetary tightening due to external debt and capital flow sensitivity. That circumstance exerts inflationary pressure on the Turkish economy. In addition, the Turkish lira depreciates due to higher USD yields, which increases import inflation. Exchange rate pass-through impacts domestic inflation, while international borrowing costs raise domestic funding costs.

The demand for gold, which acts as a hedge and store of value while potentially influencing consumer prices through jewelry and luxury goods, spikes during periods of high inflation or uncertainty in Turkey's domestic market. After gold prices increase in Turkey, foreign currencies can appreciate against the Turkish lira. When gold prices rise, uncertainty also rises, which can cause depositors to withdraw their money from the Turkish lira deposits and increase demand for foreign currencies such as the euro, USD, and British pound. That may also lead inflation rates to increase in Turkey.

During Regime 2, the model shows a negative relationship between the CPI and Bitcoin prices. Nevertheless, Bitcoin is not a viable choice for a long-term inflation hedge because its price does not cointegrate with Turkey's inflation over the long run.

5. CONCLUSION

Compared to gold and Bitcoin, U.S. bond yields are the dominant external driver of Turkish inflation. This research result is consistent with Kia (2010) and Ergul and Karakas (2024)'s findings. Gold has only an episodic positive and significant effect on Turkey's inflation. For some periods, this research result is similar to Tufail and Batool (2013) and Abaidoo and Agyapong (2022)'s findings. No long-term relationship between gold and Turkey's CPI was found. This finding partially supports the conclusion of Batten et al. (2014), who report no consistent long-term cointegration between gold and inflation if volatile periods (from the early 1980s) are excluded. These results suggest that gold does not serve as a long-term safe haven asset for Turkey. Bitcoin shows only a negative short-term relationship with inflation. No long-term relationship was found between Bitcoin and Turkey's CPI. This research result has similarity with Conlon et al.'s (2020) findings. The results show that Bitcoin may potentially help protect against inflation in Turkey in the short run, but only under certain economic regime periods. However, the research results suggest that Bitcoin cannot be thought of as a viable long-term safe haven asset. Investors may benefit from Bitcoin price appreciation as a temporary hedge against inflation under specific economic regimes. Since foreign interest rates have a dominant role in Turkey's CPI, policymakers should closely monitor international interest rate shifts. By taking into account international indicators such as U.S. interest rates, the Turkish Central Bank and Ministry of Finance should improve their forecasting of inflation. The Turkish lira should be kept stable to lower inflation brought on by costly imports. An export-oriented economy model shall be adopted to reduce the influence of external shocks on the Turkish lira and inflation. It is also advised to promote inflation-linked savings tools. It's also critical to educate the public about safer investment options. The depreciation of the Turkish lira directly impacts capital movements. High exposure to foreign interest rates can increase fast capital withdrawal and can increase dollarization. When dollarization is high, manual monitoring and the use of regular financial technologies are incompetent to control capital withdrawals. The central bank or treasury can react more swiftly and proactively thanks to AI. Turkey can establish a center for capital flow intelligence with AI to minimize the adverse impact of sudden capital withdrawal on the Turkish lira. Artificial intelligence can be utilized to monitor capital flows through real-time transaction surveillance and pattern recognition in foreign exchange and banking markets, enabling early detection of abnormal capital movements that could destabilize the Turkish lira. That center should also focus on early warning financial technologies and implement R&D activities for new financial technologies to have more efficient artificial intelligence-based early warning systems. This research can be expanded by including other cryptocurrencies and other important macroeconomic variables, and the model can be used for other emerging economies research.

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THE IMPACT OF SOCIAL MEDIA AND DIGITAL MARKETING ON BRAND AWARENESS AND PURCHASING BEHAVIOR OF MILLENNIALS IN ISTANBUL

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ABSTRACT

Purpose- This study aims to investigate the impact of social media and digital marketing on brand awareness and purchasing behavior of millennials residing in Istanbul. The research focuses on how digital platforms, particularly social media, influence consumer perceptions, shape buying decisions, and foster brand loyalty among this key demographic.
Methodology- A quantitative research approach was utilized, employing a structured online questionnaire distributed among 403 millennials in Istanbul. Data collection was based on validated scales measuring perceived product quality, product perception, brand recall, brand recognition, and purchasing behavior. The data were analyzed using descriptive statistics, correlation, and multiple regression analysis through SPSS version 21 to determine the relationship between brand awareness measures and purchasing behavior.
Findings- The results reveal that perceived product quality, product perception, brand recall, and brand recognition all have a significant positive impact on the purchasing behavior of millennials. The analysis showed no significant differences in purchasing behavior according to gender, age, or education. The findings highlight that millennials are highly influenced by digital marketing strategies and social media campaigns, which enhance brand awareness and drive purchase decisions.
Conclusion- The research concludes that social media and digital marketing play a critical role in shaping brand awareness and influencing the purchasing decisions of millennials. Brands that focus on effective digital marketing strategies and active social media engagement are more likely to increase customer loyalty and boost sales among this demographic. The study suggests that digital marketers should develop creative and targeted content, collaborate with influencers, and leverage data analytics to further enhance engagement with millennials.

Keywords: Social media, digital marketing, brand awareness, purchasing behavior, brand recall.
JEL Codes: M31, D12, D46

1. INTRODUCTION

The dynamic nature of social media and digital marketing has fundamentally reshaped how brands interact with consumers, especially among millennials. As digital platforms become increasingly integrated into daily life, understanding their effect on customer behavior and brand engagement becomes essential. This research explores the influence of social media and digital marketing on brand awareness and purchasing behavior, focusing on millennials in Istanbul.

In recent years, the expansion of digital marketing has transformed traditional marketing strategies, emphasizing the significance of online advertising, content creation, and real-time engagement. Millennials, being the first generation raised in a fully digital environment, exhibit distinct purchasing patterns, prioritizing authenticity, brand values, and personalized experiences. Marketers now target this demographic through tailored digital campaigns, recognizing that social media interactions have a direct impact on brand perception and loyalty.

The study addresses how digital and social media platforms affect brand awareness, consumer perceptions, and purchase decisions. Special emphasis is placed on the case of the renowned Turkish brand Mavi, assessing how digital marketing strategies and social media activities influence millennials' attitudes and buying behavior. By examining the relationships between perceived product quality, product perception, brand recall, and brand recognition, this research provides insights into the evolving landscape of digital consumer behavior.

This introduction sets the stage for a comprehensive analysis of the interplay between digital marketing, social media, and millennial consumer behavior in Istanbul, highlighting the necessity for brands to adapt to emerging trends in digital engagement to remain competitive and relevant.

2. LITERATURE REVIEW

Digital technology has significantly transformed marketing and consumer engagement, placing social media and digital marketing strategies at the core of brand-customer interactions. As noted by Kaplan & Haenlein (2010), social media platforms such as Facebook, Instagram, Twitter, and LinkedIn have revolutionized communication between brands and their audiences, enabling two-way interactions and fostering real-time engagement. The increasing prevalence of digital marketing is closely linked to advancements in technology and consumer digital literacy (Al-Azzam & Al-Mizeed, 2021).

Empirical studies emphasize that digital marketing directly shapes brand awareness and consumer purchasing behavior (Iblasi et al., 2016; Dhore & Godbole, 2019). For millennials, who are considered digital natives, social media usage is integral to their brand experience and decision-making (Erlangga, 2021). Digital marketers target millennials by offering personalized and interactive content, as such strategies have been shown to significantly affect brand engagement and loyalty (Ford & Alwan, 2018; Ariipek, 2023). Social media marketing not only enhances brand recognition and recall but also helps develop trust and long-term consumer relationships (Bernarto et al., 2020; Srivastava et al., 2021).

The main dimensions of brand awareness—perceived product quality, product perception, brand recall, and brand recognition—are critical in shaping purchasing decisions (Xu et al., 2022; Frigenti, 2024). Perceived product quality and brand recognition, in particular, have a strong impact on consumers' willingness to buy and their level of brand loyalty (Toha & Supriyanto, 2023; Diktas & Akgün, 2021). Millennials often value authenticity, social responsibility, and peer recommendations in digital marketing campaigns (Bell et al., 2022; Krishna, 2018).

Despite the wide acknowledgment of digital marketing's effectiveness, some gaps persist in the literature. For instance, there is limited research examining how digital marketing and social media strategies specifically affect millennials living in Istanbul or how Turkish brands like Mavi deploy unique digital tactics (Cukul, 2011; Tokatli & Kizilgun, 2004). Additionally, the interplay between demographic variables and brand awareness within the context of digital marketing remains underexplored (Obilor, 2023).

In summary, the reviewed literature demonstrates the transformative effect of digital and social media marketing on consumer behavior, particularly among millennials. However, there remains a need for more context-specific research focusing on the Turkish market, which this study seeks to address.

3. DATA AND METHODOLOGY

This study employed a quantitative research approach to investigate the impact of social media and digital marketing on brand awareness and purchasing behavior among millennials in Istanbul. The research followed a deductive approach, aiming to test hypotheses derived from the existing literature (Bohk-Ewald et al., 2018).

A structured online questionnaire was developed based on validated measures from previous studies (Al-Azzam & Al-Mizeed, 2021; Srivastava et al., 2021). The survey included items assessing perceived product quality, product perception, brand recall, brand recognition, and purchasing behavior. Participants were asked to respond using a five-point Likert scale, ranging from strongly disagree to strongly agree.

The target population consisted of millennials residing in Istanbul, aged between 26 and 45 years, who actively use social media platforms. The sampling technique employed was non-probability convenience sampling, allowing for the recruitment of 403 participants (Obilor, 2023). Data collection was conducted via an online survey distributed through social media channels.

Collected data were analyzed using SPSS version 21. Descriptive statistics, reliability analysis, correlation, and multiple regression analyses were performed to examine the relationships among the variables and to test the research hypotheses. The reliability of the measurement scales was confirmed with Cronbach's alpha values exceeding the recommended threshold (Hair et al., 2016).

Ethical considerations were strictly observed throughout the research process. Participation was voluntary and anonymous, and respondents were informed about the study's objectives and their right to withdraw at any time.

This methodology provides a systematic framework for exploring the effects of digital marketing and social media on the purchasing behavior of Istanbul's millennials, following established procedures in consumer behavior research (Al-Azzam & Al-Mizeed, 2021; Srivastava et al., 2021).

4. FINDINGS

The analysis of the collected data from 403 millennial participants in Istanbul revealed several key findings. Descriptive statistics showed that the majority of respondents were aged 26-35 and had at least a graduate-level education. The reliability analysis confirmed the internal consistency of the scales used to measure perceived product quality, product perception, brand recall, brand recognition, and purchasing behavior, with Cronbach's alpha values exceeding the accepted threshold.

Correlation analysis indicated a significant and positive relationship between all measures of brand awareness and purchasing behavior. Specifically, perceived product quality, product perception, brand recall, and brand recognition each demonstrated moderate positive correlations with purchase decisions. Multiple regression analysis further established that these variables collectively explained a substantial proportion of the variance in purchasing behavior ($R^2 = 0.813$), and all were found to have a statistically significant positive impact. It was concluded that the consumers' purchasing behavior is highly influenced by the perceived product quality,It is also concluded from the findings of the research that brand recall also has an impact on the purchasing decisions of consumers.

The brands use social media and digital platforms to advertise the products and promote the products effectively on different marketing mediums to retain the brand in the minds of the consumers. In addition to this, the study has found that the gender roles, age factors, and education status of the consumers who are millennials of Istanbul do not impact brand awareness. The study has observed no difference in the brand awareness of consumers belonging to different demographics.

Table 1: Summary of Correlation Coefficients between Brand Awareness Measures and Purchasing Behavior

Variable	Correlation with Purchase Decision (PD)	Significance (p-value)
Perceived Product Quality (PPQ)	0.311	<0.001
Product Perception (PP)	0.298	<0.001
Brand Recall (BR)	0.354	<0.001
Brand Recognition (BRG)	0.364	<0.001

Difference tests showed that purchasing behavior did not vary significantly by gender, age, or education level among the participants. This suggests that the impact of social media and digital marketing strategies on brand awareness and purchasing behavior is consistent across different demographic groups within the millennial generation.

Table 2 Regression Analysis

		B	Std. Error	t-value	Sig. value
	Coefficients				
1	(Constant)	.657	.176	3.736	<.001
	PPQ	.166	.058	2.858	.004
	PP	.071	.052	1.367	.022
	BR	.179	.055	3.223	.001
	BRG	.336	.051	6.562	<.001

Overall, the study has observed no difference in the brand awareness of consumers belonging to different demographics. . The case of Mavi, as examined in this study, confirms the effectiveness of targeted digital campaigns and active social media engagement in shaping consumer attitudes and driving purchase decisions.

5. CONCLUSION

This study examined the impact of social media and digital marketing on brand awareness and purchasing behavior among millennials in Istanbul, using the Mavi brand as a case study. The analysis revealed that key measures of brand awareness—perceived product quality, product perception, brand recall, and brand recognition—each have a significant positive effect on millennials' purchasing decisions. Among these, brand recognition and recall were found to be particularly influential.

The findings also indicated that demographic factors such as gender, age, and education level did not lead to significant differences in purchasing behavior. This suggests that digital marketing and social media strategies are effective across all segments of the millennial population.

Overall, the research confirms that well-designed digital marketing campaigns and active social media engagement can enhance brand awareness and strongly influence purchasing behavior among millennials. Brands seeking to increase their market share and customer loyalty should focus on developing creative and targeted digital content, leveraging influencer partnerships, and using data analytics to better understand and engage this key demographic.

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THE ROLE OF FINANCIAL DEVELOPMENT ON GREEN LOGISTICS IN EMERGING OECD COUNTRIES: A PANEL ARDL APPROACH

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ABSTRACT

Purpose- This study examines the dynamic relationship between financial development and green logistics in emerging OECD countries by applying a panel ARDL approach. Inspired by Özaytürk and Özekenci (2024), the main goal is to understand how financial development contributes to green logistics transformation in economies with evolving financial infrastructures.
Methodology- The analysis covers nine emerging OECD countries (Turkey, Poland, Mexico, Hungary, Slovakia, Colombia, Latvia, Lithuania, and Estonia) from 2002 to 2021. The dependent variable is the ratio of transport-related CO_2 emissions to GDP, used as a proxy for green logistics performance (Fan et al., 2022). Financial development (FD), foreign direct investment (FDI), and trade openness (TO) serve as explanatory variables. Panel ARDL modeling is employed to capture both long-run and short-run effects, with cross-sectional dependence tested using Pesaran CD (2004), stationarity examined via Levin-Lin-Chu (2002), and common factor structure assessed using PANIC (Bai & Ng, 2004).
Findings- Empirical findings suggest that financial development has a statistically significant and negative effect on CO_2 emissions in the long term, confirming its role in supporting green logistics (Jinru et al., 2022; Xu & Li, 2024). In contrast, FDI and TO do not exhibit significant long-run effects. The short-term impacts of all variables were found to be statistically insignificant, highlighting the crucial importance of institutional quality and environmental governance (Agyabeng-Mensah & Tang, 2021; Barut et al., 2023).
Conclusion- The study underscores the pivotal role of financial development in facilitating green logistics by easing access to environmentally friendly investments. However, financial mechanisms alone are not sufficient; complementary policy tools such as strong environmental regulations, institutional capacity, and governance reforms are necessary to ensure sustainable green logistics transitions in emerging economies (Xu & Li, 2024)..

Keywords: Green logistics, financial development, foreign direct investment, trade openness, panel ARDL.
JEL Codes: F18, O16, Q56.

1. INTRODUCTION

Green logistics refers to a set of sustainable practices aiming to minimize the negative environmental impacts of supply chain activities while enhancing economic and operational efficiency (Abukhader & Jönson, 2004; Seroka-Stolka, 2014). In recent years, especially in emerging economies, financial development has been considered a key driver for the adoption of green logistics practices, as it facilitates investments in environmentally friendly technologies and infrastructure through instruments such as green bonds and sustainability-linked loans (Jinru et al., 2022; Xu & Li, 2024). While previous studies have focused on all OECD countries (Özaytürk & Özekenci, 2024), this study specifically investigates the dynamic relationship between financial development and green logistics in emerging OECD countries, including Turkey, Poland, Mexico, Hungary, Slovakia, Colombia, Latvia, Lithuania, and Estonia. This focus allows for a deeper understanding of the interplay between financial structures and green transformation capacities in these economies, which is critical for policymakers and researchers. The study builds on the theoretical framework emphasizing that financial systems can reduce investment barriers for green projects and enhance environmental performance through improved capital accessibility and governance (Agyabeng-Mensah & Tang, 2021; Fan et al., 2022).

2. LITERATURE REVIEW

Green logistics refers to a set of comprehensive sustainability practices integrated into logistics and supply chain processes, aiming to reduce environmental impacts while improving operational and economic performance (Abukhader & Jönson, 2004; Seroka-Stolka, 2014). Unlike traditional logistics, which primarily focuses on efficiency and cost minimization, green logistics emphasizes reducing CO_2 emissions,

optimizing resource utilization, and enhancing energy efficiency (Sbihi & Eglese, 2007; Piecyk & McKinnon, 2010). These practices include the use of cleaner technologies, improved route planning, adoption of alternative fuels, and circular economy approaches such as waste reduction and recycling (Sarkis, 2003; Ahi & Searcy, 2015).

In addition to environmental benefits, green logistics provides firms with economic and strategic advantages. Cost reductions are achieved through energy efficiency improvements, reduced fuel consumption, and more effective waste management (Nguyen, 2021). Companies implementing green logistics also enjoy enhanced brand reputation, stronger customer loyalty, and better access to capital markets due to improved ESG (Environmental, Social, and Governance) performance (Agyabeng-Mensah & Tang, 2021; Kim et al., 2024). Furthermore, regulatory compliance and alignment with international sustainability standards, such as the European Green Deal, are increasingly becoming prerequisites for global competitiveness (OECD, 2020; Wang et al., 2018).

Economic growth is often found to have a positive relationship with green logistics performance. According to Özaytürk and Özekenci (2024), a one-unit increase in GDP results in a 0.79-unit improvement in green logistics performance in EU countries, suggesting that higher economic output enables more investments in green technologies and infrastructure. This finding aligns with studies by Aldakhil et al. (2018) and Ouni & Ben Abdallah (2024), which also indicate that economic growth supports the adoption of environmentally friendly logistics practices. However, green logistics investments require high upfront costs, which can temporarily reduce trade competitiveness, especially in export-oriented sectors (Liu et al., 2022).

Trade openness (TO), on the other hand, exhibits a more complex and often negative relationship with green logistics. While openness can promote economic growth and facilitate technology transfer, it can also lead to increased emissions and environmental pressures due to higher production and transportation activities (Wang et al., 2023; Özaytürk & Özekenci, 2024). Empirical evidence suggests that in emerging economies, a one-unit increase in trade openness can reduce green logistics performance by as much as 2.40 units in the long term and 10.78 units in the short term (Özekenci, 2025). This paradox highlights the need for balancing economic integration with environmental considerations through targeted policy instruments such as subsidies, tax incentives, and international cooperation.

Foreign direct investment (FDI) is another critical factor influencing green logistics. While some studies support the "pollution halo" hypothesis, suggesting that multinational enterprises introduce cleaner technologies and improve environmental standards in host countries (Pao & Tsai, 2010; Eskeland & Harrison, 2003), others emphasize the "pollution haven" hypothesis, where foreign investors move environmentally harmful operations to countries with weaker regulations (Dean et al., 2009; Famanta et al., 2024). The effect of FDI on environmental performance often depends on the host country's regulatory strength, institutional quality, and the type of investments received (Barut et al., 2023; Sezer, 2023). In emerging economies, evidence shows that FDI does not always contribute positively to green logistics, and in some cases, it may even exacerbate environmental challenges (Yang et al., 2023).

Financial development plays a pivotal role in enabling green logistics transformation. A well-developed financial system enhances access to affordable financing, reduces risk premiums, and encourages long-term investments in green infrastructure and clean technologies (Alshubiri, 2017; Jinru et al., 2022). Financial instruments such as green bonds, sustainability-linked loans (SLLs), and other green financing mechanisms have become vital tools to support these investments (Flammer, 2021; OECD, 2024). Green bonds are particularly instrumental in financing large-scale projects related to renewable energy, energy efficiency, and sustainable transport (Climate Bonds Initiative, 2025). Meanwhile, SLLs incentivize firms to improve ESG metrics by linking borrowing costs to sustainability performance targets (Pop & Atanasov, 2021; Loumioti & Serafeim, 2022).

Despite their potential, financial accessibility in emerging economies is hindered by high transaction costs, weak institutional frameworks, and limited market depth (Fan et al., 2022; Xu & Li, 2024). The lack of standardized definitions and certification systems increases the risk of "greenwashing," undermining investor confidence and reducing the effectiveness of green finance (Zaman & Shamsuddin, 2017). Moreover, the inadequate integration of environmental risks into financial systems makes it difficult for green projects to compete with traditional investments that promise higher short-term returns (Nguyen, 2021).

Theoretical frameworks such as the Natural Resource-Based View (NRBV) and Dynamic Capabilities Theory (DCT) further illuminate the mechanisms linking financial development to green logistics performance. NRBV suggests that firms can achieve sustainable competitive advantages by leveraging green resources, including eco-innovations, sustainable supply networks, and green human capital (Agyabeng-Mensah & Tang, 2021). DCT highlights the need for firms to continuously adapt by sensing environmental changes, seizing green opportunities, and reconfiguring resources to integrate sustainable practices into core operations (Sandberg, 2021).

At the macro level, differences in financial and institutional structures between developed and emerging economies significantly influence the adoption of green logistics. In advanced economies, strong legal frameworks, well-established capital markets, and technological readiness foster green logistics investments (Cole & Elliott, 2003; OECD, 2020). By contrast, emerging economies often struggle with fragmented financial systems, regulatory uncertainty, and institutional weaknesses, which hinder green transitions despite growing environmental awareness (Barut et al., 2023; Sezer, 2023).

Studies on the Belt and Road Initiative (BRI) economies (Li et al., 2021) and BRICS countries (Asif et al., 2024) highlight that the relationship between financial development and green logistics is not straightforward and is heavily mediated by local technological capacity, policy alignment, and energy use patterns. In some cases, foreign investments and trade openness can exacerbate environmental degradation if they prioritize short-term economic gains over sustainability objectives (Yang et al., 2023).

In summary, existing literature emphasizes that financial development alone is insufficient to achieve sustainable logistics transformation. A holistic approach combining financial instruments, strong governance, regulatory reforms, and technological innovations is essential for the effective implementation of green logistics strategies, especially in emerging economies. This study builds upon these findings to explore the

dynamic relationships between financial development, FDI, trade openness, and green logistics performance in emerging OECD countries, providing policy implications for fostering a greener and more sustainable logistics sector.

3. DATA AND METHODOLOGY

This study analyzes the impact of financial development, foreign direct investment (FDI), and trade openness on green logistics in emerging OECD countries using a panel dataset covering the period from 2002 to 2021. The analysis focuses on nine emerging OECD countries: Turkey, Poland, Mexico, Hungary, Slovakia, Colombia, Latvia, Lithuania, and Estonia.

Table 1: Variables

Symbol	Variables	Definition	Source
GL	Green Logistics	The ratio of transport-related CO_2 emissions to GDP	Climate Watch
FD	Financial Development	Financial Development Index	International Financial Statistics (IFS)
FDI	Foreign Direct Investment	Foreign direct investment (as a percentage of GDP)	World Bank
TO	Trade Openness	Total trade/GDP ratio	World Bank

The dependent and explanatory variables are presented in Table 1. The dataset consists of 180 observations (9 countries × 20 years), and descriptive statistics were used to examine the distributional characteristics of each variable. The potential issue of multicollinearity among independent variables was checked using the Variance Inflation Factor (VIF), with all values found to be below 1.15 (Gujarati, 2004). Cross-sectional dependence was tested using Pesaran's CD test (Pesaran, 2004), revealing the presence of significant dependence across all variables. The stationarity of the series was assessed through the Levin-Lin-Chu (LLC) test, and all variables were found to be stationary at the 1% significance level (Levin, Lin, & Chu, 2002). Furthermore, the PANIC test (Bai & Ng, 2004) was conducted to analyze the existence of common factors, confirming the presence of a common unit root effect. Considering that the variables exhibit both I(0) and I(1) properties, the Panel ARDL model was employed to analyze both short- and long-term relationships (Pesaran, Shin, & Smith, 1999). The model specification includes a level equation for long-term relationships and an error correction model for short-term dynamics. The optimal lag length was determined as 1 using the Akaike Information Criterion (AIC), and country fixed effects were controlled without applying a Hausman test. To ensure the validity of the model, various diagnostic tests were conducted, including Wooldridge's test for serial correlation (Wooldridge, 2002) and the Breusch-Pagan test for heteroskedasticity (Breusch & Pagan, 1979). This comprehensive methodological framework aims to capture the dynamic effects of financial development on green logistics performance in emerging OECD countries and to provide robust evidence for policymakers and researchers.

4. FINDINGS

In panel data analysis, the potential simultaneous interactions between countries were tested using Pesaran's (2004) cross-sectional dependence (CD) test. The null hypothesis of this test states that "there is no cross-sectional dependence."

Table 2: Cross-Sectional Dependence Test Results (Pesaran CD Test)

Variable	Z-statistic	p-value	Result
CO_2	6.429	<0.001	Dependence exists
TO	18.365	<0.001	Dependence exists
FD	10.571	<0.001	Dependence exists
FDI	5.714	<0.001	Dependence exists

Table 3: Levin-Lin-Chu (LLC) Unit Root Test Results

Variable	z-statistic	p-value	Stationarity Result
CO_2	−2.496	0.0063	Stationary (I(0))
TO	−4.293	<0.001	Stationary (I(0))
FD	−3.858	<0.001	Stationary (I(0))
FDI	−3.519	0.0002	Stationary (I(0))

The results indicate that there is cross-sectional dependence in all variables. Therefore, the application of second-generation panel data techniques was deemed appropriate.

To determine the stationarity of the variables, the Levin-Lin-Chu (LLC) unit root test was applied. This test examines whether panel series are stationary. All variables were found to be stationary at the 1% significance level.

In addition, the PANIC test (Bai & Ng, 2004) was conducted to evaluate the stationarity of common factors in the panel. The results revealed that none of the four principal components passed the stationarity threshold, indicating the presence of a common unit root effect.

Table 4: PANIC Test – Stationarity of Common Factors

Common Component	ADF Test Statistic	p-value	Stationarity Result
PC1	−3.4964	0.0644	Non-stationary (near)
PC2	−2.3353	0.4446	Non-stationary
PC3	−3.3594	0.0834	Non-stationary
PC4	−0.9047	0.9346	Non-stationary

Table 5: Descriptive Statistics of Variables (2002–2021, 9 countries

Variable	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
CO_2	0.739	0.572	0.036	2.147	0.642	2.148
TO	81.609	43.605	23.911	179.153	0.423	1.719
FD	0.303	0.181	0.011	0.654	0.213	1.551
FDI	4.470	4.497	−1.576	25.320	2.343	9.356

In terms of descriptive statistics, the FDI variable was observed to have high skewness and kurtosis values, indicating the presence of outliers.

The long-run coefficients from the Panel ARDL estimation are presented below. In the long term, financial development was found to have a statistically significant negative effect on CO_2 emissions, suggesting a positive impact on green logistics. The effects of FDI and trade openness were found to be statistically insignificant.

Table 6: Panel ARDL Results – Long-Run Coefficients

Variable	Coefficient	Std. Error	t-statistic	p-value	Significance
FD	−0.731	0.249	−2.936	0.004	**
FDI	−0.040	0.072	−0.556	0.579	NS
TO	0.003	0.002	1.344	0.183	NS

Table 7: Panel ARDL Results – Short-Run Coefficients

Variable	Coefficient	Std. Error	t-statistic	p-value	Significance
ΔFD	−0.275	0.203	−1.355	0.176	NS
ΔFDI	0.032	0.057	0.561	0.575	NS
ΔTO	−0.001	0.001	−0.941	0.348	NS

In the short-run estimation, the coefficients were not statistically significant, indicating that the effects of the variables are more prominent in the long term.

Finally, diagnostic tests were conducted to evaluate the statistical validity and robustness of the model. The results showed no evidence of serial correlation, heteroskedasticity, or multicollinearity.

5. CONCLUSION

This study investigated the dynamic relationship between financial development and green logistics in emerging OECD countries for the period 2002–2021 using the Panel ARDL approach. The findings reveal that financial development has a significant long-term negative effect on CO_2 emissions from transportation relative to GDP, implying that higher levels of financial development contribute positively to green logistics performance. This result suggests that well-developed financial systems can provide the necessary financial infrastructure and accessible capital required for green logistics investments, such as cleaner transportation technologies and sustainable supply chain practices (Alshubiri, 2017; Long et al., 2022).

On the other hand, the effects of foreign direct investment (FDI) and trade openness were found to be statistically insignificant in both the short and long run. These findings align with previous studies emphasizing that the impact of FDI and trade openness on environmental performance may vary depending on country-specific contexts, regulatory frameworks, and the quality of institutional structures (Li & Ramanathan, 2020; Famanta et al., 2024).

The study highlights that promoting green logistics requires not only financial capital but also strong institutional frameworks, effective governance, and comprehensive environmental policies. It underscores that financial development alone is not sufficient for sustainable development; there must also be supportive policy measures and incentives to encourage green investments (Agyabeng-Mensah & Tang, 2021; Xu & Li, 2024).

For policymakers, these results imply that strengthening financial systems and improving access to green finance can play a crucial role in advancing green logistics, especially in emerging economies. Measures such as supporting green bonds, sustainability-linked loans, and environmental subsidies can help overcome the high initial costs associated with green logistics projects and promote long-term environmental benefits.

Overall, this study contributes to the literature by providing empirical evidence on the long-term impact of financial development on green logistics in emerging OECD countries, offering valuable insights for both researchers and decision-makers.

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PRIORITIZING THE INTERNAL AUDIT UNIVERSE IN A PHARMACEUTICAL COMPANY: AN INTEGRATED AHP–TOPSIS APPROACH

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ABSTRACT

Purpose- The purpose of this study is to determine which units should be primarily applied to the internal audit universe in the pharmaceutical company where the application is carried out, with the support of the top management and using analytical decision-making methods.

Methodology- In the study, AHP and TOPSIS, which are MCDM methods, were used together. In the first stage, the criteria affecting the internal audit were weighted with the AHP method; then, the sub-units of the company were evaluated concerning the results of the TOPSIS method.

Findings- As a result of the analyses, the most critical factors affecting the internal audit universe were determined. These findings reveal the basic elements that should be taken into consideration in the internal audit process and contribute to a more systematic structure of corporate audit practices. In addition, it has been shown that a more efficient and target-oriented internal audit process can be carried out with limited human resources with the application of the TOPSIS method. This approach supports the effective use of resources and organizational stability in audit processes.

Conclusion- Based upon the analysis and findings, it may be concluded that objectively weighted criteria with AHP and prioritization with TOPSIS allowed the pharmaceutical company to direct limited audit resources to the highest risk units. The resulting model not only increases stability and efficiency in the existing organizational structure but also provides a transparent, repeatable, and defensible internal audit framework for companies of different sectors and sizes.

Keywords: Audit universe**,** multi attribute decision making, TOPSIS, AHP
JEL Codes: M42, C44, L22

1. INTRODUCTION

As in all industries, the pharmaceutical sector is also expanding rapidly, driven by rapid technological advancements (Ortakarpuz et al., 2018). These rapid developments bring work intensity and risks that may occur in the work environment (Bota-Avram & Popa, 2011). At this point, regulations and internal audit structures come into play. A risk-based internal audit structure needs to be established, and the established structure needs to be applied to all units at certain intervals (Institute of Internal Auditors, 2020). In today's business world, companies want to manage their limited employee resources and finances correctly. Managing the internal audit mechanism is of great importance at this point. The internal audit process may vary depending on factors such as the turnover of the relevant sub-unit of the company, its dependence on legal processes, its personnel, and the company's location. This situation can be explained by the fact that different types of applications are required in each area of the company. When considering multinational companies, it becomes clear that different practices must be implemented following the legal processes of each country. At this point, deciding which unit needs what level of auditing is a complex process and can be open to subjective evaluations.

In the classical internal audit method, the approach is usually based on the auditors' experiences, intuitions, and internal observations, and is mostly dependent on subjective assessments. In this method, the prioritization of the processes to be audited is mostly done according to

fixed scoring systems, past audit results, or the opinions of managers. Criteria weights are usually kept constant or calculated by simple multiplication on a certain scale. This situation may cause some limitations, such as not being able to adequately reflect the real risk levels of the processes, not being able to adapt quickly to changing conditions, and a lack of transparency in the decision-making process. However, in today's complex and rapidly changing business environment, it has become necessary to support this method with systematic and data-based alternatives.

Such multi-dimensional decision problems can be systematically analyzed with Multi-Criteria Decision Making (MCDM) techniques. MCDM methods provide objective and consistent results on how to allocate resources most efficiently by considering different criteria simultaneously. Thus, internal audit activities can be planned with both a risk-focused and strategic approach. In the continuation of the study, different internal audit functions were weighted with the Analytic Hierarchy Process (AHP) method, and their importance levels were revealed. Thanks to the Technique for Order Performance by Similarity to Ideal Solution (TOPSIS) methodology, the internal units were ranked with the help of the weights found with the AHP method. The order in which internal audit activities should be carried out in company units has been determined.

The biggest difference between the Internal Audit Universe created using the classical and AHP & TOPSIS methods is the method of determining the criteria weights affecting the study, and therefore the weights of the criteria. The difference in weights is the factor that most affects the audit priority of the processes within the institution. Determining the weights of the criteria with the AHP method, which is an objective decision-making technique, rather than the subjective opinion of the auditor and the company management, has ensured that the audit priorities of the institution are more systematic, transparent, objective, planned, professional, dynamic, and explainable. Another major difference is that, while the weights determined in the old method were found only by multiplying the risk values determined on a 4-point scale for each subsection, the new method is more analytical and data-oriented, thanks to applying all steps of the TOPSIS method. Additionally, the application of multi-criteria decision-making methods like AHP and TOPSIS enhances the clarity and defensibility of decision-making processes for all stakeholders involved in the audit process. This contributes to building greater trust and confidence at the management level (Kahraman et al., 2015).

In the following parts of the study, firstly, methodologies are explained, then in Part 3, application of the proposed model to the selected problem is presented with a step-by step approach. After the final results are provided, future studies are proposed in the conclusion.

2. METHODOLOGY

Within the scope of the study, AHP and TOPSIS methods, which are multi-criteria decision-making techniques, were used together. The criteria were weighted by applying the AHP method, then the TOPSIS application was applied, and the alternatives were ranked. Developed by Saaty (2008), AHP is a decision-making tool used to solve complex problems and divides these problems into hierarchies and sub-problems. Model steps are given in Figure 1. When applied in internal auditing, it will allow weights to be assigned to criteria according to their relative importance (Woods et al., 2018; Sarens et al., 2009).

Figure 1: AHP Steps (Adapted from Saaty, 2008)

Step 1:   Determining the problem and creating the hierarchical structure.

Step 2: Collecting information from decision makers for criteria and creating normalized pairwise comparison matrices;

$$M = \begin{bmatrix} 1 & a_{12} & ... & a_{1n} \\ a_{21} & 1 & ... & a_{2n} \\ ... & ... & ... & ... \\ a_{n1} & a_{n2} & ... & 1 \end{bmatrix} , a'_{ij} = \frac{a_{ij}}{\sum_{i=1}^{n} a_{ij}}, i,j = 1,2,...,n$$

Step 3: Determination of Eigenvector (Relative Importance Vector): $w_i = \left(\frac{1}{n}\right)\sum_{j=1}^{n} a'_{ij}, i,j: 1,2,...,n$

Step 4: Checking the consistency of the comparison matrices. First calculating the CI value, then finding the CR value suggested by Saaty is calculated with the equations $CI = \frac{\lambda_{max}-n}{n-1}$ and λ_{max} represents the largest eigenvalue and n is the number of criteria and RI is the matrix table value determined by Saaty, CR = CI /RI The consistency value must be less than 0.1. In case of inconsistency in the opinions of the decision makers, the consistency value will be greater than 0.1. In this case, step 2 is repeated until the value is less than 0.1

Step 5: The weights of the decision variables are determined.

TOPSIS was proposed by Hwang and Yoon (Hwang & Yoon, 1981). It is a method based on idealizing the positive and negative solutions created by using the best and worst results of the alternatives and then choosing the solution closest to the positive ideal and farthest from the negative ideal (Hwang & Yoon, 1981) as presented in Figure 2.

Figure 2: TOPSIS Steps (Adapted from Hwang & Yoon, 1981)

Step 1: Collecting decision makers' opinions for alternatives and creating a decision matrix: $A_{ij} = \begin{bmatrix} a_{11} & a_{12} & ... & a_{1n} \\ a_{21} & a_{22} & ... & a_{2n} \\ ... & ... & ... & ... \\ a_{m1} & a_{m2} & ... & a_{mn} \end{bmatrix}$

Step 2: Normalization of the Matrix

$$N_{ij} = \frac{a_{ij}}{\sqrt{\sum_{i=1}^{m} a_{ij}^2}} \ (i = 1, ..., m \ ve \ j = 1, ..., n) \quad N_{ij} = \begin{bmatrix} a_{11} & a_{12} & ... & a_{1n} \\ a_{21} & a_{22} & ... & a_{2n} \\ ... & ... & ... & ... \\ a_{m1} & a_{m2} & ... & a_{mn} \end{bmatrix}$$

Step 3: Determining Positive Ideal (A*) and Negative Ideal (A-) Solutions. If maximization is aimed at, the positive ideal solution values, which are the maximum values for each column, are determined. Then, the negative ideal solution values are determined by obtaining the minimumvalues for each column. Euclidean distance is used when calculating distance values to positive and negative ideal points.

$$d_{ij} = \sqrt{\sum_{k=1}^{p} (x_{ik} - x_{jk})^2}$$

Step *4: Calculation of Separation Measures*   *: $S_i^* = \sqrt{\sum_{j=1}^{n} (v_{ij} - v_j^*)^2}$*   *$S_i^- =$*

Step 5: *Calculating Relative Closeness to the Ideal Solution:* $C_i^+ = \frac{S_i^-}{S_i^- + S_i^+}$

3. THE PROPOSED APPLICATION

In the application part of this study, an AHP-TOPSIS-based evaluation, model, and analysis were applied to the in-company units where the application was made. The units examined were evaluated from many aspects and their effects on the company's audit universe were tried to be determined. In the application, firstly, the problem was determined, and the criteria were established. An AHP study was conducted to weigh these criteria, and then the alternatives were ranked using the TOPSIS application.

3.1. Weight Determination with AHP

The steps of AHP, as described below, are used to determine the importance weights of the criteria.

Step 1: Determining the problem and creating the hierarchical structure: The AHP application aims to plan the internal audit universe correctly. To plan correctly, it is aimed to determine and categorize all audit areas within the organization. The AHP application aims to plan the internal audit universe correctly. To plan correctly, it is essential to identify all audit areas within the organization and categorize them accordingly. At this stage, alternatives need to be determined. As an alternative, the sub-units of the company that need internal auditing have been determined.

Afterwards, the criteria were determined to answer the question of the priority/order in which the internal audit activities would be applied in the company, which was the main purpose of the study. In both the old classical method and the method where AHP & TOPSIS decision-making techniques are used, some criteria are used to determine the audit priority. In this study, the most commonly used criteria and sub-criteria in the preparation of the audit universe in Internal Audit departments were used. The criteria selection was finalized with the assistance of academicians who are experts in the field, through an examination of the literature, and with input from company experts. After the criteria and alternatives were determined, managers completed the comparison matrices. The same managers were asked to score the same criteria on a scale of 1-10 for the TOPSIS application, and the application was carried out with these data. In this study, the following risk criteria (Table 1) were used in determining the audit universe (Kahraman et al., 2003).

Table 1: List of Main and Sub-Criteria for the Selected Problem

Criteria		Sub Criteria
Financial Impact(A)	A	-
Legal and Process Risk (B)	B1	Interaction and influence risk with other processes
	B2	Complexity risk of activities and transactions
	B3	Legal compliance and regulatory risk
Employee(C)	C1	Staff inadequacy and turnover risk
	C2	Organizational change risk in the last 3 years
Audit (D)	D1	Number of frauds and irregularities risk
	D2	Risk of not being audited for a long time
	D3	Risk of inadequacy of internal control systems
	D4	Audit Maturity Risk
Distance risk from the head office(E)	E	-
Corporate Risk Inventory Current Risks(F)	F	-

Step 2: Creating pairwise comparison matrices: Comparison matrices were used to determine superiority. After scoring the sub-criteria, the final comparison matrix, a 6x6 matrix with 6 main criteria, was obtained. The intensity of importance values in Table 2 was used when making comparisons.(Vaidya and Kumar, 2006) The 1-9 comparison scale prepared by Satty was used (Saaty and Sodenkamp, 2008).

Table 2: An Example for a Pairwise Comparison Matrix

Pairwise Comparison Matrix								Normalized Comparison Matrix					
Decision Variables	**A**	**B**	**C**	**D**	**E**	**F**		**Decision Variables**	**A**	**B**	**C**	**D**	**E**	**F**
A	1	3	5	1/5	7	3		**A**	0.143	0.206	0.214	0.102	0.206	0.399
B	1/3	1	3	1/5	5	1/5		**B**	0.048	0.069	0.129	0.102	0.147	0.027
C	1/5	1/3	1	1/9	3	1/5		**C**	0.029	0.023	0.043	0.057	0.088	0.027
D	5	5	9	1	9	3		**D**	0.713	0.344	0.386	0.511	0.265	0.399
E	1/7	1/5	1/3	1/9	1	1/9		**E**	0.020	0.014	0.014	0.057	0.029	0.015
F	1/3	5	5	1/3	9	1		**F**	0.048	0.344	0.214	0.170	0.265	0.133

Step 3: Determination of Eigenvector (Relative Importance Vector): As a result of the steps, the criterion weights were determined as 0.21 for A, 0.09 for B, 0.04 for C, 0.44 for D, 0.02 for E, and 0.20 for F, respectively. These results show that criterion D has the highest importance, whereas criterion E has the lowest weight value.

Step 4: Calculating the Consistency of Eigenvector: The consistency of pairwise comparisons made by the raters was assessed using the Random Index table (Mumpower et al., 2012). According to this consistency analysis, the comparisons made between the criteria are within the accepted threshold range. In the AHP analysis, the number of criteria was determined as 6. The highest eigenvalue obtained was 6.65. The Consistency Index (CI) calculated according to this value was found to be 0.13. The Random Consistency Index (RI) value used for the six criteria was 1.24. The Consistency Ratio (CR) was 0.1051. Since the CR value was slightly above 10%, the decision matrix was at an acceptable level.

3.2. Listing the Alternatives with TOPSIS

In this study for the selected problem in the pharmaceutical industry, TOPSIS is used to list the units to be audited internally. The method is implemented by following the steps below.

Step 1: Decision Matrix: The opinions of the decision makers' regarding the alternatives initial decision matrix is constructed as presented in Table 3. The rows of the decision matrix contain i,i=1,2,.....m alternatives, and the columns contain j,j=1,2,....n criteria.

Table 3: Initial Decision Matrix

Dep.	A	B1	B2	B3	C1	C2	D1	D2	D3	D4	E	F
DLDF	3.00	1.50	1.50	3.00	2.00	1.58	4.00	4.00	2.00	1.00	4.00	2.00
DLGAB	2.00	3.00	1.75	2.00	2.88	2.38	4.00	4.00	1.63	2.63	4.00	4.00
DLUKÇ	3.00	2.67	2.00	3.00	2.00	1.00	1.00	2.00	2.00	1.00	4.00	2.00
.	.	.	.	.	.	.	.	.	.	.	.	.
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.	.	.	.	.	.	.	.	.	.	.	.	.
GMUÜ	4.00	2.00	1.00	3.00	3.00	2.00	4.00	4.00	2.00	1.00	2.33	2.00
GMY	1.00	3.25	3.25	2.00	1.75	1.00	1.00	4.00	2.50	1.00	1.00	2.00
GMKS*	2.00	1.67	1.17	3.00	1.00	1.00	3.00	2.00	1.00	1.50	1.00	2.00
GMH	2.00	2.00	2.00	3.00	2.00	1.00	1.00	1.00	1.00	3.00	1.00	2.00

Step 2: Normalized Decision Matrix: In the second step, the initial decision matrix is normalized based on Step 2 as presented in Table 4.

Table 4: Normalized Decision Matrix

Dep.	A	B1	B2	B3	C1	C2	D1	D2	D3	D4	E	F
DLDF	0.274	0.156	0.178	0.256	0.226	0.199	0.312	0.261	0.237	0.118	0.456	0.188
DLGAB	0.183	0.312	0.208	0.171	0.325	0.299	0.312	0.261	0.193	0.311	0.456	0.376
DLUKÇ	0.274	0.277	0.238	0.256	0.226	0.126	0.078	0.130	0.237	0.118	0.456	0.188
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
GMUÜ	0.091	0.338	0.386	0.171	0.198	0.126	0.078	0.261	0.296	0.118	0.114	0.188
GMY	0.183	0.173	0.139	0.256	0.113	0.126	0.234	0.130	0.119	0.178	0.114	0.188
GMKSSPO	0.183	0.208	0.238	0.256	0.226	0.126	0.078	0.065	0.119	0.355	0.114	0.188
GMH	0.091	0.104	0.119	0.142	0.169	0.252	0.078	0.261	0.119	0.237	0.114	0.188

Step 3: Determining Positive and Negative Ideal (A-) Solutions: Based on Figure 2, Step 3, A* and A- are calculated as presented in Table 5.

Table 5: Positive and Negative Ideal Solutions

	A	B			C		D				E	F
	A	B1	B2	B3	C1	C2	D1	D2	D3	D4	E	F
Positive Ideal	0.077	0.004	0.003	0.021	0.013	0.002	0.076	0.030	0.019	0.009	0.011	0.074
Negative Ideal	0.019	0.001	0.001	0.006	0.004	0.001	0.019	0.007	0.006	0.003	0.003	0.018

Step 4: Calculation of Separation Measures: Separation measures are calculated for each alternative using positive and negative ideal solutions (See Table 6).

Table 6: Separation Measures

	DLDF	DLGAB	DLUKÇ	GMBT	GMDT	GMF	GMH	GMIK	GMİ	GMK
S+	0.038	0.040	0.041	0.055	0.055	0.043	0.060	0.057	0.058	0.059
S-	0.114	0.121	0.119	0.100	0.120	0.077	0.105	0.074	0.096	0.087

	GMKİ	GMM	GMTLZ	GMTÜ	GMTS	GMUÜ	GMY	GMKSSPO	GMH	
S+	0.062	0.071	0.072	0.073	0.080	0.081	0.082	0.083	0.091	
S-	0.082	0.092	0.089	0.077	0.080	0.066	0.063	0.061	0.059	

Step 5: Calculating Relative Closeness to the Ideal Solution: The highest proximity values were observed for DLDF, DLGAB, DLUKÇ, and GMKİ, which showed that these alternatives should be prioritized. Options such as GMUÜ, GMY, GMKSSPO, and GMH have relatively less importance with lower CI+ values.

4. CONCLUSION

In the classical method, preparing the Internal Audit Universe relied on subjective judgment, historical data, and limited stakeholder input, often lacking structured decision-making. In contrast, the modern approach incorporates multi-criteria decision techniques like AHP to systematically prioritize risk factors based on expert input and relative importance, and TOPSIS to rank audit areas by how closely they align with an ideal risk profile. Also, the results could be given about which one is more reliable for the institution if the results are compared with both methods.

The use of AHP and TOSIS provided the Board of Directors for the Internal Audit Plan, with an objective and data-driven decision-making process, providing more confidence and risk-focused gain compared to the traditional approach. The work also increased transparency, reduced bias, and ensured that audit priorities were aligned with the organization's strategies and current risks. It also led to more agile decisions, stronger stakeholder trust, and better resource allocation. As a result, it supported long-term sustainability by encouraging continuous improvement, adaptability, and alignment with the organization's evolving goals and risk environment. The order of importance and weights of the criteria determined to evaluate risks and reach audit priority were evaluated during the time of this study by company managers based on the Internal Audit Universe results prepared with the AHP and TOPSIS method.

The Internal Audit Plan was prepared based on the Internal Audit Universe results in the form of processes and sub-processes. The prepared Internal Audit Plan was accepted with much less intervention compared to the Internal Audit Plan prepared with the classical method, Internal Audit Universe. The interventions made by the Board of Directors were mostly in the form of adding to the plan the possible risky operational areas that could not be audited in the recent past, and the special subject-based audits that were outside the processes used in the Internal Audit Universe. In addition to the integrated use of AHP and TOPSIS methods in this study, other MCDM techniques can also be applied to address the problems within the internal audit domain.

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MODERATING ROLES OF RELATIONAL LEARNING AND COMPETITION INTENSITY ON THE EFFECT OF RELATIONSHIP MANAGEMENT CAPABILITY ON THE SERVICE INNOVATION PERFORMANCE OF CALABARZON TRAVEL AGENCIES

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ABSTRACT

Purpose- Relational learning is the process by which partners exchange knowledge, develop a shared understanding, and incorporate this understanding into the memory of the domain (Waheed, W., 2019). It speeds up the sharing of information, common understanding, and creation of a special relationship memory. The two parties' cooperative connection is then further encouraged by the growing volume of information and communication. When the conditions of cooperative relationships shift, the impact of RMC on the performance of businesses will also evolve. Thus, relational learning could moderate the relationship between service innovation performance and relationship management skills (Hadid, W., 2019). Meanwhile, the competition intensity is intimately tied to the activity of innovation within or across businesses. Competition intensity has either directly or indirectly impacted organizations' technological innovation, corporate performance, product innovation performance, and innovation dissemination efficiency (Huang, 2018). This study assessed the moderating roles of relational learning and competition intensity on the effect of relationship management capability to the service innovation performance of travel agencies in CALABARZON with the goal of developing a relationship management strategic program for leveraging relationship management capability of travel agencies.

Methodology- It utilized a descriptive correlational design and survey questionnaire was used as the main data gathering instrument which was supported by the conduct of unstructured interviews. The instrument was distributed to 142 owners, managers, or supervisors of travel agencies who have direct supervision of the operation of the business. The respondents were selected from the total population of 244 through employing the stratified random sampling.

Findings- The results and findings of the study revealed that the level of service innovation performance is very good (M = 6.09; SD =). Digitalization in tourism is aimed at making the tourism business not only more flexible, consistent with the realities of time, but also more competitive in the developing digital world. Digitalization in the tourism industry ensures a situation where customers get excellent results, and the owners of travel companies get higher incomes (Kayumovich, 2020). Moreover, the results also revealed that travel agencies are also very good in relationship management capability (M = 6.33; SD =). Relationship management capability increases knowledge transfer and resource acquisition by fostering strong ties among partners, while relationship learning assists organizations in identifying and realizing the value of knowledge and resources in service innovation practice (Zhu et. Al, 2022). Additionally, the level of relational learning and competition intensity as assessed by the respondents are extremely high with M = 6.09; SD = , and M = 6.09; SD = ,respectively. The findings of the study also revealed that these two variables do not moderate the relationship between relationship management capability and service innovation performance.

Conclusion- Based from the results and findings of the study, a relationship management strategic program was proposed to leverage the relationship management capability of travel agencies on the identified areas of improvement that will impact service innovation performance.

Keywords: Relational learning, competition intensity, relationship management capability, service innovation performance, travel agencies
JEL Codes: M10, M15, M31

1. INTRODUCTION

A pillar of the global economy, the travel industry has seen tremendous change recently because of shifting customer tastes, advances in technology, and a growing focus on individualized experiences. Travel agents have difficulty preserving market relevance and guarantee sustained growth in this competitive environment. In the Philippines, where tourism is a significant contributor to the national economy, travel agencies face mounting pressures to not only maintain high-quality customer service but also continuously innovate to stay relevant in a rapidly changing market environment.

Service innovation in travel agencies is transforming the industry, driven by advancements in technology and shifting consumer expectations. Innovation in the travel and tourism industry can take many different forms. It essentially refers to the many ways in which businesses and corporations update the experience that customers and tourists have when traveling. Travel agencies are leveraging artificial intelligence to offer personalized services. In the performance of service innovation of travel agencies, relationship management is pivotal to service innovation because it fosters personalized experiences, builds customer loyalty, and enables the co-creation of services that meet evolving traveler expectations. Effective relationship management allows travel agencies to collect and analyze detailed customer data, including preferences, past bookings, and feedback. This information enables agencies to tailor services and recommendations to individual travelers, enhancing satisfaction and encouraging repeat business

Travel agencies are becoming more aware of the strategic significance of relationship management capabilities (RMC) as a critical factor in determining their long-term success in the fiercely competitive business world of today. Through RMC, they can successfully manage and cultivate relationships with important stakeholders, which in turn promotes cooperation, trust, and the development of mutual values. These skills are especially important in the travel industry where innovation is a major factor in client pleasure and distinctiveness in addition to providing a competitive edge. Firms with relationship management capability can absorb operational resources to achieve service innovation performance. High relationship management capability enables firms to establish and broaden the network relationship with new customers or new partners, which makes it easier for them to obtain financial capital, social capital, customer capital and other operational resources. The interaction view on relationship management in which two parties work together to strengthen mutual trust to ensure or improve their economic performance is congruent with relational learning as a relational management capability.

Relational learning is the process by which partners exchange knowledge, develop a shared understanding, and incorporate this understanding into the memory of the domain (Waheed, W., 2019). It speeds up the sharing of information, common understanding, and creation of a special relationship memory. The two parties' cooperative connection is then further encouraged by the growing volume of information and communication. When the conditions of cooperative relationships shift, the impact of RMC on the performance of businesses will also evolve. Thus, relational learning could moderate the relationship between service innovation performance and relationship management skills (Hadid, W., 2019).

Meanwhile, the competition intensity is intimately tied to the activity of innovation within or across businesses. Competition intensity has either directly or indirectly impacted organizations' technological innovation, corporate performance, product innovation performance, and innovation dissemination efficiency. Other scholars have argued that risks of innovation including failure and competitors' quick copying of innovative products are affected by the increased competition intensity, Consequently, there should be a thorough discussion of the competition intensity in the innovation practices of businesses.

2. LITERATURE REVIEW

Service innovation modifies the manner that customers are served to generate value for customers and income for the business. A business may see a rise in revenue through a new service innovation because of increased spending by current clients, a better reputation for the business, recommendations, etc. Four changing trends, which include increasing customer demand, the growth of mobile Internet, big data and advanced analytics, and the Internet of Things (IoT) have made it easier for businesses to innovate their services (Shields, K., 2022). While it is evident that service innovation differs from technology innovation and product innovation, it can be seen in both the industrial and service sectors and can be drastic and frequently incremental (Li, L., 2019). It is a value improvement procedure that adds value for clients, staff, companies, communities, partners, and alliances (Kim, H., 2015). Service innovation now encompasses new behaviors and processes such as service concept, service provider and user connection, service delivery system, and technology transformation, rather than just innovation in the service industry (Cheng, B.L., 2021).

Innovation is critical to a company's success (Huang et.al, 2018) and it has a major impact on product quality and operational performance (Chen et.al, 2021). While a company's ability to innovate has an indirect impact on its operational performance (Sohl et. al, 2020), it does have the potential to boost its overall performance. Innovation is a significant driver of corporate competitiveness and performance development, particularly for small and medium-sized enterprises (Kumar, 2021). Tourism settings are characterized by networks and small-scale structures that challenge incumbents to systematically capitalize on external and internal resources to respond to market demands (Pfammatter, 2024). Research findings document the usefulness of cooperation in tourist destinations (Wilke et al., 2019, Della Corte and Aria, 2016), and there is evidence that cooperation among tourism service providers and intermediaries is beneficial for participating parties (Chang et al., 2019).

Enhancing inter-organizational trust to increase a high degree of harmony, trust our partner's decisions, competence, and abilities to fulfill agreements and promises to share resources and operational strategies are important in travel industry (Nguyen, et. al., 2021). Enterprise network capabilities are the network management qualifications and task execution capabilities that enterprises have when dealing with external organizations and can improve network management qualifications in the process of performing network tasks. Relationship learning (information exchange, relationship memory) and competitive intensity may have a joint effect on the service innovation performance of a firm involved in relationship management capability. On the other hand, relationship learning reduces the influence of relationship management (Zhu, H., et al., 2022).

Competition intensity positively and dramatically modifies the relationship between service innovation, marketing innovation, and customer satisfaction (Nwachukwu and Vu, 2022). Cooperative benefits of resource sharing imply improved competitiveness. To benefit from resource sharing, firms must find and engage attractive partners; manage, coordinate, and govern inter-organizational relationships; avoid or resolve cultural clashes with allies; and deal with risks associated with opportunistic or unpromising partner behaviors. Consequently, by effective relationship management capability and successful relationship learning, businesses will achieve high performance by interacting in creative service endeavors to satisfy client needs in a highly competitive environment. In other words, the combined effects of relationship management capability and relationship learning will optimize service innovation performance for businesses in a highly turbulent market (Pfammatter, et al., 2024).

3. DATA AND METHODOLOGY

It utilized a descriptive correlational design and survey questionnaire was used as the main data gathering instrument which was supported by the conduct of unstructured interviews. The respondents of the study are the one hundred forty-two (142) owners, managers, or supervisors of travel agencies in the CALABARZON Region who have direct supervision of the business operation. This is from the total population of two hundred twenty-four (224) accredited travel agencies based on the list gathered from the Department of Tourism website and was computed using Raosoft calculator with 95% confidence interval and 5% margin of error. The total number of respondents was distributed in different provinces of Cavite, Laguna, Batangas, Rizal, and Quezon by employing stratified random sampling.

4. FINDINGS

Based on the data gathered from the respondents, the researcher presents the following findings:

1. Based on the results, the respondents believed that they are excellent when it comes to service innovation performance with an overall mean of 6.09. In relation to this, majority of the respondents assessed that they are exceptional in terms of innovation results with the highest weighted mean of 6.27, and excellent in terms of innovation process which garnered the lowest weighted mean of 5.99. When it comes to innovation potential, majority of the respondents agreed that they are exceptional as implied by the composite mean of 6.09. The highest weighted mean of 6.32 indicates that travel agencies are excellent in building trust with their customers by ensuring their safety and security. The respondents also claimed that they are good at using data analytics and machine learning algorithms that can help them gain insight into customer preferences as shown by the lowest mean of 4.39. With respect to the process, the respondents believed that they are excellent as implied by the composite mean of 5.99. The owners, managers, or supervisors of travel agencies monitor and evaluate the innovation through collecting data on the performance of new initiative to the exceptional level as shown by the highest weighted mean of 6.31. Meanwhile, the respondents claimed that they are very good in scaling up provision of services, developing a marketing strategy and launching the innovation into the market including targeted marketing campaigns or launch events involving virtual experiences, contests, or experiential activations to showcase new destinations or services as shown by the lowest mean of 5.40. In relation to the assessment of the respondents regarding results of innovation, the composite mean of 6.27 suggests that travel agencies are exceptional in this area. In more specific terms, the respondents claimed that they are exceptional in achieving improved efficiency in service delivery, reduced service time, and optimized resources with highest weighted mean of 6.54. The assessment also showed that they are very good in having enhanced customer experience, which is measured in terms of customer satisfaction and feedback based from the lowest weighted mean of 6.07.

2. As far as the level of relationship management capability is concerned, the composite mean of 6.33 suggests that travel agencies are highly capable when it comes to different dimensions of relationship management capability. The respondents noted that they are highly capable in terms of relationship learning capability with highest mean of 6.36. Moreover, they are also highly capable in terms of relationship behavioral capacity based on the lowest weighted mean of 6.23. In terms of the level of relationship infrastructure capability, the respondents assessed that they are capable as reflected on the highest mean of 5.41. Specifically, the respondents agreed that before cooperating with a partner, the company firstly assess whether the establishment of this partnership will hinder the company's relationship with other partners. In this part, they are capable based from the highest mean of 6.11. On the other hand, respondents agreed that they are somewhat capable in terms of customer relationship management (CRM) systems, including tools for collecting, storing, and analyzing customer data and systems for gathering customer feedback are user-friendly and efficient with the lowest mean of 3.53. The composite mean of 6.36 points out that the respondents are highly capable when it comes to relationship learning capability. In more specific terms, the highest mean of 6.55 implies that travel agencies are highly capable in understanding client needs and concerns through effective listening practices. Meanwhile, the lowest means that companies are highly capable in terms of judging whether the resources provided by partners are useful. The assessment regarding the level of relationship behavioral capability signifies that travel agencies are highly capable with an overall mean of

6.23. The respondents noted that they are highly capable when it comes to building a good working relationship with partners which garnered the highest weighted mean of 6.37 while the lowest mean of 6.06 implies that the respondents are capable in employing software solutions to facilitate communication and collaboration with partners.

3. Based on the results, the composite mean of 6.50 implies that travel agencies have a very high level of relational learning. In a more specific terms, the highest mean of 6.58 means that the level in which the company and partners usually establish joint teams to solve operational problem is very high. On the other hand, the company also showed a very high level of sharing market information or customer demand information with partners with the lowest mean of 6,41. With respect to the level of competition intensity, the overall mean of 6.50 implies that competition in travel agencies is at a very high level. The respondents agreed that there are many companies in the market offering similar service products to them based on the highest mean of 6.57 with an interpretation on very high. Moreover, the lowest mean of 6.43 suggests that the level at which competitors are constantly proposing new products or improved products for their target is very high.

4. The results and findings of this study revealed that relational learning does not moderate the relationship between relationship management capability and service innovation (B = 0.14, p = 0.259).

5. The results and findings of this study revealed that relational learning does not moderate the relationship between relationship management capability and service innovation (B = 0.01, p = 0.43).

6. The output is developed which comprised of varied activities in relation to a strategic program that is expected to leave a huge impact in the travel agencies. The proposed program aims to leverage the relationship management capability that will contribute to the achievement of a better performance in terms of service innovation in the travel industry.

5. CONCLUSION

Based on the findings revealed in the study, the following conclusions are drawn:

1. The level of service innovation performance of travel agencies in terms of results is excellent while it is very good in terms of potential and process.

2. Travel agencies are very good in relationship management capability in terms of relationship infrastructure capability, relationship learning capability, and relationship behavioral capability.

3. The level of relational learning and competition intensity of travel agencies is very high.

4. Relational learning does not moderate the relationship between relationship management capability and service innovation performance.

5. The combined effect of relational learning and competition intensity does not moderate the relationship between relationship management capability and service innovation performance.

6. A relationship management strategic program was proposed to leverage the relationship management capability of travel agencies on the identified areas of improvement that will impact service innovation performance.

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THE EFFECT OF PERCEIVED GENDER DISCRIMINATION ON CAREER EXPECTATION AND CAREER SATISFACTION: A STUDY ON FEMALE EMPLOYEES

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ABSTRACT

Purpose- Gender discrimination is a deep-rooted issue that hinders the healthy functioning of social structures and manifests itself in many areas. The different roles and responsibilities historically assigned to women and men have led to stereotypical judgments that form the basis of this discrimination. The aim of this research is to examine the effects of perceived gender discrimination in the workplace on women's career expectation and career satisfaction. The study investigates how visible or indirect forms of discrimination encountered by women throughout their career journeys shape their career aspirations and overall career satisfaction.

Methodology- The research was conducted with the participation of 494 female employees working in various sectors in the Marmara Region, with Istanbul as the central focus. The questionnaire form included a Personal Information Form covering demographic characteristics of the participants (age, marital status, education level, sector, position, length of service in the institution, total work experience), the Perceived Gender Discrimination Scale, the Career Expectation Scale, and the Career Satisfaction Scale. The questionnaire was created via the Google Forms platform, and the survey link was sent to the participants. The data were collected between 21/01/2025 and 12/02/2025. Since all questionnaire forms were completed without any missing data, all forms were included in the analysis process. The obtained data were processed and analyzed using SPSS 25 software. Frequency and percentage analyses were used to determine the distribution of participants' demographic and professional characteristics. Exploratory Factor Analysis (EFA) was conducted to determine the construct validity of the scales. Regression Analysis was used to test the research hypotheses.

Findings- The findings of the study indicate that perceived gender discrimination has a significant negative effect on the "career continuity and development perception" sub-dimension of career expectation. On the other hand, it was found that perceived gender discrimination does not have a significant effect on the "career advancement expectation" sub-dimension of career expectation. Therefore, it can be stated that the study provides partial support for the negative impact of perceived gender discrimination on career expectation. Additionally, the study revealed that perceived gender discrimination significantly and negatively affects career satisfaction.

Conclusion- By revealing the negative effects of perceived gender discrimination on career expectation and satisfaction, this study is expected to contribute to the development of more effective and inclusive policies within organizations.

Keywords: Perceived gender discrimination, career, career expectation, career satisfaction, female employees
JEL Codes: J16, J24, J28

ALGILANAN CİNSİYET AYRIMCILIĞININ KARİYER BEKLENTİSİ VE KARİYER MEMNUNİYETİNE ETKİSİ: KADIN ÇALIŞANLAR ÜZERİNE BİR ARAŞTIRMA[*]

ÖZET

Amaç- Cinsiyet ayrımcılığı, toplumsal yapının sağlıklı işlemesini engelleyen, birçok alanda kendini gösteren köklü bir sorundur. Kadın ve erkeklere tarih boyunca yüklenen farklı rol ve sorumluluklar, bu ayrımcılığın temelini oluşturan kalıplaşmış yargılara neden olmuştur. Bu

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araştırmanın amacı, kadın çalışanların iş yaşamında algıladıkları cinsiyet ayrımcılığının kariyer beklentisi ve kariyer memnuniyeti üzerindeki etkilerini incelemektir. Kadınların kariyer yolculuklarında karşılaştıkları görünür ya da dolaylı ayrımcılık biçimlerinin, kariyer hedeflerine dair beklentilerini ve kariyer tatminlerini nasıl şekillendirdiği araştırılmıştır.

Yöntem- Araştırma, İstanbul merkez olmak üzere Marmara Bölgesi'nde çeşitli sektörlerde görev yapan 494 kadın çalışanın katılımıyla gerçekleştirilmiştir. Anket formu, katılımcıların demografik bilgilerine ilişkin (yaş, medeni durum, eğitim düzeyi, sektör, pozisyon, kurumda çalışma süresi, toplam çalışma süresi) Kişisel Bilgi Formu, Algılanan Cinsiyet Ayrımcılığı Ölçeği, Kariyer Beklentisi Ölçeği ve Kariyer Memnuniyeti Ölçeğini kapsamaktadır. Anket formu Google Formlar platformunda oluşturulmuş ve anket linki katılımcılara gönderilmiştir. Veriler, 21/01/2025 ile 12/02/2025 tarihleri arasında toplanmıştır. Anket formlarının tamamı eksiksiz doldurulduğundan, tüm formlar analiz sürecine alınmıştır. Elde edilen veriler, SPSS 25 programı kullanılarak işlenmiş ve analiz edilmiştir. Katılımcıların demografik ve mesleki özelliklerine ilişkin dağılımı tespit etmek üzere frekans ve yüzde analizlerinden yararlanılmıştır. Ölçeklerin yapı geçerliliğini saptamak için Açımlayıcı Faktör Analizi (AFA) uygulanmıştır. Araştırma hipotezlerini test etmek üzere ise Regresyon Analizi kullanılmıştır.

Bulgular- Araştırmanın bulguları, algılanan cinsiyet ayrımcılığının kariyer beklentisinin "kariyer sürekliliği ve gelişim algısı" alt boyutu üzerinde negatif yönde anlamlı etkiye sahip olduğunu göstermektedir. Öte yandan, çalışmada algılanan cinsiyet ayrımcılığının kariyer beklentisinin "kariyer yükselme beklentisi" alt boyutu üzerinde anlamlı etkisinin olmadığı belirlenmiştir. Dolayısıyla araştırmada, algılanan cinsiyet ayrımcılığının kariyer beklentisi üzerinde negatif yönde etkisini kısmen destekleyen bulgular elde edildiği söylenebilir. Ayrıca çalışmada, algılanan cinsiyet ayrımcılığının kariyer memnuniyetini negatif ve anlamlı şekilde etkilediği tespit edilmiştir.

Sonuç- Çalışmanın algılanan cinsiyet ayrımcılığının kariyer beklentisi ve memnuniyeti üzerindeki olumsuz etkilerini ortaya koyarak, kurumların daha etkili ve kapsayıcı politikalar geliştirmelerine katkı sağlayacağı düşünülmektedir.

Anahtar Kelimeler: Algılanan cinsiyet ayrımcılığı, kariyer, kariyer beklentisi, kariyer memnuniyeti, kadın çalışanlar
JEL Kodları: J16, J24, J28

1. GİRİŞ

Kadınların iş gücüne katılım oranlarındaki artış, modern toplumların ekonomik ve sosyal gelişmişlik düzeylerinin önemli göstergelerinden biri olarak değerlendirilmektedir. Ancak bu nicel artışa rağmen, kadınların çalışma yaşamında karşılaştıkları eşitsizlikler ve görünmeyen engeller, istihdamın niteliğini sorgulama gerekliliğini doğurmaktadır. Kadın çalışanlar, kariyer yolculuklarında yalnızca performanslarıyla değil, aynı zamanda cinsiyetlerine yönelik önyargılarla da mücadele etmek zorunda kalmaktadır. Bu durum, kadınların mesleki gelişim sürecini sekteye uğratmakta, kariyer beklentilerini ve memnuniyetlerini olumsuz etkileyebilmektedir.

Günümüz dünyasında kadınlar iş yaşamında çeşitli fırsatlar elde etmiş gibi görünse de kariyer yolculuklarında hala engellerle karşı karşıya kalmaktadır. Bu engellerin temelinde ise çoğu zaman algılanan cinsiyet ayrımcılığı yer almaktadır. Kadınlara tarihsel süreçte atfedilen roller, onların sadece ev içi sorumluluklarla özdeşleştirilmesine neden olmuş; buna karşın erkeklerin iş gücüne ve yönetsel pozisyonlara daha yakın görülmesi, iş yaşamında cinsiyet temelli bir ayrışmanın oluşmasına zemin hazırlamıştır. Tüm bu kültürel ve yapısal faktörler, kadınların kariyer beklentilerini şekillendirmekte ve zaman zaman da sınırlamaktadır.

Bu çalışmanın temel amacı, kadın çalışanların algıladıkları cinsiyet ayrımcılığının kariyer beklentileri ve kariyer memnuniyetleri üzerindeki etkisini ortaya koymaktır. Özellikle son yıllarda kadınların iş gücüne katılım oranı artmış olsa da üst düzey yönetim pozisyonlarında erkeklere göre çok daha az sayıda kadın yer almaktadır. Kadın çalışanlar hala, eşit işe eşit ücret alamamakta ya da kariyer basamaklarını tırmanırken daha fazla çaba harcamak zorunda kalmaktadır. Bu durum, kadınların kariyer hedeflerini belirlerken birçok sınırlayıcı inançla baş başa kaldıklarını göstermektedir. Ayrıca bu ayrımcılık, kariyer memnuniyetlerini de olumsuz şekilde etkilemektedir. Dolayısıyla bu çalışma, kadınların kariyer gelişimini etkileyen ayrımcılık algısını ölçerek hem bireysel hem de kurumsal farkındalık yaratmayı amaçlamaktadır. Bu çalışma, kadın çalışanların kariyer deneyimlerine dair güncel veriler sunmayı ve literatürde yer alan çalışmalara yeni bir bakış açısı kazandırmayı hedeflemektedir. Özellikle kadınların iş yaşamındaki beklenti ve memnuniyetlerinin, karşılaştıkları ayrımcı tutumlarla nasıl şekillendiğini ortaya koymanın, daha eşitlikçi bir iş ortamı için gerekli adımların atılmasına katkı sağlayacağı düşünülmektedir.

Araştırma, nicel yöntemle yürütülmüş ve veri toplamak amacıyla anket yöntemi kullanılmıştır. Marmara Bölgesi'nde çeşitli sektörlerde çalışan 494 kadına dört bölümden oluşan bir anket uygulanmıştır.

Çalışmada öncelikle algılanan cinsiyet ayrımcılığı, kariyer, kariyer beklentisi ve kariyer memnuniyeti kavramları tanımlanmıştır. Ayrıca, algılanan cinsiyet ayrımcılığı ile kariyer beklentisi ve kariyer memnuniyeti arasındaki ilişkiler araştırma bulguları ışığında ele alınmıştır. Devam eden bölümlerde algılanan cinsiyet ayrımcılığının kariyer beklentisi ve kariyer memnuniyeti üzerindeki etkisini belirlemeye yönelik gerçekleştirilen araştırmanın amacı, kapsamı, yöntemi ve bulgularına yer verilmiştir. Sonuç bölümünde ise elde edilen bulgular doğrultusunda çeşitli çıkarımlar yapılmış, araştırmacılara ve uygulamacılara öneriler sunulmuştur.

2. LİTERATÜR İNCELEMESİ

Algılanan cinsiyet ayrımcılığı ve kariyerle ilgili beklenti ve memnuniyet, iş yaşamının önemli konuları arasında yer almaktadır. Cinsiyet ayrımcılığı, toplumsal olarak inşa edilmiş cinsiyet rolleri ve normlarına dayanarak bireylere yönelik yapılan herhangi bir ayrım, dışlama veya kısıtlama biçimidir (Kouta ve Kaite, 2011, s. 59). Bu bağlamda, algılanan cinsiyet ayrımcılığı, bireyin bu eşitsizliği fark etmesi, yorumlaması ve bunu bir ayrımcılık olarak değerlendirmesi şeklinde tanımlanabilir. Bu algı, bazen somut bir ayrımcılık deneyimine, bazen de bireyin subjektif yorumlarına veya bulunduğu sosyal bağlama göre şekillenebilir. Kadınların toplumsal yaşamda ve iş hayatında karşılaştıkları yapısal ve kültürel engeller, cinsiyet temelli eşitsizliklerin temelini oluşturmaktadır. Toplumun kadına yüklediği geleneksel roller (anne, eş, ev hanımı vb.) ve biyolojik farklılıkların toplumsal normlarla harmanlanması, kadının istihdam sürecine katılımını zorlaştırmaktadır. Çalışma hayatındaki eşitsizliklerin temelinde ise açık ya da örtük biçimlerde uygulanan cinsiyet temelli ayrımcılık yer almaktadır. Kadınlar, işe alım, terfi ve ücretlendirme gibi temel süreçlerde eşit olmayan uygulamalara maruz kalmaktadır (Özbucak Albar, 2019, s. 283). Literatürde kariyer farklı

açılardan ele alınmaktadır. Birinci yaklaşım, kariyeri işyerinde statü yükselmesi ve terfi ile ilişkilendirirken; ikinci yaklaşım, belirli bir meslek alanında uzmanlaşma süreci olarak değerlendirmektedir. Üçüncü görüş, kariyeri bireyin yaşam boyu üstlendiği mesleki rollerin bütünü olarak ele alırken, dördüncü tanım ise çalışma hayatı boyunca edinilen deneyimler ve roller çerçevesinde şekillenmektedir (Gözüm, 2021, s. 6). Kariyer beklentisi, bireyin belirli bir meslek aracılığıyla maddi ve manevi tatmin elde etme arzusunu ifade etmektedir. Kariyer beklentileri, bireylerin kariyer seçimlerini doğrudan etkileyerek tüm yaşamlarını şekillendirmektedir. Özellikle kariyer beklentileri; sağlıkla ilgili faktörleri (örneğin maaş, sosyal yardımlar, çalışma ortamı ve koşulları), prestij faktörlerini (örneğin işverenin coğrafi konumu, işin toplumdaki statüsü ve sosyal itibarı) ve gelişim faktörlerini (örneğin bağımsız çalışabilme, iş yerinde eşit fırsatlar, adil rekabet ortamı ve bireysel yeteneklerin geliştirilmesi) kapsamaktadır (Wang vd., 2023, s. 1). Kariyer memnuniyeti, bireyin çalıştığı kurumda kariyerine ilişkin beklentilerinin ne ölçüde karşılandığına dair kişisel bir algıyı ifade etmektedir (Fide Keskin ve Yıldız, 2023, s. 2004). Kariyer memnuniyeti; bireyin mesleki yaşamı boyunca elde ettiği gelişim, başarı ve deneyimlere ilişkin genel değerlendirmesi sonucunda hissettiği tatmin düzeyini belirtmektedir. Söz konusu kavram yalnızca mevcut iş pozisyonuna odaklanmamakta, aynı zamanda bireyin tüm kariyer yolculuğundan duyduğu memnuniyeti kapsamaktadır. Kişinin kariyerine yönelik beklentileri ile yaşadığı deneyimler arasındaki uyum, memnuniyetin temel kaynağını oluşturmaktadır. Bu öznel yapı, bireyin kariyerine yüklediği anlam, hedeflerine ulaşma düzeyi ve mesleki kimliğiyle kurduğu ilişki üzerinden şekillenmektedir (Durmuş ve Akyüz, 2021, s. 998-999).

Cinsiyet ayrımcılığı, bireylerin iş yaşamındaki yönelimlerini şekillendiren önemli bir toplumsal sorundur. Kadın çalışanlar, özellikle işe alım, terfi ve ücretlendirme gibi süreçlerde maruz kaldıkları doğrudan ve dolaylı ayrımcılık nedeniyle kariyer beklentilerini yeniden gözden geçirmek zorunda kalmakta; bu durum, mesleki hedeflerin daralmasına ve kariyer motivasyonunun azalmasına neden olmaktadır (Karatepe ve Arıbaş, 2015, s. 14-15; Wang vd., 2023). Öte yandan, cinsiyet temelli ayrımcılığın sürekli deneyimlenmesi, bireylerin iş yaşamından duyduğu tatmini de olumsuz etkilemektedir. Kadınların potansiyellerinin görmezden gelinmesi, adalet algısının zedelenmesi ve fırsat eşitsizlikleri, kariyer memnuniyetinde düşüşe neden olmakta; bu durum iş tatmini, bağlılık ve performans gibi sonuçlar üzerinde de yansımalarını göstermektedir (Alagöz ve Güneş 2023, s. 754).

Literatürde, algılanan cinsiyet ayrımcılığının kariyer beklentisine etkisini gösteren çeşitli araştırmalar bulunmaktadır. Karaözkök (2024) tarafından bir devlet üniversitesinde görev yapan kadın akademisyenlerle yapılan çalışmada, kadın akademisyenlerin cam tavan sendromu algısına sahip oldukları ve bu algının kariyer gelişimlerini olumsuz etkilediği bulunmuştur. Çalışmada kadınların, yönetici ve lider pozisyonlarına yükselmede görünmez engellerle karşılaştıkları ve cinsiyet temelli ayrımcılığın kariyer motivasyonlarını azalttığı belirlenmiştir. Kemik ve Çetiner (2023) Türkiye ve İngiltere'de kadın çalışanlarla gerçekleştirilen karşılaştırmalı çalışmada, kadınların belirli iş alanlarına başvurmaktan kaçındıklarını, işe alınmama veya terfi ettirilmeme kaygısıyla kariyer hedeflerini ertelediklerini belirlemiştir. Türkiye'de doğum izni, çocuk bakımı ve kreş gibi imkanların yetersizliği nedeniyle kadın çalışanların kariyer beklentilerinde geri çekilme eğilimi gösterdikleri; İngiltere'de ise benzer sorunların kültürel farklılıklarla devam ettiği saptanmıştır. Bulgular, algılanan cinsiyet ayrımcılığının kadınların kariyer hedef ve tercihlerinde doğrudan belirleyici rol oynadığını göstermektedir. Alagöz ve Güneş (2023) tarafından Gastronomi ve Mutfak Sanatları bölümlerinde eğitim gören aşçılık öğrencileriyle yürütülen araştırmada, kadın öğrencilerin sektörde kariyer yapmaya yönelik isteksizliklerinde algılanan cinsiyet ayrımcılığının belirleyici olduğu bulunmuştur. Kadın öğrenciler, terfi engelleri, ücret eşitsizliği ve "potansiyel anne" olarak görülme gibi nedenlerle kariyer beklentilerini bastırmaktadır. Bazı öğrenciler ise açıkça meslekten uzaklaşmayı düşündüklerini ifade etmiştir. Ayrıca, kadın katılımcıların cinsiyet ayrımcılığı algısının erkek katılımcılara göre daha yüksek düzeyde olduğu saptanmıştır. Bulgular, algılanan cinsiyet ayrımcılığının, kadın öğrencilerin kariyer hedeflerini doğrudan sınırlayan temel bir engel olduğunu göstermektedir. Karadirek (2023) Ordu ilinde görev yapan 324 kadın sağlık çalışanı üzerinde gerçekleştirdiği araştırmada, cam tavan algısının kadınların kariyer beklentilerini olumsuz etkilediğini ve yönetsel pozisyonlara ulaşmada zorluk yaşandığını bulmuştur. Moorthy vd. (2022) Malezya'da özel sektörde çalışan kadınların kariyer ilerlemelerini etkileyen faktörleri incelemiştir. Toplam 250 kadın çalışanla yapılan anket çalışması, ataerkillik, örgütsel kültür ve ailevi sorumlulukların kadınların kariyer beklentileri üzerinde önemli etkileri olduğunu göstermiştir. Buna karşılık, bireysel faktörlerin (performans, yaş, beceri) kariyer ilerlemesinde anlamlı etkisi bulunmamıştır. Çalışma, cam tavan teorisi ve feminist teori çerçevesinde, kadınların kariyer beklentilerini şekillendiren yapısal engelleri vurgulamaktadır. Acuner (2019) tarafından Trabzon ilinde kamu kurumlarında görev yapan kadınlarla yürütülen araştırmada, kadınların kariyer geliştirme süreçlerinde erkeklere oranla daha az destek aldıkları ve cinsiyet temelli engellerle daha fazla karşılaştıkları tespit edilmiştir. Kara (2019) Osmaniye ilindeki kamu ve özel hastanelerde görev yapan 200 sağlık çalışanı ile yürüttüğü çalışmada, kadınların yönetici pozisyonlarına erişimde cinsiyet temelli engellerle karşılaştığını ve bu durumun iş tatminlerini olumsuz etkilediğini saptamıştır. Bulut ve Akçacı (2017) tarafından yapılan çalışmada, Kilis ilinde kadınların yoğun olarak istihdam edildiği altı sektörde (eğitim, sağlık, gıda, tekstil, ticaret ve finans) çalışan 635 kadına anket uygulanmıştır. Araştırma, kadınların iş yaşamında karşılaştıkları sorunları ve algıladıkları cinsiyet ayrımcılığını sektörel bazda incelemeyi amaçlamaktadır. Elde edilen bulgular, kadınların çalışma hayatında cinsiyet temelli önyargılar ve ayrımcılıkla karşılaştıklarını, bu durumun sektöre göre farklılık gösterdiğini ortaya koymuştur. Özellikle yönetici pozisyonlarına ulaşmada kadınların erkeklere kıyasla daha fazla engelle karşılaştıkları belirlenmiştir. Bulut ve Kızıldağ (2017) tarafından Bursa'da faaliyet gösteren işletmelerde görev yapan kadın insan kaynakları yöneticileriyle yapılan görüşmelerde, kadınların işe alım ve terfi süreçlerinde cinsiyet temelli ayrımcılık yaşadıkları belirlenmiştir. Kadın yöneticiler, erkek meslektaşlarına kıyasla kariyer ilerlemelerinde daha fazla çaba sarf etmeleri gerektiğini, ailevi sorumlulukların ve toplumsal cinsiyet rollerinin kariyer hedeflerini sınırlandırdığını ifade etmiştir. Bu bulgular, kadınların algıladıkları cinsiyet ayrımcılığının, mevcut konumları kadar geleceğe yönelik kariyer beklentilerini de doğrudan etkilediğini göstermektedir. Çelik ve Altıntaş (2017) İzmir'deki A grubu seyahat acentalarında görev yapan 204 çalışan ve 89 işverenle yaptıkları anket çalışmasında, işgören bulma ve seçim süreçlerinde cinsiyet ayrımcılığının rolünü incelemiştir. Çalışanlar, işe alım ilanlarında ve mülakat süreçlerinde cinsiyet temelli ayrımcılıkla karşılaştıklarını belirtmiştir. Bu durumun, kadın çalışanların kariyer beklentilerini olumsuz etkilediği ve sektörde ilerleme konusunda motivasyonlarını düşürdüğü tespit edilmiştir. Eroğlu ve İrdem (2016) Türkiye'de kamu ve özel sektörde yönetim kademelerinde görev yapan kadın ve erkek sayıları üzerinden karşılaştırma yaptıkları çalışmada, çeşitli yönetim kademelerinde erkeklere kıyasla kadınlara daha az yer verildiğini saptamıştır. Çalışmada, kadınların kariyer süreçlerinde karşılaştıkları cinsiyet temelli ayrımcılık algısının, kariyer doyumlarını ve terfi beklentilerini olumsuz etkilediği belirtilmiştir. Sonuç olarak, araştırma bulguları, algılanan cinsiyet ayrımcılığının kadınların kariyer beklentilerini düşürdüğünü, motivasyonlarını zayıflattığını ve geleceğe dair mesleki hedeflerini sınırladığını göstermektedir. Bu nedenle, cinsiyet temelli ayrımcılığın ortadan kaldırılmasına yönelik politikalar geliştirilmesi, yalnızca bireysel değil, toplumsal düzeyde de önemli bir ihtiyaç olarak ortaya çıkmaktadır.

Literatürde, algılanan cinsiyet ayrımcılığının kariyer memnuniyeti üzerindeki etkisini ortaya koyan bazı araştırmalar yer almaktadır. DeCastro vd. (2014) tarafından yapılan çalışmada, kadın mentorların özellikle katılımcılara iş-yaşam dengesi konusunda daha fazla tavsiye verme eğiliminde oldukları, ancak bu alandaki mentorlukların genel olarak oldukça seyrek gerçekleştiği bulunmuştur. Ayrıca, kadın mentorların daha az erişilebilir ve daha kontrolcü olarak algılandığı, katılımcıların ise rol modeli bulmakta daha fazla güçlük yaşadığı belirtilmiştir. Bu bulgular, kadınların akademik tıptaki kariyerlerini sürdürmede karşılaştıkları zorlukların, yeterli rehberlik eksikliği ve toplumsal cinsiyet önyargılarından kaynaklanabileceğini göstermektedir. Kadın mentorların liderlik davranışlarının toplumsal beklentilere aykırı bulunarak daha olumsuz algılandığı ve bunun kariyer memnuniyetini olumsuz etkilediği ortaya konmuştur. Bu nedenle, iş-yaşam dengesi konusunda mentorluk desteğinin artırılması ve mentorluk süreçlerinde cinsiyet temelli önyargılara karşı farkındalık kazandırılmasının, kadınların akademik kariyerlerinde ilerlemelerini ve kariyer memnuniyetlerini desteklemek açısından kritik önem taşıdığı vurgulanmaktadır. Elçi vd. (2021) 256 beyaz yakalı kadın çalışanla yürüttükleri araştırmada, farklı sektörlerde görev yapan kadınların iş yerinde maruz kaldıkları cinsiyet temelli ayrımcılığın, kariyer memnuniyetlerini olumsuz etkilediğini belirlemiştir. Kadın katılımcılar erkek çalışanlara kıyasla daha az desteklendiklerini, terfi süreçlerinde geride bırakıldıklarını ve yönetici pozisyonlarına ulaşmada zorlandıklarını ifade etmiştir. Bu olumsuz deneyimlerin, işten ayrılma niyetini artırdığı; dolayısıyla kariyer memnuniyetinin, algılanan ayrımcılık ile işten ayrılma eğilimi arasındaki ilişkide kısmi bir aracı rol oynadığı saptanmıştır. Çalışma, ayrımcılığa ilişkin algıların kadınların iş yaşamındaki sürekliliklerini ve mesleki bağlılıklarını tehdit edebilecek düzeyde etkili olduğunu göstermektedir. Yanar ve Akpınar (2023) tarafından Spor Bilimleri alanında görev yapan 61 kadın akademisyenle yürütülen araştırmada, katılımcıların cam tavan sendromuna ilişkin metaforik algıları incelenmiştir. Katılımcılar, cam tavan sendromunu "duvar", "çaresizlik", "kafes" gibi metaforlarla tanımlamıştır. Bu metaforlar, kadın akademisyenlerin kariyerlerinde karşılaştıkları görünmez engelleri ve bu engellerin psikolojik, örgütsel ve toplumsal cinsiyet temelli olduğunu ortaya koymaktadır. Terpstra-Tong vd. (2025) tarafından gerçekleştirilen araştırma, 35 farklı toplumda görev yapan 2291 kadın çalışanın verileri üzerinden yürütülmüş ve kadın çalışanların kariyer memnuniyetini etkileyen yapısal ve kültürel faktörlere odaklanmıştır. Çalışmada elde edilen bulgular, iş yerlerinde kadınların kariyer memnuniyetini yalnızca niceliksel temsiliyetin değil, aynı zamanda örgütsel hiyerarşi içinde bulundukları konumların ve karşılaştıkları etkileşim biçimlerinin de belirlediğini göstermektedir. Araştırmanın önemli sonuçlarından biri, kadın bir yöneticiye bağlı çalışan kadınların kariyer memnuniyetinin, diğer yapıdaki hiyerarşik ilişkilere göre daha düşük düzeyde seyretme eğiliminde olduğudur. Bu durum, yüzeysel olarak kadın dayanışmasıyla açıklanamayacak kadar karmaşık ve bağlamsal unsurlar içermektedir. Yazarlar, bu ilişkinin nedenlerinden biri olarak, toplumsal cinsiyet rolleriyle ilişkili beklentilerin kadın liderlik tarzlarını sınırlandırmasını ve kadın yöneticilerin destekleyici değil, zaman zaman daha rekabetçi roller üstlenmek zorunda kalmalarını göstermektedir. Ayrıca, araştırma kadınların kariyer memnuniyetini artıran en istikrarlı etkenlerden birinin, bir üst kademede yer alan kadın temsili olduğunu ortaya koymuştur. Bu etkinin, cinsiyet eşitliğine ilişkin yasal altyapısı zayıf olan toplumlarda daha belirgin olduğu ifade edilmiştir. Ancak kadın çoğunluğunun bulunduğu eş düzey hiyerarşik pozisyonlarda, kariyer memnuniyetinde zaman zaman düşüş gözlemlenmiştir. Bu durumun, kadınlar arası rekabetin artması ve sosyal statüye ilişkin gerilimlerin yoğunlaşmasıyla açıklanabileceği belirtilmiştir. Sonuç olarak, çalışma kadınların kariyer memnuniyetinin yalnızca bireysel özellikler ya da örgütsel koşullardan ibaret olmadığını; aynı zamanda toplumsal cinsiyet eşitliğine ilişkin yasal düzenlemeler, kültürel normlar ve hiyerarşik yapıdaki cinsiyet dağılımı gibi bağlamsal unsurlardan da derinden etkilendiğini göstermektedir. Bu nedenle, çok uluslu işletmelerin kadın çalışanlara yönelik insan kaynakları politikaları geliştirirken, faaliyet gösterdikleri ülkenin yasal ve sosyo-kültürel özelliklerini dikkate alması kritik öneme sahiptir. Özellikle kadın temsilinin yüksek olduğu yönetim kademelerinin oluşturulması ve kadın yöneticilerin mentorluk gibi destekleyici rollerle güçlendirilmesi, kariyer memnuniyetini artırmaya yönelik etkili stratejiler arasında değerlendirilmektedir. Bu çok katmanlı yapı, toplumsal cinsiyet temelli eşitsizliklerin yalnızca bireyler arası ilişkilerde değil, kurumsal sistemlerin işleyişinde de yeniden üretildiğini ortaya koymaktadır. Sonuç olarak, literatürdeki bulgular, kadın çalışanların algıladıkları cinsiyet ayrımcılığının, kariyer memnuniyetini azaltan bir unsur olduğunu ortaya koymaktadır. Cinsiyet temelli eşitsizliklerin ortadan kaldırılmasının, yalnızca kadınların kariyerlerine ilişkin tatmin düzeylerini artırmakla kalmayacağı; aynı zamanda örgüt içi motivasyon, performans ve bağlılık gibi kritik unsurları da olumlu yönde etkileyeceği düşünülmektedir. Literatür incelendiğinde, algılanan cinsiyet ayrımcılığının kariyer memnuniyeti üzerindeki etkisini ele alan çalışmaların sınırlı sayıda olduğu görülmektedir. Dolayısıyla, bu bölümde daha fazla bulguya yer verilememiştir. Bu eksiklik, çalışmanın literatür ve uygulama açısından önemini ortaya koyduğu gibi, gelecekte yapılacak çalışmalar için önemli bir araştırma alanı sunmakta ve konunun hem kuramsal hem de uygulamalı boyutlarıyla ele alınmasına duyulan ihtiyacı vurgulamaktadır.

3. YÖNTEM

3.1. Araştırmanın Amacı ve Önemi

Araştırmanın amacı, kadın çalışanlar örnekleminde algılanan cinsiyet ayrımcılığının kariyer beklentisi ve kariyer memnuniyetine etkisini incelemektir. Çalışmanın, uygulamaya ve literatüre önemli katkı sunacağı düşünülmektedir. Pratikte, kuruluşlara ve politika yapıcılara ayrımcılığın kadınların profesyonel bakış açısını, kariyer beklentisini ve memnuniyetini nasıl etkilediğine ilişkin veri odaklı içgörüler sunarak, daha kapsayıcı işyeri politikalarının ve cinsiyete duyarlı İK uygulamalarının geliştirilmesine destek olması beklenmektedir. Teorik bakış açısından, çalışmanın, cinsiyetle ilgili sosyokültürel dinamiklerin Batı ortamlarından farklı olduğu, görece az araştırılmış bir bağlam olan Türkiye'yi ele alarak mevcut literatürü derinleştireceği düşünülmektedir. Algılanan cinsiyet ayrımcılığının kariyerle ilgili sonuçlarını vurgulayarak, araştırmanın işyerinde eşitlik, kariyer gelişimi ve çalışan refahı üzerine daha geniş tartışmalara katkıda bulunması beklenmektedir. Ayrıca çalışmanın, algılanan cinsiyet ayrımcılığı, kariyer beklentisi ve kariyer memnuniyetini birlikte ele alarak, literatürde oldukça sınırlı sayıda araştırmanın incelediği bu üç değişken arasındaki ilişkileri ortaya koyması bakımından önemli bir boşluğu dolduracağı düşünülmektedir.

3.2. Anakütle ve Örneklem Seçimi

Araştırmanın anakütlesini İstanbul merkez olmak üzere Marmara Bölgesi'nde kamu ve özel sektörde görev yapan kadın çalışanlar oluşturmaktadır. Çalışmada örneklem seçimi için kolayda örnekleme yöntemi kullanılmıştır. Bu yaklaşım, 100 milyona kadar bir nüfus büyüklüğü için en az 384 katılımcıdan oluşan bir örneğin %5 hata payı ile %95 güven düzeyine ulaşmak için yeterli olduğunu gösteren literatüre

dayanarak uygun görülmüştür (Gürbüz ve Şahin, 2018, s. 130). Buna göre, 494 katılımcıdan veri toplanan çalışmada, yeterli örneklem büyüklüğüne ulaşıldığı söylenebilir.

3.3. Veri Toplama Yöntemi ve Aracı

Araştırmada veri toplama yöntemi olarak anket yöntemi kullanılmıştır. Anket formu, katılımcıların demografik bilgilerini içeren (yaş, medeni durum, eğitim düzeyi, sektör, pozisyon, kurumda çalışma süresi, toplam çalışma süresi) kişisel bilgi formu ve üç ölçek ile hazırlanmıştır. Algılanan cinsiyet ayrımcılığını ölçmek için Foley vd. (2005) tarafından uyarlanan 4 maddelik Algılanan Cinsiyet Ayrımcılığı Ölçeği kullanılmıştır. Yanıtlar 6'lı Likert ile (1: Kesinlikle Katılmıyorum, 6: Kesinlikle Katılıyorum) belirtilmiştir. Ölçek, Korkmaz'ın (2019) çalışmasından alınmıştır. Kariyer beklentisini ölçmek için Scandura ve Schriesheim'in 1991 yılında geliştirdikleri 6 maddeli Kariyer Beklentisi Ölçeği kullanılmıştır. Yanıtlar 6'lı Likert ile (1: Kesinlikle Katılmıyorum, 6: Kesinlikle Katılıyorum) belirtilmiştir. Ölçek, Korkmaz'ın (2019) çalışmasından alınmıştır. Kariyer memnuniyetini ölçmek için Greenhaus vd. (1990) tarafından geliştirilen, Hofmans vd. (2008) tarafından kullanılan, Avcı ve Turunç (2012) tarafından Türkçe'ye uyarlanan 5 maddeli Kariyer Memnuniyeti Ölçeği kullanılmıştır. Yanıtlar 5'li Likert ile (1: Kesinlikle Katılmıyorum, 5: Kesinlikle Katılıyorum) belirtilmiştir. Ölçek, Fide Keskin'in (2022) çalışmasından alınmıştır. Anket formu Google Formlar platformunda oluşturulmuş ve anket linki katılımcılara iletilmiştir.

4. BULGULAR

Araştırma, İstanbul merkez olmak üzere Marmara Bölgesi'nde faaliyet gösteren çeşitli sektörlerde çalışan 494 kadının katılımıyla gerçekleştirilmiştir. Veriler, 21/01/2025 ile 12/02/2025 tarihleri arasında toplanmıştır. Anket formlarının tamamı eksiksiz doldurulduğundan, tüm formlar analiz sürecine dahil edilmiştir. Elde edilen veriler, SPSS 25 programı kullanılarak işlenmiş ve analiz edilmiştir. Katılımcıların demografik ve mesleki özelliklerine ilişkin dağılımı belirlemek amacıyla frekans ve yüzde analizlerinden yararlanılmıştır. Ölçeklerin yapı geçerliliğini test etmek amacıyla Açımlayıcı Faktör Analizi (AFA) uygulanmıştır. Araştırma hipotezlerini test etmek üzere ise Regresyon Analizi kullanılmıştır. Verilerin analizi ve elde edilen bulgular, aşağıdaki bölümlerde ayrıntılı olarak sunulmaktadır.

4.1. Tanımlayıcı Bilgiler

Katılımcıların demografik ve mesleki özelliklerine ilişkin tanımlayıcı istatistikler Tablo 1'de sunulmuştur. Yaş dağılımı incelendiğinde, katılımcıların %34,8'inin 31-40 yaş aralığında, %29,8'inin 30 yaş ve altında olduğu görülmektedir. Bu oranlar, araştırmaya katılan bireylerin önemli bir bölümünün genç ve orta yaş grubunda yer aldığını göstermektedir. Katılımcıların %53'ü evli, %47'si ise bekardır. Eğitim düzeyine bakıldığında, katılımcıların büyük çoğunluğunun yükseköğretim mezunu olduğu görülmektedir. Özellikle %63,2'si lisans ve %22,1'i lisansüstü düzeyde eğitim almıştır. Bu bulgu, araştırmanın eğitimli bir kadın çalışan profiline sahip olduğunu göstermektedir. Sektörel dağılım açısından değerlendirildiğinde ise katılımcıların %50,6'sının kamu sektöründe, %49,4'ünün ise özel sektörde görev yaptığı belirlenmiştir. Pozisyonlarına göre yapılan sınıflamada, %78,1'i çalışan, %21,9'u yönetici statüsündedir. Bu durum, kadınların çoğunlukla yönetim dışı personel pozisyonunda görev aldığını göstermektedir. Kurumda çalışma süresi verileri incelendiğinde, katılımcıların %42,9'unun 1-5 yıl, %16,8'inin 6-10 yıl ve %13,4'ünün ise 1 yıldan az süreyle görev yaptığı anlaşılmaktadır. Bu dağılım, örneklemin önemli bir kısmının kurumsal deneyim açısından yeni ya da orta seviyede olduğunu göstermektedir. Toplam mesleki deneyim açısından ise %39,9'unun 15 yıldan fazla, %24,5'inin ise 1-5 yıl deneyime sahip olduğu görülmektedir. Bu dağılım, çalışmaya katılan bireylerin önemli bir kısmının uzun süreli çalışma hayatı deneyimine sahip olduğunu ortaya koymaktadır.

Tablo 1: Katılımcıların Demografik Özellikleri ve Çalışma Durumlarına İlişkin Bilgiler

Değişken		N	%
Yaş	30 yaş ve altı	147	29,8
	31-40	172	34,8
	41-50	107	21,7
	51 ve üzeri	68	13,8
Medeni Durum	Bekar	232	47,0
	Evli	262	53,0
Eğitim Durumu	İlköğretim	1	0,2
	Lise	23	4,7
	Önlisans	49	9,9
	Lisans	312	63,2
	Lisansüstü	109	22,1
Sektör	Kamu	250	50,6
	Özel	244	49,4
Pozisyon	Yönetici	108	21,9
	Çalışan	386	78,1
Kurumda Çalışma Süresi	1 yıldan az	66	13,4
	1-5 yıl	212	42,9
	6-10 yıl	83	16,8
	11-15 yıl	59	11,9
	15 yıldan fazla	74	15,0
Toplam Çalışma Süresi	1 yıldan az	6	1,2

	1-5 yıl	121	24,5
	6-10 yıl	88	17,8
	11-15 yıl	82	16,6
	15 yıldan fazla	197	39,9
Toplam		**494**	**100**

4.2. Model Değişkenlerine İlişkin Açımlayıcı Faktör Analizi

Algılanan Cinsiyet Ayrımcılığı Ölçeği'ne ilişkin yapı geçerliliği, Açımlayıcı Faktör Analizi (AFA) ile incelenmiştir. Kaiser-Meyer-Olkin (KMO) değeri ,812 olarak hesaplanmıştır. Bartlett Küresellik Testi sonucunda elde edilen Ki-kare değeri anlamlı bulunmuştur ($χ^2$ = 1012,187; sd = 6; p < .001). KMO değerinin ,60'ın üzerinde olması ve Bartlett testinin anlamlılık göstermesi (p<.05), veri setinin faktör analizine elverişli olduğunu göstermektedir (Pallant, 2017, s. 201). Açımlayıcı faktör analizi Temel Bileşenler Analizi ve Direct Oblimin rotasyonu ile gerçekleştirilmiştir. Analiz sonucunda maddelerin tek faktör altında toplandığı ve bu tek faktörlü yapının toplam varyansın %72,798'ini açıkladığı görülmüştür. Açıklanan varyans oranı, ölçeğin ölçtüğü yapıyı temsil etme gücünü göstermesi açısından önemlidir. Faktör analizlerinde açıklanan varyansın toplam varyans üzerinden %50'yi aşması, yapı geçerliliği açısından yeterli kabul edilmektedir (Yaşlıoğlu, 2017, s. 77). Bu bağlamda elde edilen varyans oranının, yeterli olduğu söylenebilir. Ölçeğe ilişkin faktör yükleri incelendiğinde, dört maddenin faktör yüklerinin sırasıyla ,877; ,872; ,844 ve ,818 olduğu görülmektedir. Bu değerlerin tamamı ,40'ın üzerindedir ve maddelerin ölçtüğü yapıyla ilişkili olduğunu göstermektedir. Ayrıca, birden fazla faktöre benzer düzeyde yüklenen herhangi bir madde bulunmamaktadır (Büyüköztürk, 2012, s. 125). Elde edilen bulgular, Algılanan Cinsiyet Ayrımcılığı Ölçeği'nin yapı geçerliliğinin sağlandığını ve tek boyutlu bir yapıda çalıştığını göstermektedir.

Kariyer Beklentisi Ölçeğinin faktör analizine uygunluğunu değerlendirmek amacıyla yapılan ön analizde, KMO değeri ,628 olarak elde edilmiş ve Bartlett Küresellik Testi anlamlı bulunmuştur ($χ^2$ = 809,383; sd = 15; p < .001). Bu bulgular, veri setinin açımlayıcı faktör analizine uygun olduğunu göstermektedir. Açımlayıcı faktör analizi, Temel Bileşenler Analizi ve Direct Oblimin rotasyonu kullanılarak gerçekleştirilmiştir. Analiz sonucunda iki faktörlü bir yapı elde edilmiştir. Birinci faktör "Kariyer Yükselme Beklentisi" olarak adlandırılmıştır. Bu faktör, bireylerin mevcut pozisyonlarında terfi alma, daha üst düzey görevlere geçme ve akranlarına kıyasla daha hızlı bir kariyer ilerlemesi elde etme beklentilerini yansıtmaktadır. 1., 3. ve 6. maddeler bu yapıyı temsil etmektedir. Bu bağlamda faktör, bireylerin kariyerlerinde dikey ilerlemeye yönelik motivasyonlarını ve hedef odaklı yönelimlerini ortaya koymaktadır. İkinci faktör ise "Kariyer Sürekliliği ve Gelişim Algısı" şeklinde adlandırılmıştır. Bu faktör, bireylerin kariyer yolculuklarını genel bir süreklilik çerçevesinde değerlendirme biçimlerini ifade etmektedir. İş değiştirme gerekliliği, kariyerin duraksaması ya da istikrarlı ilerleme gibi unsurlar bu yapının temelini oluşturmaktadır. 2., 4. ve 5. maddeler bu faktör altında yer almaktadır. Bu doğrultuda faktör, bireylerin kariyer gelişimlerine yönelik uzun vadeli değerlendirmelerini yansıtmaktadır. İki faktörlü yapıda, toplam varyansın %65,753'ü açıklanmıştır. Birinci faktör altında yer alan maddelerin yükleri ,891; ,876 ve ,718; ikinci faktör altında yer alan maddelerin yükleri ise ,832; ,738 ve ,695 olarak hesaplanmıştır. Maddeler yalnızca ait oldukları faktöre yüksek düzeyde yüklenmiş olup, çapraz yükleme yoktur. Bu sonuçlar, Kariyer Beklentisi Ölçeği'nin iki boyutlu bir yapıya sahip olduğunu ve geçerli bir ölçüm aracı olarak kullanılabileceğini göstermektedir.

Kariyer Memnuniyeti Ölçeğinin faktör analizine uygunluk testi sonuçlarına göre, KMO değeri ,854 olarak elde edilmiş, Bartlett Küresellik Testi ise anlamlı bulunmuştur ($χ^2$ = 1473,452; sd = 10; p < .001). Bu bulgular, veri setinin faktör analizine uygun olduğunu göstermektedir. Açımlayıcı faktör analizi Temel Bileşenler Analizi ve Direct Oblimin rotasyonu ile gerçekleştirilmiştir. Özdeğeri 1'in üzerinde olan yalnızca bir faktör elde edilmiş ve bu faktör toplam varyansın %70,796'sını açıklamıştır. Tüm maddeler tek bir faktör altında toplanmakta ve faktör yükleri ,878 ile ,774 arasında değişmektedir. Ayrıca çapraz yükleme bulunmamaktadır. Bu bulgular, Kariyer Memnuniyeti Ölçeği'nin geçerli ve tek boyutlu bir yapıya sahip olduğunu göstermektedir.

4.3. Araştırmanın Kavramsal Modeli ve Hipotezleri

Açımlayıcı faktör analizinden elde edilen bulgular doğrultusunda, araştırmanın kavramsal modeli (Şekil 1) şekillendirilmiş ve bu modele dayalı olarak hipotezler geliştirilmiştir. Geliştirilen kavramsal model ve hipotezler aşağıda sunulmaktadır.

Şekil 1: Araştırmanın Kavramsal Modeli
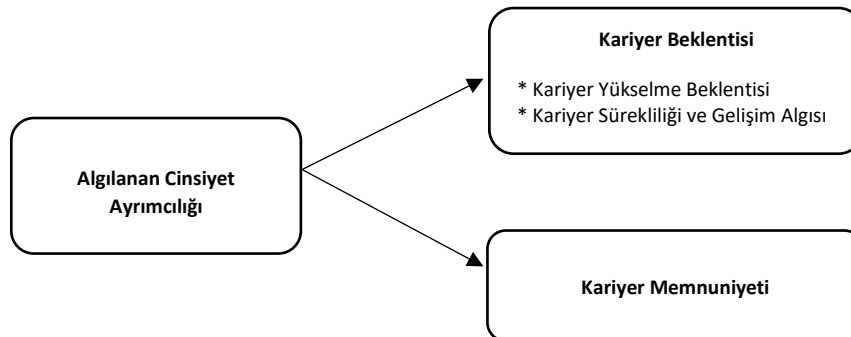
H₁: Algılanan cinsiyet ayrımcılığı, kariyer beklentisini negatif yönde ve anlamlı şekilde etkilemektedir.

H₁ₐ: Algılanan cinsiyet ayrımcılığı, kariyer yükselme beklentisini negatif yönde ve anlamlı şekilde etkilemektedir.

H₁ᵦ: Algılanan cinsiyet ayrımcılığı, kariyer sürekliliği ve gelişim algısını negatif yönde ve anlamlı şekilde etkilemektedir.

H₂: Algılanan cinsiyet ayrımcılığı, kariyer memnuniyetini negatif yönde ve anlamlı şekilde etkilemektedir.

4.4. Model Değişkenlerine İlişkin Güvenilirlik ve Normallik Analizi

Ölçeklerin güvenilirlik düzeyleri, Cronbach's Alpha (α) katsayısı kullanılarak belirlenmiştir. Cronbach's Alpha (α) katsayısı, Yıldız ve Uzunsakal (2018, s. 19) tarafından şu şekilde değerlendirilmektedir:

0 <α <.40	: Ölçek güvenilir değil
.40<α <.60	: Ölçek düşük güvenilirlikte
.60<α <.80	: Ölçek oldukça güvenilir
.80<α <1.00	: Ölçek yüksek güvenilirlikte

Bu sınıflamaya göre, elde edilen bulgular şu şekilde yorumlanmaktadır: Algılanan Cinsiyet Ayrımcılığı değişkenine ilişkin Cronbach's Alpha değeri ,872 olup, bu değer ölçeğin yüksek düzeyde güvenilir olduğunu göstermektedir. Kariyer Yükselme Beklentisi değişkenine ait Cronbach's Alpha değeri ,789'dur. Bu sonuç, oldukça güvenilir bir yapı ortaya koymaktadır. Kariyer Sürekliliği ve Gelişim Algısı değişkeni için hesaplanan Cronbach's Alpha katsayısı ,624'tür. Bu değer, oldukça güvenilir kabul edilen aralıkta yer almakta olup, kabul edilebilir düzeyde iç tutarlılık göstermektedir. Kariyer Memnuniyeti değişkeninin Cronbach's Alpha değeri ,894'tür. Bu oran, değişkenin yüksek düzeyde güvenilir olduğunu ifade etmektedir.

Parametrik testlerin uygulanabilmesi için modelde yer alan değişkenlerin normallik varsayımı, çarpıklık ve basıklık katsayıları incelenerek değerlendirilmiştir. Analiz sonucunda, ±1 aralığında çarpıklık ve basıklık değerlerine ulaşılmıştır. Çarpıklık ve basıklık değerlerinin ±1,5 aralığında olması, dağılımın normal dağılıma uygun olduğunu göstermektedir (Tabachnick ve Fidell, 2020). Elde edilen bulgular doğrultusunda, verilerin normal dağılım varsayımını karşıladığı ve parametrik testlerin uygulanabilir olduğu söylenebilir.

4.5. Model Değişkenlerine İlişkin Korelasyon Analizi

Model değişkenlerine ilişkin korelasyon analizi sonuçları Tablo 2'de yer almaktadır. Korelasyon katsayısı iki değişken arasındaki ilişkiyi ifade etmektedir. Katsayı önündeki işaret negatif olduğunda ilişki ters yönlüdür (bir değer artarken diğeri azalır) (Mukaka, 2012, s. 69). Literatürde korelasyon katsayılarının değerlendirilmesine ilişkin farklı görüşler bulunmakla birlikte, Pallant (2017, s. 150), korelasyon katsayısının .10-.29 arasında zayıf, .30-.49 arasında orta, .50-1.0 arasında yüksek olarak değerlendirilebileceğini belirtmektedir. Tablo, bu değerler referans alınarak yorumlanmıştır.

Tablo 2'deki korelasyon analizine göre şu bulgular elde edilmiştir:

- Algılanan cinsiyet ayrımcılığı ile kariyer yükselme beklentisi arasında anlamlı ilişki yoktur (r = ,032; p>0,05).

- Algılanan cinsiyet ayrımcılığı ile kariyer sürekliliği ve gelişim algısı arasında negatif yönlü, anlamlı ve orta düzeyde ilişki (r= -,368; p<0,01) bulunmaktadır.

- Algılanan cinsiyet ayrımcılığı ile kariyer memnuniyeti arasında negatif yönlü, anlamlı ve düşük düzeyde ilişki (r= -,264; p<0,01) bulunmaktadır.

Tablo 2: Değişkenlere İlişkin Korelasyon Analizi Sonuçları

Değişken	(1)	(2)	(3)	(4)
Algılanan Cinsiyet Ayrımcılığı (1)	1			
Kariyer Yükselme Beklentisi (2)	,032	1		
Kariyer Sürekliliği ve Gelişim Algısı (3)	-,368**	,084*	1	
Kariyer Memnuniyeti (4)	-,264**	,166**	,529**	1

**Korelasyon 0,01 düzeyinde anlamlıdır (Tek kuyruk).
 *Korelasyon 0,05 düzeyinde anlamlıdır (Tek kuyruk).

4.6. Model Değişkenlerine İlişkin Regresyon Analizi

Algılanan cinsiyet ayrımcılığının kariyer beklentisinin alt boyutları üzerindeki etkisine ilişkin regresyon analizi sonuçları Tablo 3'te yer almaktadır. Elde edilen bulgular, şu şekilde açıklanmıştır:

- Algılanan cinsiyet ayrımcılığının, kariyer yükselme beklentisi üzerindeki etkisi incelendiğinde:

  - Modelin istatistiksel olarak anlamlı olmadığı belirlenmiştir (F = ,504; p = ,478 > .05). B değeri ,035 olarak hesaplanmış ve bu değer istatistiksel olarak anlamlı bulunmamıştır (p = ,478). Bu bulguya göre, kadın çalışanların algıladıkları cinsiyet ayrımcılığı düzeyinin kariyer yükselme beklentisi üzerinde istatistiksel olarak anlamlı etkisi bulunmamaktadır.

- Algılanan cinsiyet ayrımcılığının, kariyer sürekliliği ve gelişim algısı üzerindeki etkisi değerlendirildiğinde:

❖ Regresyon modeli anlamlı bulunmuştur (F = 76,861; p = ,000 < .01). R² değeri ,135 olarak bulunmuştur. Bu bulgu, algılanan cinsiyet ayrımcılığının, kariyer sürekliliği ve gelişim algısındaki toplam varyansın %13,5'ini açıkladığını göstermektedir. B değeri -,353 olarak hesaplanmış ve istatistiksel olarak anlamlı bulunmuştur (p = ,000). Bu bulguya göre, algılanan cinsiyet ayrımcılığı puanındaki bir birimlik artış, kariyer sürekliliği ve gelişim algısı puanında -,353 birimlik azalışa yol açmaktadır.

Tablo 3: Algılanan Cinsiyet Ayrımcılığının Kariyer Beklentisine Etkisine İlişkin Regresyon Analizi Sonuçları

Bağımlı Değişken	R²	F: Anlamlılık (sig.)	Bağımsız Değişken	B	t	p
Kariyer Yükselme Beklentisi	,001	,504 ,478	Algılanan Cinsiyet Ayrımcılığı	,035	,710	,478
			(Sabit)	3,278	23,529	,000
Kariyer Sürekliliği ve Gelişim Algısı	,135	76,861 ,000**	Algılanan Cinsiyet Ayrımcılığı	-,353	-8,767	,000
			(Sabit)	4,876	42,508	,000

Algılanan cinsiyet ayrımcılığının kariyer memnuniyeti üzerindeki etkisini belirlemek amacıyla gerçekleştirilen regresyon analizi bulguları Tablo 4'te yer almaktadır. Bulgular ışığında şunlar söylenebilir:

❖ Regresyon modeli anlamlı bulunmuştur (F = 36,919; p = ,000 < .01). R² değeri ,070 olarak bulunmuştur. Bu bulgu, algılanan cinsiyet ayrımcılığının, kariyer memnuniyeti değişkenindeki toplam varyansın %7'sini açıkladığını göstermektedir. B değeri -,205 olarak hesaplanmış ve istatistiksel olarak anlamlı bulunmuştur (p = ,000). Bu bulguya göre, algılanan cinsiyet ayrımcılığı puanındaki bir birimlik artış, kariyer memnuniyeti puanında -,205 birimlik azalışa yol açmaktadır.

Tablo 4: Algılanan Cinsiyet Ayrımcılığının Kariyer Memnuniyetine Etkisine İlişkin Regresyon Analizi Sonuçları

Bağımlı Değişken	R²	F: Anlamlılık (sig.)	Bağımsız Değişken	B	t	p
Kariyer Memnuniyeti	,070	36,919 ,000**	Algılanan Cinsiyet Ayrımcılığı	-,205	-6,076	,000
			(Sabit)	3,724	38,724	,000

Bu sonuçlara göre, **H₁ hipotezi kısmen desteklenmiş (H₁b desteklenmiş, H₁a desteklenmemiş) ve H₂ hipotezi desteklenmiştir.**

5. SONUÇ

Bu araştırmada, kadın çalışanların iş yaşamında algıladıkları cinsiyet ayrımcılığının, onların kariyer beklentisi ve kariyer memnuniyeti üzerindeki etkisi incelenmiştir. Çalışma, algılanan cinsiyet ayrımcılığının kariyer beklentisi ve kariyer memnuniyeti üzerindeki etkilerini inceleyerek, iş yaşamında cinsiyet eşitliği sağlanmasının ilgili değişkenler açısından önemini ortaya koymaktadır.

Araştırmanın bulguları, algılanan cinsiyet ayrımcılığının kariyer beklentisinin "kariyer sürekliliği ve gelişim algısı" alt boyutu üzerinde negatif yönde anlamlı etkiye sahip olduğunu göstermektedir. Bu sonuç, bireylerin çalışma yaşamında karşılaştıkları cinsiyete dayalı ayrımcılık algısının, kariyerlerini uzun vadede sürdürebilme motivasyonlarını ve mesleki gelişim olanaklarına dair algılarını olumsuz etkilediğini göstermektedir. Bu durum, örgütler açısından da yetenekli çalışanların kaybı ve insan kaynağının verimli kullanılamaması gibi önemli riskler doğurmaktadır. Öte yandan, çalışmada algılanan cinsiyet ayrımcılığının kariyer beklentisinin "kariyer yükselme beklentisi" alt boyutu üzerinde anlamlı etkisinin olmadığı belirlenmiştir. Bir başka ifadeyle, katılımcılar cinsiyet ayrımcılığı algılasalar bile, bu durum onların terfi etme veya kariyerlerinde yükselme beklentilerini etkilememektedir. Bu bulgu, bireylerin kişisel yetkinliklerine, çabalarına veya sistemin bir noktada eşitlik sağlayacağına dair inançlarını koruduğuna işaret edebilir. Ayrıca bazı bireyler ayrımcılığı fark etseler bile, yükselme hedeflerinden vazgeçmeme veya bu algıyı kariyer hedeflerine yansıtmama eğiliminde olabilir. Çalışmanın algılanan cinsiyet ayrımcılığının kariyer beklentisine etkisine ilişkin bulgularının, Karaözkök (2024), Kemik ve Çetiner (2023), Alagöz ve Güneş (2023), Bulut ve Kızıldağ (2017) ve Çelik ve Altıntaş (2017) tarafından yapılan araştırmaların bulgularıyla benzerlik gösterdiği söylenebilir. Çalışmanın bir diğer bulgusu, algılanan cinsiyet ayrımcılığının kariyer memnuniyeti üzerinde negatif yönde anlamlı etkisi olduğudur. Algılanan cinsiyet ayrımcılığının kariyer memnuniyeti üzerinde negatif yönde anlamlı etkisi, bireylerin ayrımcılığa maruz kaldıklarında işlerinden ve kariyer süreçlerinden daha az tatmin olduklarını göstermektedir. Bu durum, adalet duygusunun zayıflaması ve fırsat eşitliği algısının motivasyonu olumsuz yönde etkilemesiyle ilişkilendirilebilir. Çalışmanın bu bulgusunun, Elçi vd. (2021) tarafından yapılan çalışmanın bulgusu ile benzerlik taşıdığı söylenebilir.

Algılanan cinsiyet ayrımcılığının "kariyer sürekliliği ve gelişim algısı" ve "kariyer memnuniyeti" üzerinde olumsuz etkiler yarattığı dikkate alındığında, kurumların ve kadın çalışanların bu etkileri azaltmaya yönelik çeşitli adımlar atması gerekmektedir. Kurumlar öncelikle, cinsiyet temelli ayrımcılığı önlemeye yönelik açık ve bağlayıcı politikalar geliştirmeli, bu politikaların tüm çalışanlar tarafından benimsenmesini sağlamak amacıyla düzenli eğitim ve farkındalık programları düzenlemelidir. Terfi, performans değerlendirme ve ödüllendirme süreçlerinde şeffaf, nesnel ve cinsiyetten bağımsız kriterler kullanmalı ve bunu görünür kılmalıdır. Ayrıca, kadın çalışanların kariyer gelişimini desteklemek amacıyla mentorluk ve kariyer koçluğu programları oluşturulması büyük önem taşımaktadır. Kadın çalışanlar ise, kariyer hedeflerini net bir şekilde belirleyerek bu doğrultuda kişisel gelişimlerine yatırım yapmalı, gerekirse profesyonel destek alarak yaşadıkları olası ayrımcılık deneyimlerine karşı kariyer motivasyonlarını korumaya çalışmalıdır.

Bu çalışma, insan kaynakları politikalarında eşitlikçi ve kapsayıcı yaklaşımların önemini bir kez daha gözler önüne sermektedir. Kadın çalışanların kariyer gelişimlerine destek olunması, ayrımcılık algısını azaltacak şeffaf terfi ve değerlendirme sistemlerinin uygulanması hem

bireysel memnuniyeti hem de örgütsel verimliliği artıracaktır. Ayrıca, ilerleyen araştırmalarda farklı sektör ve bölgelerde benzer çalışmalar yapılması, nitel yöntemlerle kadınların bireysel deneyimlerinin derinlemesine incelenmesi önerilmektedir. Kadınların iş yaşamında maruz kaldıkları yapısal ve algısal engellerin daha kapsamlı şekilde ele alınması, toplumsal dönüşüm süreçlerine de katkı sağlayacaktır. İleride yapılacak çalışmalarda, algılanan cinsiyet ayrımcılığının yalnızca kariyer beklentisi ve memnuniyeti üzerindeki etkisi değil; örgütsel bağlılık, tükenmişlik, işten ayrılma niyeti ve psikolojik sağlamlık gibi diğer değişkenlerle olan ilişkisi de incelenebilir. Bunun yanı sıra, farklı yaş grupları, sosyoekonomik düzeyler ya da sektör bazlı karşılaştırmalar yapılarak bulguların genellenebilirliği artırılabilir. Ayrıca, nitel araştırma yöntemleri ile kadın çalışanların bu konudaki kişisel deneyimlerine odaklanmak; duygu, algı ve anlam dünyalarını daha derinlikli biçimde analiz etmeye olanak sağlayacaktır. Erkek çalışanlarla yapılacak karşılaştırmalı çalışmalar ise, cinsiyet temelli algıların bütüncül şekilde değerlendirilmesine katkı sunabilir.

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DETERMINATION OF HUMAN RESOURCE IDENTITY IN FINANCE ENTERPRISES THROUGH MENTAL METAPHORS

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ABSTRACT

Purpose- The purpose of this research is to reveal how human resource identity is represented and structured through mental metaphors in financial institutions. In this direction, the texts in the human resources sections of the official websites of banks were analyzed and the role of the metaphors used in the formation of human resource identity was examined.

Methodology- The research employed a qualitative analysis method. Data for this study were obtained using headings such as "human resources," "career," "people and culture," "talent and culture," and "HR Portal" on the banks' official websites. The research population consisted of texts published in the human resources sections of the official websites of 14 selected domestic, private, and foreign owned banks.

Findings- As a result of the analysis, metaphors were grouped under certain themes and each theme reflects the meanings that organizations attribute to human resources.

Conclusion- Financial institutions use mind metaphors as a managerial tool when shaping their human resources identity. These metaphors express the place of employees within the organization, their importance, and their meaning within the institutional context, thus shaping the institutions' fundamental attitudes and understanding of their human resources. By structuring their human resources identities around the metaphors of "journey," "family," "game," "story," and "network," banks ensure that employees' individual development aligns with corporate objectives.

Keywords: Mental metaphors, human resource identity, human resource management, financial enterprises
JEL Codes: M12, M14, J24

FİNANS İŞLETMELERİNDE İNSAN KAYNAĞI KİMLİĞİNİN ZİHİN METAFORLARI YOLUYLA BELİRLENMESİ

ÖZET

Amaç- Bu araştırmanın amacı, finans kurumlarında insan kaynağı kimliğinin zihin metaforları aracılığıyla nasıl temsil edildiğini ve yapılandırıldığını ortaya koymaktır. Bu doğrultuda bankaların resmi web sitelerinde yer alan insan kaynakları bölümlerindeki metinler analiz edilerek, kullanılan metaforların insan kaynağı kimliğinin oluşturulmasındaki rolü incelenmiştir.

Yöntem- Araştırmada nitel analiz yöntemi kullanılmıştır. Bu kapsamda çalışmanın verileri, bankaların resmi internet sitelerinde "insan kaynakları", "kariyer", "insan ve kültür", "yetenek ve kültür", "İK Portal" gibi başlıklardan yararlanılarak elde edilmiştir. Araştırmanın evrenini, yerli, özel ve yabancı sermayeli olmak üzere seçilen 14 bankanın resmi web sitelerinde insan kaynakları bölümlerinde yayımlanan metinler oluşturmaktadır.

Bulgular- Analiz sonucunda metaforlar belirli temalar altında gruplandırılmış ve her bir tema kurumların insan kaynağına yükledikleri anlamları yansıtmaktadır.

Sonuç- Finansal kurumlar, insan kaynakları kimliğini şekillendirirken zihin metaforlarını yönetsel bir araç olarak kullanmaktadır. Bu metaforlar aracılığıyla çalışanların örgüt içindeki yeri, taşıdığı önem ve kurumsal bağlamdaki anlamı ifade edilmekte; böylelikle kurumların insan kaynağına yönelik temel tutumları ve anlayışları biçimlenmektedir. Bankalar, insan kaynakları kimliklerini "yolculuk", "aile", "oyun", "hikâye" ve "ağ" metaforları çerçevesinde yapılandırarak; çalışanların bireysel gelişimlerinin kurumsal hedeflerle uyumlu hale gelmesini sağlamaktadır.

Anahtar Kelimeler: Zihin metaforları, insan kaynağı kimliği, insan kaynakları yönetimi, finans işletmeleri
JEL Kodları: M12, M14, J24

1. GİRİŞ

Dijital dönüşümün ve nitelikli işgücü ihtiyacının giderek arttığı günümüz iş dünyasında, insan kaynakları yönetimi destekleyici bir fonksiyon olmaktan çıkarak örgütsel kimliğin kurucu unsurlarından biri haline gelmiştir. Bu değişim, kurumların insan kaynağına yönelik algı, tutum ve ifadelerini yeniden üretmelerine yol açmakta; İnsan kaynakları kimliğinin oluşum biçimi, kurumlar açısından stratejik düzeyde ele alınması gereken bir konuya dönüşmektedir.Bu çerçevede, metaforlar örgütlerin soyut gerçekliklerini anlamlandırma ve iletme sürecinde işlevsel bir

rol üstlenmekte; insan kaynaklarına dair değerler, roller ve ilişkiler metaforik anlatımlar yoluyla temsil edilmektedir. Bu süreci anlamlandırmada metaforlar önemli bir rol oynamaktadır. Özellikle zihin metaforları, soyut olanı somutlaştırma gücüne sahip bilişsel yapılar olarak, örgütlerin çalışanlara ne tür anlamlar yüklediğini, onlardan ne beklediğini ve nasıl bir bakış açısına sahip olduğunu ortaya koymaktadır.

2.LİTERATÜR TARAMASI

İnsan kaynağı kimliği, örgüt içinde insan kaynakları fonksiyonunun üstlendiği roller, değerler ve işlevlerle şekillenen, hem kurum içi hem de dışı paydaşlarca algılanan sosyal ve kültürel bir kavramdır (Sağlam Arı ve Konaklıoğlu, 2017:125). Bak, Kutlu ve Bak (2020: 235) tarafından yapılan çalışmada, insan kaynakları çalışanlarının kendi mesleki kimliklerini ifade etmek için kullandıkları metaforların, bu kimliğin bireysel ve toplumsal boyutlarını anlamada önemli ipuçları sunduğu vurgulanmıştır. Bu metaforik anlatımlar, insan kaynağının örgüt içindeki işlevini, algılanan değerini ve mesleki duruşunu temsil eder. Metafor en basit tanımıyla, bir şeyi başka bir şey ile anlatma biçimidir (Okutan ve Yetim, 2019:184). Zihin metaforları, bireylerin soyut kavramları ve karmaşık olguları anlamlandırmak için zihinsel düzeyde kullandıkları bilişsel araçlardır. Lakoff ve Johnson (1980), metaforların sadece dilde süsleyici ifadeler olmadığını, aksine insanların dünyayı kavramsal olarak yapılandırmasının temel araçları olduğunu ortaya koymuştur. Bu perspektife göre, metaforlar soyut fikirlerin somut deneyimlerle ilişkilendirilmesini sağlar ve böylece anlam üretiminin zihinsel temelini oluşturur (Lakoff ve Johnson, 1980: 5-7). Organizasyonel yaşamın bütün doğasını tam olarak açıklamada tek bir metafor yeterli değildir. Bu bağlamda, insan kaynakları yönetiminde tek bir metafor açısından değil, bütünleşik bir değerlendirme daha doğru olmaktadır (Bayraktaroğlu vd., 2011:9-10). Cornelissen (2005), örgüt metaforlarının, karmaşık sosyal yapıları anlamlandırmada temel araçlar olduğunu ve bu metaforların insan kaynakları uygulamalarının algılanış biçimini şekillendirdiğini ifade etmiştir.

3. ARAŞTIRMANIN AMACI VE YÖNTEMİ

Bu çalışmanın amacı, finans sektöründe faaliyet gösteren kurumlarda insan kaynağı kimliğinin zihin metaforları vasıtasıyla ne şekilde yansıtıldığını analiz etmektir. Bu bağlamda, bankaların kurumsal web sitelerinde bulunan insan kaynaklarına yönelik bölümlerde yer alan metinler, içerik analizi yöntemiyle incelenmiş ve bu metinlerde kullanılan zihin metaforlarının, çalışan kimliğinin oluşumundaki işlevi irdelenmiştir. Veriler, bankaların resmi internet sayfalarında yer alan "insan kaynakları", "kariyer", "insan ve kültür", "yetenek ve kültür" ve "İK Portal" gibi başlıklar altında yayımlanan metinlerden elde edilmiştir. Araştırmacılar içerik analizini kullanarak belirli kelimelerin, temaların veya kavramların varlığını, anlamlarını ve ilişkilerini ölçebilir ve/veya analiz edebilir (Sallan Gül ve Kahya Nizam, 2021:182). Araştırmanın evrenini, yerli, özel ve yabancı sermayeli olmak üzere seçilen 14 bankanın resmi web sitelerinin insan kaynakları bölümlerinde yayımlanan metinler oluşturmaktadır.

4. BULGULAR

Araştırmada, insan kaynağı kimliğini yansıtan anlatımlar beş ana metafor teması altında toplanmıştır: yolculuk, aile, oyun, hikâye ve ağ. Her tema altında, bankalara ait örnek ifadeler analiz edilerek çalışanın kurum içindeki konumunu yansıtan metaforik kimlikler ortaya konmuştur.

Tablo 1: Araştırmada Yer Alan Bankalar

Banka Adı	Banka Türü
Akbank	Özel Sermayeli Mevduat Bankası
Alternatif Bank	Türkiye'de kurulmuş yabancı sermayeli bankalar
Anadolubank A.Ş.	Özel Sermayeli Mevduat Bankası
Citibank A.Ş.	Türkiye'de kurulmuş yabancı sermayeli bankalar
Fibabanka A.Ş	Özel Sermayeli Mevduat Bankası
Türkiye Garanti Bankası A.Ş	Türkiye'de kurulmuş yabancı sermayeli bankalar
HSBC Bank A.Ş	Türkiye'de kurulmuş yabancı sermayeli bankalar
ING Bank A.Ş.	Türkiye'de kurulmuş yabancı sermayeli bankalar
Türkiye İş Bankası A.Ş.	Özel Sermayeli Mevduat Bankası
Odea Bank A.Ş	Türkiye'de kurulmuş yabancı sermayeli bankalar
QNB Finansbank A.Ş.	Türkiye'de kurulmuş yabancı sermayeli bankalar
Şekerbank T.A.Ş	Özel Sermayeli Mevduat Bankası
Türk Ekonomi Bankası A.Ş.	Özel Sermayeli Mevduat Bankası
Yapı Kredi Bankası A.Ş.	Türkiye'de kurulmuş yabancı sermayeli bankalar

Tablo 1'de araştırmada yer alan bankaların isimleri ve banka türü belirtilmektedir.

Tablo 2: Metaforik Temaların Sınıflandırılması

Ana Tema	Alt Temalar
YOLCULUK	Gelişim / Keşif / Kariyer /Harita / Hedef / Rehber / Yol
AİLE	Aile olmak / Aile üyesi/ Güven / Aidiyet
OYUN	Takım/ Oyunlaştırma /Strateji / Rekabet / Spor
HİKAYE	Öykü/Başarı
AĞ	Bağlantı / Paylaşım / İletişim / Network

Çalışma kapsamında 5 ana tema ve 22 alt tema oluşturulmuştur. Bu temalar tablo 2'de gösterilmektedir.

Tablo 3: Yolculuk Metaforu

Metafor Tema	Alt Tema	Banka	İfade	İK Kimliği
YOLCULUK	Gelişim/Keşif/Kariyer Harita/Hedef/Rehber/Yol	Akbank	Kendini keşfetme serüvenine katılım Doğru adımlarla kariyerinde ilerle	Stratejik gelişimle kendini keşfeden
		Alternatif Bank	Şeffaf, çalışan odaklı, yenilikçi gelişim; kariyerde yatay ve dikey fırsatlar	Potansiyelini keşfeden, gelişime açık
		Anadolu Bank	Tüm çalışanlar yetenekli; kariyer yolları açık; kurum kültürüne bağlı ve yenilikçi	Yetenekli, kültüre bağlı ve yenilikçi
		Citibank	Citi'liler kariyer gelişim sorumluluğunu kendileri üstlenir.	Kariyer gelişiminin lideri, sorumluluk alan
		Fibabanka	Çalışanların yetenek, potansiyel, gelişim ve mutluluğu takip edilir.	Yetenek ve mutluluğu izlenen, desteklenen
		Garanti Bankası	Kariyer fırsatlarına kendini aday göstermek.	Kariyer fırsatlarına aktif ve gönüllü katılan
		HSBC	Hedefler şeffaf, performans sürekli izlenir.	Hedefleri net, performansını sürekli değerlendiren
		ING Bank	Hırslarınızla uyumlu yola çıkın kariyerinizi üç rotasyonda keşfedin	Rotasyonlarla kariyerini keşfeden
		İş Bankası	Seçtiğin yolda sana yol göstermek	Kurum içini keşfeden ve yönlendirilen
		Odeabank	Gelişmek ve geliştirmek için cesur kararlar alırız.	Gelişmek ve çevresini geliştirmek
		QNB Finansbank	Her QNB'li işinin lideridir Birbirimizin hedefleri için çalışmak	İşinin lideri olan, takım hedefleri için birlikte çalışan
		Şekerbank	Kariyer hedeflerini desteklemek	Gelişimi planlı izlenen
		TEB	Tecrübeli çalışanların deneyimlerini paylaşması için profesyonel gelişim platformu	Tecrübelerini paylaşan, etkileşimli öğrenme ortamlarında gelişen
		Yapı Kredi	Yıl boyunca sürecek bir yolculuk Kariyer yapmak istediğin alanları keşfetmen	Gelişim yolculuğunda kendi kariyerini oluşturabilen, öğrenmeye açık

Tablo 3'te *Yolculuk Metaforu*, çalışanları bir gelişim ve kariyer yolculuğuna davet eden, onları potansiyellerini keşfetmeye ve stratejik adımlar atmaya yönlendiren bir yapı olarak ortaya çıkmaktadır.Çalışanlar; aktif öğrenen, hedef koyan, kendi kariyerini planlayan ve kurumla birlikte dönüşen bireyler olarak tanımlanmaktadır.

Tablo 4: Aile Metaforu

Metafor Tema	Alt Tema	Banka	İfade	İK Kimliği
AİLE	Aile olmak/Aile üyesi/Güven/Aidiyet	Fibabanka	Fibabanka Ailesi'nin bir parçası olmak üzere	Kuruma aidiyet duyan, ailenin parçası olarak görülen
		HSBC	Çalışma arkadaşlarımıza sadece bir işveren olarak değil, onların içinde kendilerini güvende ve esen hissettikleri bir ortam sağlarız.	Kendini güvende hisseden, desteklenen ve değer verilen
		İş Bankası	İş Ailem: Aile olmak, birbirine her konuda destek olmak demek	Birlikte büyüyen, her konuda desteklenen "İş Ailesi" üyesi
		Odeabank	Çalışma kültürü; çalışanlara saygı, sevgi ve güven sınırları içinde	Sevgi, saygı ve güven temelli kültürde çalışan
		Şekerbank	İnsan Kaynakları ekipleri arasında arasında güvene dayalı, rahat paylaşıma imkan sağlayan bir iletişim	Güvene dayalı, rahat iletişim ortamında fikirlerini paylaşan

Tablo 4'te *Aile Metaforu*, çalışanlar sadece işgören değil, kurumun "aile" üyeleri olarak duygusal bağlılık, aidiyet, güven ve destek çerçevesinde yer almaktadır.

Tablo 5: Oyun Metaforu

Metafor Tema	Alt Tema	Banka	İfade	İK Kimliği
OYUN	Takım/Oyunlaştırma/ Strateji/Rekabet/Spor	Akbank	Oyunlaştırma gibi modern alt yapılarla gelişim yolculuğunu keyifli hale getiriyor.	Oyunlaştırma ile gelişim yolculuğunu keyifli ve motive eden
		Fibabanka	Yenilikçi ve müşteri odaklı çalışma arkadaşlarımızla birlikte gelişiriz.	Yenilikçi, müşteri ve takım odaklı çalışanlarla birlikte gelişen
		Garanti Bankası	Kariyer fırsatları programı ile doğru hamleleri yap	Kariyer fırsatlarını stratejik değerlendiren
		İş Bankası	İŞ'te Turnuva: Rekabet ve heyecan dolu bir organizasyon	Rekabet ve heyecanla motivasyonu yüksek tutulan
		QNB Finansbank	Hepimiz aynı ekibin parçasıyız, birbirimizin hedefleri için çalışırız.	Aynı takımda işbirliği yapan, birbirinin hedeflerine katkı sunan
		TEB	Rekabet avantajı sağlayabilecek çalışanlar belirlenir.	Rekabet avantajı sağlayacak potansiyel çalışanlar

Tablo 5'te *Oyun Metaforu*, çalışan gelişimini destekleyen, motivasyon ve katılımı artıran dinamik bir yapı olarak betimlenmektedir. Çalışanlar; aktif katılımcı, stratejik düşünen, takım oyuncusu ve rekabetçi bireyler olarak tanımlanmaktadır.

Tablo 6: Hikaye Metaforu

Metafor Tema	Alt Tema	Banka	İfade	İK Kimliği
HİKAYE	Öykü/Başarı	Akbank	Fark yaratan hikayelerimiz	Kendi başarı hikayesini yazan
		Garanti Bankası	Başarı hikayeni Garanti BBVA'da yaz	Başarı hikayelerini kurumda oluşturan ve paylaşan
		İş Bankası	İŞ'te Yaşam hikayeleri, Çalışanlarımızın deneyim öyküleri	Deneyimlerini paylaşarak kurum kültürünü zenginleştiren
		Odeabank	Odealist Olmak: Kariyerinizi Birlikte Yazıyoruz	Kariyerini birlikte yazan, aidiyet duygusuyla hikayesini paylaşan
		QNB Finansbank	Birlikte yazdığımız başarı öyküleri	Birlikte yazdıkları başarı hikayeleriyle takım ruhunu güçlendiren
		Yapı Kredi	Çalışanlarımızın ilham veren öyküleri	İlham veren hikayelerle kültür ve deneyimi zenginleştiren

Tablo 6'da *Hikâye Metaforu,* Çalışanların bireysel başarıları ve deneyimleri, kurumsal değer ve kültürün parçası olarak anlatılmaktadır.

Tablo 7: Ağ Metaforu

Metafor Tema	Alt Tema	Banka	İfade	İK Kimliği
AĞ	Bağlantı/Paylaşım/ İletişim/Network	QNB Finansbank	Forum ve destek hatlarıyla çalışan ağı güçlendirilir.	Çalışan ağını güçlendiren
		Şekerbank	Açık iletişim ağı kullanıyoruz.	Açık ve samimi iletişim ağı ile desteklenen, fikir paylaşımına açık
		TEB	Çalışan odaklı yaklaşımımızla ortak aklın hakim olduğu bir kültür yaratıyoruz.	Ortak akıl ve kültür yaratan, çalışan görüşlerini ön planda tutan
		Yapı Kredi	Stratejik birimlerdeki kişilerle tanışacağın ve network kuracağın etkinlikler	Stratejik birimlerle network kuran, sosyal bağlılığı güçlü çalışan

Tablo 7'de *Ağ Metaforu*, çalışanlar arasında iletişim, paylaşım ve iş birliğini destekleyen bir köprü ve bağlantı ağı olarak görülmektedir.

Tablo 8: Bankaların İnsan Kaynağı Kimliği Temalarının Metaforik Dağılımı

Banka	YOLCULUK	AİLE	OYUN	HİKAYE	AĞ
Akbank	2	0	1	1	0
Alternatif Bank	1	0	0	0	0
Anadolu Bank	1	0	0	0	0
Citibank	1	0	0	0	0
Fibabanka	2	1	2	0	0
Garanti Bankası	1	0	1	1	0
HSBC	2	1	0	0	0
ING Bank	1	0	0	0	0
İş Bankası	2	1	1	1	0
Odeabank	2	1	0	1	0
QNB Finansbank	2	0	2	1	1

Şekerbank	1	1	1	0	1
TEB	2	0	1	1	1
Yapı Kredi	1	0	0	1	1
Toplam	21	5	9	7	4

Tablo 8'de Bankaların insan kaynağı kimliği temalarının metaforik dağılımı sonucunda; yolculuk metaforu n=21, aile metaforu n=5, oyun metaforu n=9, hikaye metaforu n=7 ve ağ metaforu n=4 olarak belirlenmiştir.

5. SONUÇ

Finans sektörü kuruluşları, insan kaynaklarına ilişkin kimlik oluşturma süreçlerinde zihin metaforlarından stratejik bir şekilde faydalanmaktadır. Bu metaforlar aracılığıyla çalışanların kurumdaki konumu, değeri ve anlamı dolaylı bir biçimde tanımlanmakta böylece kurumun insan kaynağına ilişkin temel yaklaşımları meydana gelmektedir. Bu araştırma, finans sektöründe faaliyet gösteren bankaların insan kaynakları kimliğini, zihin metaforları aracılığıyla ele almıştır. Bulgular, insan kaynakları birimlerinin çalışanları yalnızca teknik ve idari görevlerle sınırlı görmediğini; aksine, onların kariyer yolculuklarında rehberlik eden, gelişim süreçlerini destekleyen, aidiyet ve bağlılık duygusunu güçlendiren, motivasyon ve katılımı artıran yapılar olduğunu ortaya koymaktadır. Bankalar, insan kaynakları kimliklerini "yolculuk", "aile", "oyun", "hikâye" ve "ağ" metaforları çerçevesinde yapılandırarak; çalışanların bireysel gelişimlerinin kurumsal hedeflerle uyumlu hale gelmesini sağlamaktadır.Yolculuk metaforu, bireyleri aktif öğrenen, kendi kariyerlerini bilinçli şekillendiren bireyler olarak konumlandırırken; aile metaforu aidiyet duygusunun pekiştirilmesi ve psikolojik güvenlik ortamının oluşturulmasına vurgu yapmaktadır. Oyun metaforu, çalışan motivasyonu, rekabetçilik ve takım ruhunun geliştirilmesini desteklerken; hikâye metaforu, bireysel başarıların kurumsal anlatılarla bütünleşmesini ve anlamlandırılmasını sağlamaktadır. Ağ metaforu ise kurum içi iletişim kanallarını güçlendirerek iş birliği ve birlikte öğrenmenin artırılmasına katkıda bulunmaktadır.İnsan kaynaklarının finans sektöründe yalnızca destekleyici bir işlev görmekten öte, kurumsal kültürün oluşturulmasında ve örgütsel başarının sağlanmasında önemli bir rol oynadığı görülmektedir.

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A COMPARATIVE ANALYSIS OF MACHINE LEARNING ALGORITHMS ON NETWORK TRAFFIC FORECASTING

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ABSTRACT

Purpose- The purpose of this study is to evaluate and compare the performance of four different time series forecasting models applied to mobile network traffic data, a domain characterized by high variability and complex seasonal patterns. Accurate forecasting of mobile capacity needs in the telecommunications sector is of great importance for providing uninterrupted and high-quality service. Since each network is unique, it is necessary to build a model that best predicts the seasonal traffic changes of the network.
Methodology- This research utilizes a comparative approach by implementing SARIMA, Prophet, LSTM, and a novel hybrid Prophet-LSTM model on monthly mobile traffic data from a telecommunications operator. The models were evaluated based on standard error metrics including MAE, MSE, RMSE and R^2 score.
Findings- The hybrid model leverages Prophet's trend-seasonality decomposition with LSTM's capability to learn nonlinear residual dynamics. The analysis reveals that the hybrid Prophet-LSTM model significantly outperforms the standalone SARIMA, LSTM, and Prophet models in terms of forecasting accuracy, flexibility, and adaptability. While SARIMA was limited in capturing complex, long-term trends and nonlinear fluctuations, LSTM required extensive hyperparameter tuning and was sensitive to data structure. Prophet proved to be effective in handling trend and seasonality with minimal parameter tuning, making it particularly suitable for cyclic patterns commonly observed in the telecommunications sector. However, the hybrid model's ability to leverage Prophet's decomposition strengths along with LSTM's temporal learning capacity enabled it to deliver the most robust predictions with the lowest error rates.
Conclusion- This model offers direct practical applications in network capacity planning, financial forecasting, and resource optimization processes. Moreover, it can be adapted for use in other sectors such as energy, transportation, and finance that rely heavily on time series data. Based on these findings, the hybrid Prophet-LSTM model is recommended for mobile traffic forecasting tasks involving both seasonal and nonlinear dynamics. Future studies may incorporate real-time streaming data and external factors to further improve predictive performance and real-world applicability.

Keywords: Network traffic prediction, SARIMA, Prophet, LSTM, hybrid model
JEL Codes: C32, C53, L96

1. INTRODUCTION

The rapid increase in mobile data usage, driven by the widespread adoption of smartphones, video streaming, and 5G technologies, has made efficient capacity planning a vital requirement for telecommunications operators. As user behavior becomes more dynamic and network infrastructures more complex, accurate forecasting of network traffic has emerged as a critical challenge in the industry. Poor forecasting can result in either underutilization of resources or service disruptions, both of which can significantly affect customer satisfaction and operational costs.

Time series forecasting models play a key role in predicting future traffic trends and enabling proactive network planning. However, the selection of an appropriate model is not straightforward, as mobile traffic data typically exhibits non-linear, seasonal, and sometimes abrupt behavioral shifts. Traditional statistical methods such as SARIMA are often limited in capturing such complexities. However, at the expense of greater model complexity and training time, machine learning-based models such as Long Short-Term Memory (LSTM) networks are more flexible and capable to learn complex time relationships.

In recent years, hybrid modeling approaches have gained traction, aiming to combine the strengths of different paradigms to improve forecasting performance. One such approach is the Prophet-LSTM hybrid model, which integrates Prophet's strength in trend and seasonality

decomposition with LSTM's ability to learn residual dynamics. This hybridization seeks to produce more accurate and robust forecasts, particularly in domains like telecommunications where traffic patterns are both seasonal and irregular.

This paper presents a comparative analysis of four forecasting models—SARIMA, Prophet, LSTM, and a Prophet-LSTM hybrid—applied to real-world monthly mobile traffic data. By evaluating their performance using multiple error metrics, this study aims to identify the most effective modeling approach for telecommunications traffic forecasting. In doing so, it contributes both to the academic literature and to the practical needs of the telecommunications industry.

The remainder of the paper is organized as follows: Section 2 provides a review of related literature. Section 3 describes the dataset and methodology used. Section 4 presents the experimental results and analysis. Section 5 concludes the paper and outlines directions for future work.

2. LITERATURE REVIEW

Forecasting network traffic is a vital task for ensuring the efficiency, quality of service, and sustainability of operations in the telecommunications sector. As mobile data volumes increase due to 5G adoption and digitalization, accurate traffic prediction models are needed to support resource planning and proactive management.

Over the years, a wide range of time series forecasting models have been proposed and evaluated. Traditional statistical models such as ARIMA have been widely used for modeling linear time-dependent data. However, they often fall short in handling non-linear dynamics and complex seasonal behaviors. Prophet, developed by Facebook, has gained popularity due to its ability to model trend and seasonality with minimal tuning, as shown in the works of Subashini et al. (2019) and Cembaluk et al. (2022). While Prophet provides reliable predictions in many scenarios, some studies point out its limitations in handling high-frequency fluctuations without appropriate parameter optimization.

Deep learning-based models, particularly Long Short-Term Memory (LSTM) networks, have shown great promise in capturing long-term dependencies and non-linear patterns in sequential data (Katwal et al., 2023; Prajam et al., 2022). However, LSTM models require substantial training data and computational resources, and may be sensitive to hyperparameter configurations.

To address the limitations of single-model approaches, several studies have proposed hybrid models combining statistical and machine learning methods, Madan and Mangipudi (2018) introduced a DWT–ARIMA–RNN hybrid model, where wavelet transformation was used to decompose noise and complexity, followed by statistical and deep learning techniques for improved accuracy.

Shi et al. (2021) explored optimization-based hybrid models, integrating techniques such as Particle Swarm Optimization (PSO) and Variational Mode Decomposition (VMD) to enhance model precision. These decomposition-based frameworks improve forecasting by modeling each component individually and combining them. In a more recent example, Zaraket et al. (2024) proposed the "Hyper-Flophet" model, combining Prophet and LSTM to leverage both trend decomposition and sequential learning. Their results demonstrated that hybrid approaches generally outperform single models in complex traffic scenarios.

To support this idea, Karthika et al. (2017) proposed a hybrid method consisting of ARIMA and SVM models for short-term electricity load forecasting (STLF). The results showed that the ARIMA–SVM hybrid model (MAPE: 4.15%) achieved higher accuracy than using only ARIMA (MAPE: 5.16%) or only SVM (MAPE: 4.97%). Furthermore, it was noted that the hybrid model, combined with outlier correction, further reduced the error rate. This study makes a strong contribution to the idea of combining time series models with artificial intelligence methods to increase forecast accuracy.

Arslan (2022) introduces a hybrid time series forecasting model that combines Prophet and a stacked bidirectional LSTM to improve prediction accuracy. The approach involves decomposing the data to isolate and remove seasonality, training the LSTM on deseasonalized data for efficiency, and then reintegrating the seasonal component for final predictions. Evaluated on a real-world dataset of monthly energy consumption from seven countries, the hybrid model outperformed or matched the accuracy of several traditional and advanced models.

Zhang (2003) proposes a hybrid time series forecasting model that combines the linear ARIMA model with the nonlinear artificial neural network (ANN) to leverage their complementary strengths. While ARIMA captures linear patterns and ANNs handle nonlinear relationships, the hybrid model is designed to address complex time series with both components. Empirical results on three real datasets show that the combined model outperforms ARIMA and ANN used individually.

Aladag et. al. (2009) proposes a hybrid forecasting model that combines ARIMA with an Elman Recurrent Neural Network (ERNN), aiming to improve upon Zhang's earlier ARIMA-FNN hybrid approach. Since ERNNs include a context layer, they offer better forecasting accuracy than feedforward neural networks (FNNs). The proposed model was tested on the Canadian lynx dataset and showed improved performance compared to other methods.

Khashei (2011) proposes a hybrid forecasting method that combines a traditional time series model with a probabilistic neural network (PNN) to enhance prediction accuracy. The approach modifies the forecasts of the base model by analyzing and classifying the residual trends using the PNN, alongside optimizing the step length through mathematical programming. Tested on three real-world datasets, the hybrid model outperforms the standalone time series model, demonstrating its potential as a more accurate alternative for forecasting tasks.

In related domains, hybrid models such as Prophet-LSTM have also been employed in web traffic (Kong et al., 2021), energy demand (Bashir et al., 2022), and oil production forecasting (Ning et al., 2022). These studies collectively support the idea that hybrid modeling techniques can effectively bridge the gap between interpretability and predictive power.

Inspired by these findings, this study proposes a Prophet-LSTM hybrid model tailored for mobile network traffic forecasting. By leveraging Prophet's ability to handle trend-seasonality and LSTM's strength in modeling residuals, the model aims to deliver accurate, robust, and scalable forecasts. In contrast to previous works, this study applies the hybrid model to real operational data from a telecom operator, aiming to offer both theoretical insights and practical contributions for time series forecasting in large-scale networks.

3. DATA AND METHODOLOGY

The dataset used in this study consists of mobile network traffic records obtained from a telecommunications operator. Since the telecommunications sector is highly confidential, the dataset was created with the guidance of experts in the area. A synthetic dataset spanning from January 2023 to December 2024, including 24 months of historical downlink and uplink traffic data aggregated at the monthly level, was created withthe following steps: the average of actual data was taken, yearly seasonality was added, daily seasonality was added (Turkish customers tend to produce more data during the summer time and on the weekends)

The dataset was splitted into test and training subsets with the ratio of 30% and 70% simultaneously. Each of the models was trained with the same data and made the predictions on the same time span.

For SARIMA, Grid Search was used for hyperparameter tuning. For Prophet, weekly and yearly seasonality were activated. For LSTM, MinMaxScaler was used and hyperparameter tuning process was applied. For hybrid model, first Prophet was applied then the residuals were trained by LSTM and the combination of these two predictions was the final result.

Then, MAE, MSE, RMSE and R^2 score were calculated for each model. These calculations were made by the following formulas:

$$MAE = \frac{1}{n} \sum_{i=1}^{n} |y_i - \hat{y}_i|$$

$$MSE = \frac{1}{n} \sum_{i=1}^{n} (y_i - \hat{y}_i)^2$$

$$RMSE = \sqrt{MSE}$$

$$R^2 \text{ Score} = 1 - \frac{\sum_{i=1}^{n}(y_i - \hat{y}_i)^2}{\sum_{i=1}^{n}(y_i - \bar{y})^2}$$

Lower MAE, MSE, RMSE and R^2 score closer to 1 would give the best model performance.

4. FINDINGS

Performance of the models are given for comparison. MAE, MSE, RMSE and R^2 score were compared to find the best model. Each figure shows the test set and the predictions. Figure 1 shows that although SARIMA's error rates are interpreted as low, its R^2 score of 17.6% is well below expectations. A single metric is not sufficient to evaluate a model's performance, and it requires consideration from many different perspectives.

Figure 1: SARIMA Model Performance
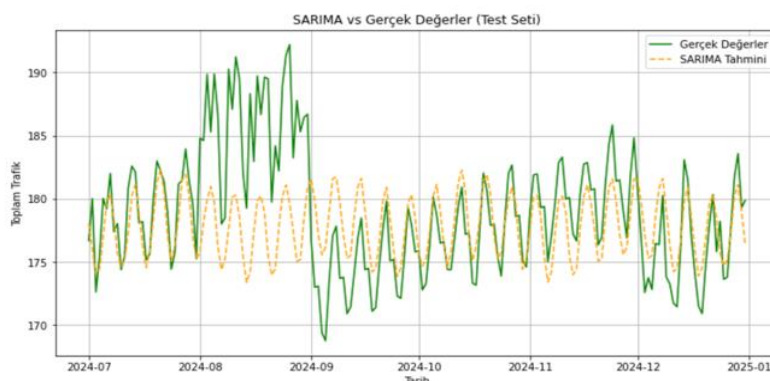
Figure 2 shows that the established model is quite successful since the MAE is close to zero and the R2 score is 76%.
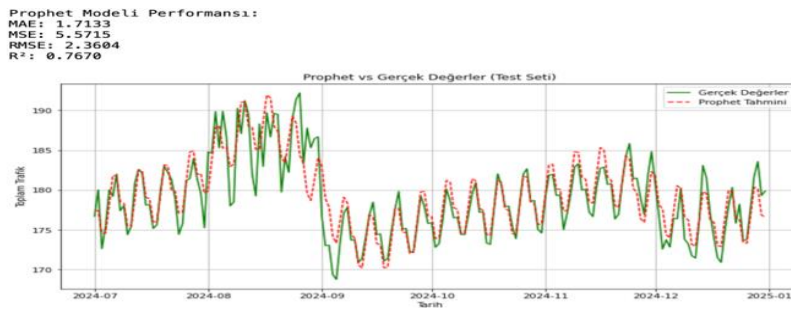
Figure 2: Prophet Model Performance

Figure 3 shows the performance of the LSTM model is lower than the Prophet model, but higher than SARIMA. It was able to explain 40% of the data.
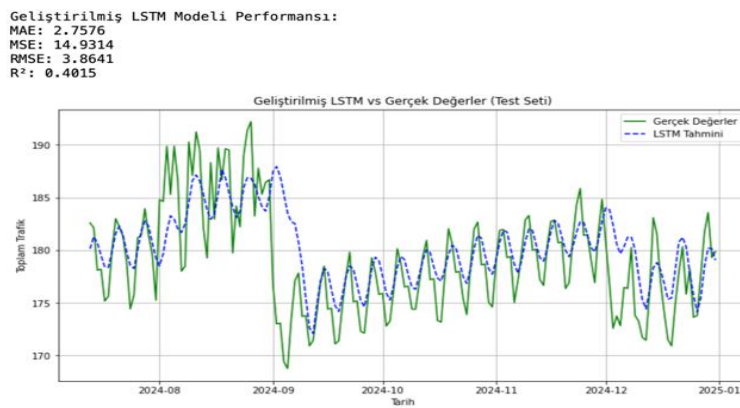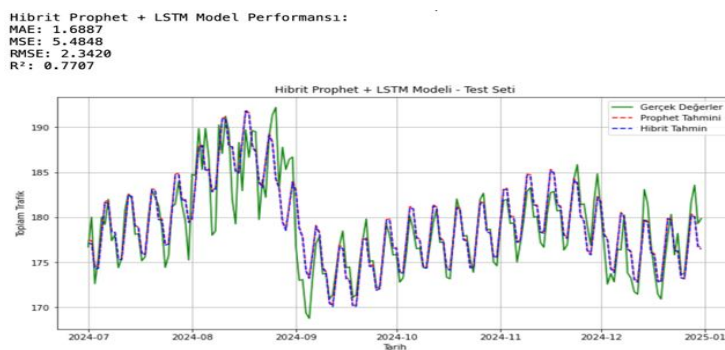
Figure 3: LSTM Model Performance

Figure 4 shows that the calculated error rates were quite low. The Prophet model explained 76.7% of the data, while the hybrid model explained 77%. This percentage improvement is anticipated to be even greater in larger, more realistic data sets.

Figure 4: Hybrid Model Performance

The summary of the performance metrics are given in Table 1.

Table 1: Comparison of performance metrics

	MAE	MSE	RMSE	R^2 Score
SARIMA	3.25	19.6	4.43	17%
LSTM	2.75	14.9	3.86	40%
Prophet	1.71	5.6	2.36	76.7%
Hybrid model	1.68	5.4	2.34	77%

5. CONCLUSION

Hybrid models are very promising for sectors dealing with time series data. It is seen that measuring the model performance with a real and longer data set would give a better outcome. External factors such as special days, holidays, match fixtures and campaign periods can be added to the model in order to obtain a real-life pattern. More precise and detailed predictions of models can be obtained by increasing data frequency to hourly level. This type of time series problems and hybrid model approaches can easily be adapted to other sectors working with time series data such as energy, transportation, e-commerce and finance.

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PSYCHOLOGICAL VIOLENCE (MOBBING) IN BUSINESS LIFE: PERCEPTIONS AND BEHAVIORS OF DIFFERENT GENERATIONS TOWARDS PSYCHOLOGICAL VIOLENCE

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ABSTRACT

Purpose- The aim of this study is to measure the perception of psychological violence among different generations in the workplace and to contribute to the literature by identifying the behaviors exhibited in response to such experiences. In this context, data were collected through a questionnaire administered to a sample composed of individuals from different generational cohorts. In the first section of the study, examples of psychologically violent behaviors were selected from a pool created using four of the most frequently cited psychological violence scales in the literature.

Methodology- Participants were asked to rate these behaviors in terms of their severity and relevance. In the second section, two distinct psychological violence scenarios were presented to participants. This part aimed to assess the participants' reactions and to explore how different generations cope with psychological violence in the workplace. In the final section, participants were asked open-ended questions about their personal experiences with psychological violence, including any incidents they may have encountered.

Findings- The research was conducted with 283 participants who had at least one year of work experience. Of these, 18.4% belong to generation X, 62.5% to generation Y, and 19.1% to generation Z. The average age of participants was 34.5, with a balanced gender distribution (145 female, 138 male). Additionally, 68.9% of the respondents reside in Istanbul. The average work experience was 9.76 years, and the average duration of exposure to psychological violence was 19.4 months. Furthermore, 32.5% of participants held managerial positions.

Conclusion- The findings indicate that generation X appears to be more resilient to psychological violence in the workplace and tends to not perceive certain behaviors as psychological violence. In contrast, generations Y and Z, who spend a significant portion of their social lives at work, are more likely to interpret negative workplace experiences as major disruptions, often resulting in intentions to leave their jobs. Regarding gender differences, female participants responded more strongly to psychologically violent situations compared to male participants and perceived such behaviors as more severe and distressing. This suggests that women may be more sensitive to negative behaviors in the workplace and more likely to interpret them as serious and harmful experiences.

Keywords: Psychological violence, work life, mobbing, generations, survey method
JEL Codes: J28, M54, J71

İŞ YAŞAMINDA PSİKOLOJİK ŞİDDET (MOBBİNG): FARKLI KUŞAKLARIN ALGILARI VE PSİKOLOJİK ŞİDDETE DÖNÜK DAVRANIŞLARI

ÖZET

Amaç- İş yaşamında yer alan farklı kuşakların psikolojik şiddet algısını ölçmek ve eğer psikolojik şiddete uğramışlarsa buna tepki olarak gösterdikleri davranışlarını ortaya koyarak literatüre katkı sağlamaktır. Bu bağlamda farklı kuşaklardan oluşan örneklemden anket yöntemi ile veriler toplanmıştır.

Yöntem- Öncelikle literatürde en çok kullanılan 4 anket ölçeğinden oluşturulan havuzdan seçilen psikolojik şiddet eylemi örnekleri sunulmuştur ve katılımcılardan bu psikolojik şiddet içeren davranışları derecelendirmeleri istenmiştir. İkinci kısımda iki farklı psikolojik şiddet senaryosu hazırlanmış ve katılımcılara sunulmuştur. Burada amaç katılımcıların tepkisini ölçmek ve farklı kuşakların iş yerinde psikolojik şiddetle nasıl başa çıktığına yoğunlaşmaktır. Son kısımda ise katılımcılara açık uçlu sorularla kendi başlarından geçen psikolojik şiddet olay veya olaylarına ilişkin deneyimleri sorulmuştur.

Bulgular- Araştırma, en az bir yıllık iş deneyimi olan 283 katılımcı ile yürütülmüştür. Katılımcıların %18,4'ü X, %62,5'i Y ve %19,1'i Z kuşağındandır. Yaş ortalaması 34,5 olup cinsiyet dağılımı dengeli şekilde kadın (n=145) ve erkek (n=138) olarak dağılmıştır. Katılımcıların

%68,9'u İstanbul'da yaşamaktadır. Ortalama iş tecrübesi 9,76 yıl, mobbinge maruz kalma süresi ise ortalama 19,4 aydır. Katılımcıların %32,5'i yönetici pozisyonundadır.

Sonuç- Sonuçlar X kuşağının iş yerinde psikolojik şiddete diğer kuşaklardan daha dayanıklı olduğu ve bazı durumları psikolojik şiddet olarak görmediğini göstermektedir. Y ve Z kuşakları ise iş yerinde geçirilen zamanın da uzun olması sebebiyle iş ortamının sosyal hayatlarının içinde değerlendirildiği ve bu noktada bir sorun yaşadıklarında tepkilerinin çoğunlukla işi bırakmaya yönelik olduğu görülmüştür. Cinsiyet değişkeni incelendiğinde ise, kadın katılımcıların psikolojik şiddet içeren durumlara erkek katılımcılara kıyasla daha fazla tepki verdikleri ve bu tür durumları daha yoğun bir psikolojik şiddet deneyimi olarak algıladıkları görülmüştür. Bu bulgu, kadınların iş yerindeki olumsuz davranışlara karşı daha duyarlı olduklarını ve maruz kalınan psikolojik şiddeti daha ciddi ve yıpratıcı bir süreç olarak değerlendirme eğiliminde olduklarını ortaya koymaktadır.

Anahtar Kelimeler: Psikolojik şiddet, İş yaşamı, mobbing, kuşaklar, anket yöntemi
JEL Kodu: J28, M54, J71

1. GİRİŞ

Psikolojik şiddet (mobbing) kavramı örgütsel davranış alanında hem ulusal hem de uluslararası yazında kendine artan şekilde yer bulmuştur (Laleoğlu ve Özmete, 2013). Her ne kadar psikolojik şiddetin belirleyicileri, görgül şekilde ölçümü ve daha az da olsa psikolojik şiddet ile başa çıkmada kullanılan davranışlar önceki araştırmalarda irdelenmişse de, psikolojik şiddete ilişkin farklı kuşakların algı ve tepkileri yazında görece az yer almıştır (Nielsen ve Einarsen, 2018). Halbuki, toplumun çalışan kesiminin farklı yaş gruplarından oluşması, farklı kuşakların günlük zaman diliminin en az üçte birini bir arada geçirdikleri anlamına gelmektedir. Farklı kuşaklardan oluşan bir çalışma ortamında, çalışanların psikolojik şiddet konusunda geliştirdikleri farklı algılar ve algıladıkları durumlara verecekleri farklı tepkiler olası iletişim problemleri nedeniyle olumsuz davranışlara sebep olabilir. Kuşakların çeşitli örgütsel davranışlarının farklılaşabildiği yazında daha önce ele alınmıştır (Batuk Ünlü ve Uçan, 2022). Dolayısıyla, farklı kuşakların psikolojik şiddet algıları ve şiddete karşı verdiği davranışlarının daha iyi anlaşılması önemli bir araştırma sorusu olarak nitelendirilmiştir.Bu çalışmanın amacı, iş ortamında psikolojik şiddete maruz kalan farklı kuşaklardan çalışanların psikolojik şiddeti nasıl anlamlandırdıklarını ve psikolojik şiddete verdikleri tepkilerini gözlemlemek ve ne derece farklılaştığını ölçümleyerek karşılaştırmaktır. Her ne kadar insan kaynakları politikaları öncelikle psikolojik şiddetin oluşmaması için yapılandırılmalıysa da psikolojik şiddetin farklı kuşak çalışanları tarafından farklı algılanma olasılığı bu politikaların belirlenme ve uygulanmalarında önemli engel teşkil edebilir. Bu noktadan hareketle, çalışma daha önce yeterince ele alınmamış kuşaklar arası algı ve tepki farklılıklarına yoğunlaşarak literatüre yenilikçi ve farklı bir bakış açısı kazandırmayı hedeflemektedir. Bu çalışmada psikolojik şiddet ölçümü için varolan ölçeklerden bir soru formu tasarlanmış olup, form aynı zamanda farklı kuramsal senaryolar üzerinde cevaplayıcıların algılarını değerlendirmektedir. Oluşturulan havuzda kullanılan ölçeklerden biri Leymann (1990) tarafından geliştirilen Leymann Psikolojik Terör Envanteri (Leymann Inventory of Psychological Terror-LIPT), diğeri Einarsen ve Raknes'in (1997) İşyeri Zorbalığı Ölçeği'dir (Negative Act Questionnaire-NAQ). İşyeri Zorbalığı Ölçeği Aydın ve Öcel (2009) Türkçe'ye çevrilmiştir. Aynı şekilde Çögenli ve Asunakutlu (2014) tarafından Leymann Psikolojik Terör Envanteri geçerlik ve güvenirlik çalışması yapılarak Türkçe'ye çevrilmiştir. Son olarak çalışmada kullanılan bir diğer ölçek olan Aiello vd., (2008) tarafından geliştirilmiş psikolojik şiddet ölçeğinin Türkiye örneğinde çevirisini Laleoğlu ve Özmete (2013) yapmıştır. Soru formunda son olarak katılımcıların psikolojik şiddet deneyimleri ve tepkileri de açık uçlu sorularla toplanarak içerik analizi yöntemiyle değerlendirilmiştir.

2. YAZIN TARAMASI

2.1. İş Ortamında Psikolojik Şiddet Nedir?

Psikolojik şiddet (mobbing) taciz, rahatsız etme, baskı kurma veya sıkıntı vermek anlamlarında kullanılır ve iş yerinde psikolojik terör veya yıldırma olarak da ifade edilebilir. Psikolojik şiddet, özellikle hiyerarşinin çok katmanlı olduğu ve iletişim ile kontrolün zayıf olduğu örgütlerde, gücü elinde bulunduran kişinin ya da kişilerin ekip arkadaşlarına ya da çalışanlarına psikolojik olarak, sistematik ve uzun süreli baskı uygulamasıdır (Uysal ve Yavuz, 2013). Leymann'a göre psikolojik şiddet bir veya daha fazla kişi tarafından yönlendirilen bir tür psikolojik terör'dür. Bir başka tanıma göre ise psikolojik şiddet, iş arkadaşlarının hem bireysel hem de grup olarak, uzun süreli (en az 6 ay) ve belirli bir kişiye veya kişilere karşı tekrar eden (en az haftada bir kez) aşağılayıcı, işten yıldırıcı hareketlerini temsil eder (Einarsen ve Skogstad, 1996).

2.2. İş Ortamında Psikolojik Şiddet Sürecinde Rol Alanlar

İş yerinde psikolojik şiddet denildiğinde genelde şiddete uğrayan mağdur kişiler ve şiddeti gerçekleştiren kişiler akla gelir. Fakat belki de en az bu iki taraf kadar önemli ama olaya her zaman dahil olmayan taraf, yani izleyiciler de vardır. Psikolojik şiddeti uygulayanlar davranışları ile hedef aldığı kişiyi çalışma ortamından soyutlamaya çalışan kişilerdir. Psikolojik şiddet kurbanları bu tarz etik dışı davranışlara istemeseler de maruz kalan kişilerdir. İş yerinde psikolojik şiddetin sürmesinde çok büyük etkisi olan izleyiciler, psikolojik şiddet mağdurunun yanında yer alıp onu yalnız bırakmayarak, ona destek olarak psikolojik şiddetin bitmesini ya da bazı durumlarda azalmasını sağlayabilir. Fakat bu yola nadiren başvurulur ve bunun sebebi mağdurun yanında olunması sonucunda kendisinin de aynı muameleye maruz kalma ihtimali olduğu düşüncesidir.

2.3. Psikolojik Şiddetin Öncülleri ve Yordayıcıları

İş yerindeki psikolojik şiddet, birçok değişkenin varlığından kaynaklanabilir. Bu değişkenler kişilik özellikleri, sosyal kaynaklar ve çalışma ortamı olarak çerçevelendirilebilir. Yapılan araştırmalarda iş yerinde psikolojik şiddetin ortaya çıkması için gerekli ortamı oluşturan durumlar iki farklı hipotezle açıklanmıştır. Bunlardan ilki bireysel eğilimler hipotezi, diğeri ise çalışma ortamı hipotezidir (Einarsen, Zapf, Cooper, ve Hoel, 2011). Bireysel eğilimler hipotezi, psikolojik şiddete uğrayan ya da şiddeti gerçekleştiren kişinin karakteristik özelliklerinin psikolojik şiddetin öncülleri olduğunu savunur (Tutar, 2004). Bu hipoteze göre belli kişisel özellikler psikolojik şiddete maruz kalma ya da psikolojik şiddet uygulama

ihtimalini artırır (Einarsen vd., 2011). Çalışma ortamı hipotezi ise Leymann'ın 1992 ve 1996 yıllarında yaptığı çalışmalarına dayanır ve çalışma ortamındaki sosyal çevrenin ve işin yapılış şeklinin/tasarımının psikolojik şiddetin öncüllerinden olduğunu iddia eder (Nielsen ve Einarsen, 2018).

2.4. Psikolojik Şiddetin Sonuçları

Nielsen ve Einarsen'in (2018) yapmış olduğu meta-analizlerin derlendiği çalışmada görülmüştür ki iş yerinde psikolojik şiddetin sonuçlarıyla ilgili birçok analiz yapılmıştır ve bu sonuçlar kapsamlı bir şekilde incelenmiştir. Bulunan sonuçlardan sebep sonuç ilişkisi bakımından en güçlü noktalar depresyon, kaygı ve travma sonrası stres bozukluklarıdır. Bunlara ek olarak psikolojik şiddetin işe bağlılıkta azalma, işe devam etmeme ya da tatminsizlik hatta ayrılma niyeti ile de ilişkili olduğu bulunmuştur (Nielsen ve Einarsen, 2018).

2.5. Kuşak Kavramı

Kuşak, aşağı yukarı aynı yaştaki benzer sosyal yönelime ve yaşam görüşüne sahip tüm insanları içerir (Batuk Ünlü ve Uçan, 2022). Kuşakların zaman aralığı genellikle anne-babaların, çocuklarının doğumları arasındaki kadardır (Göksel ve Güneş, 2017). Kuşak sınıflandırması için belirlenen tarihsel aralıklar; Sessiz Kuşak (1925-1945), Bebek Patlaması Kuşağı (1946- 1964), X Kuşağı (1965- 1979), Y Kuşağı (1980 – 1999), Z Kuşağı (2000- 2010) ve Alpha Kuşağı (2011 yılı ve sonrası) şeklindedir (Twenge, Campbell, Hoffman, ve Lance, 2010).

1965 ve 1979 yılları arasında doğan ve demografik olarak benzer özellikleri gösteren bireylerin oluşturdukları kuşak X kuşağı, önceki neslin yarattığı ofis kültüründen ve konforundan etkilenmişlerdir, ek olarak çift gelirli aileye mensup olmanın getirdiği maddi rahatlığı da deneyimlemişlerdir. Fakat X kuşağında kendinden önceki kuşaklar kadar otoriteye bağlılık gözlenmemektedir. Çalışma hayatında otoriteyi ve kuralları sorgulamakta ve kendilerine ters düştüğü durumlarda değiştirmeye çalışmakta önceki kuşağa göre daha iyidirler (Kaleli ve Yalçın, 2021). Y kuşağı 1980-1999 yılları arasında doğan bireylerden oluşmaktadır ve çocukluk veya ergenlik dönemlerinde internetle tanışmaları sebebiyle Millennials olarak da adlandırılırlar. Y kuşağındaki bireyler de esnek çalışma ortamına önem verirler, sınırların az olduğu çalışma ortamlarını tercih ederler, ayrıca bu kuşak aynı anda birden çok işi gerçekleştirebilen, öğrenmeye istekli, kariyerinde yükselişe çok önem veren kişilerdir (Gursoy, Maier ve Chi, 2008). 2000 yılı sonrasında doğan bireyler olan Z kuşağı, iş gücüne en son katılan kuşak olma özelliği taşımaktadır. Bu kuşağın kendine güvenme, kendini rahatça ifade edebilme, farklı sosyolojik gruplarla anlaşma, hak arama, yaratıcılık gibi konularda diğer kuşaklardan daha başarılı oldukları düşünülmektedir. Ayrıca çabuk sıkılan bir yapıları olduğu için, beklentilerini karşılayamayan iş ortamlarından da hızla uzaklaşacakları, dolayısıyla çalıştıkları kurumun onları sadakatsizlikle etiketleyebileceği düşünülmektedir (Montana ve Petit, 2008).

3. METODOLOJİ VE ÖRNEKLEM

Bu çalışmada, psikolojik şiddet algısının farklı kuşaklar tarafından nasıl değerlendirildiği anlamlandırılmaya çalışılmaktadır. Bu amaçla veri toplama yöntemi olarak yapılandırılmış soru formlarından yararlanılmış olup, form içerisinde sadece psikolojik şiddet algısını ölçen ölçeklerden değil oluşturulmuş farklı senaryolardan da faydalanılmıştır. Bir arada çalışan kuşakların büyüdükleri koşulların farklılığının bir sonucu olarak; yaşam şekilleri, hayata bakış açıları ve düşünce yapıları farklılaşmıştır (Jurkiewicz ve Brown, 1998). Bunun bir sonucu olarak kuşaklar iş ortamında da farklı örgütsel davranışlar sergilemektedirler. Örneğin, teknolojik gelişmelerin zirvede olduğu dönemlere tanık olan Z ve Y kuşağı çalışanları, X kuşağının aksine iş ve özel yaşamları arasındaki dengeye daha çok önem vermektedirler (Erden Ahyün, 2013). X kuşağı diğer kuşaklara oranla daha titiz bir çalışma biçimi sergilerken, bağımsızlıklarına düşkün Y kuşağı ise çalışmaya çok yoğun zaman ayırmak istememektedir. Z kuşağının ise kurallara daha az bağlı kalmak istediği, özel yaşamına daha fazla zaman ayırdığı ve saygı kavramına daha farklı baktığı dikkat çekmektedir (Smola ve Sutton, 2002). Sağlıklı bir iş ortamı oluşturmak için örgütler ilk olarak kuşakların iş ortamındaki iletişim problemlerinin kaynağını yani psikolojik şiddete yönelik algılarını anlamalıdırlar. Bu amaçla, bu çalışmada farklı yaş gruplarından psikolojik şiddete uğrayan çalışanların, tepkilerini ve psikolojik şiddete yönelik alacakları aksiyonlar ölçümlenmeye çalışılmıştır. Öncelikle soru formunun psikolojik şiddet algısının ölçülmesinde kullanılan kısmında psikolojik şiddet örnekleri sunulmuştur ve bu eylemleri şiddetlerine göre derecelendirmeleri istenmiştir. Senaryo kısmında ise iki farklı psikolojik şiddet senaryosu hazırlanmış ve sunulmuştur. İlk senaryo çalışanın yöneticisinden gelen küçük fakat sürekli eleştiriler sonucu kişinin zamanla ekip arkadaşları tarafından dikkate alınmama ve aşağılama gibi davranışlarına maruz kalmasıyla ilgilidir. İkinci senaryoda ise yönetici çalışanın performansını özel hayatında yaşamış olabileceği bir soruna bağlar, çeşitli imalarda bulunarak özel hayata müdahale eder ve ekip arkadaşlarının içinde itibarını zedeler. İkinci senaryo ilk senaryoya göre daha yoğun psikolojik şiddet içerecek şekilde tasarlanmıştır. Toplamda 283 katılımcıyla gerçekleştirilen çalışmada, katılımcının en az 1 yıllık profesyonel çalışma deneyimine sahip olması ön koşul olup, homojen bir örneklem oluşturmak için her cinsiyetten ve kuşaktan katılımcı sayısı benzer tutulmaya çalışılmıştır. Katılımcıların %18,4'ü X kuşağı (n=52), %62,5'i Y kuşağı (n=177) ve %19,1'i Z kuşağı (n=54) mensubudur. Yaş ortalaması genel olarak 34,46 yıl olup, kuşaklar arası farklılık doğal olarak belirgindir (X: 49,3; Y: 33,0; Z: 24,9). Katılımcıların %68,9'u İstanbul'da, %31,1'i diğer şehirlerde yaşamaktadır. Cinsiyet dağılımı dengeli olup, kadın (n=145) ve erkek (n=138) katılımcılar orantılıdır.

Profesyonel iş tecrübesi ortalaması 9,76 yıl olup, kuşaklar arası dağılım X: 21,3 yıl, Y: 8,8 yıl, Z: 1,85 yıl şeklindedir. Katılımcıların mobbinge maruz kalma süreleri ortalama 19,4 ay olarak belirlenmiştir. Ayrıca katılımcıların %32,5'i yönetici pozisyonunda çalışmaktadır.

4. BULGULAR

Bu bölümde, yapılan anket çalışmasında yer alan iş yerinde psikolojik şiddet ölçeğindeki örnekleri derecelendiren katılımcıların kuşak, cinsiyet ve yönetici olup olmama durumlarına göre iş yerinde psikolojik şiddet algıları arasındaki ilişkiler Ki-kare (Chi-Square) testiyle incelenmiştir. Yapılan analizlerde %5 anlamlılık düzeyi temel alınarak, gruplar arasında istatistiksel olarak anlamlı fark olup olmadığı değerlendirilmiştir. Yine bu çalışma kapsamında ankette verilen ölçek örneklerinin kuşaklara göre iş yerinde psikolojik şiddet olarak algılanma düzeyleri arasındaki

fark, Tek Yönlü Varyans Analizi (ANOVA) ile incelenmiştir. Anlamlı fark görüldüğü durumlarda, farkın hangi kuşaklar arasında olduğunu belirlemek amacıyla Scheffe ve LSD testleri yapılmış, ilgili kuşakların ortalamalarına göre farklılıklar değerlendirilmiş ve detaylandırılmıştır.

Ki-kare (Chi-Square) testi ile analiz edilen ölçek sorularından, "Yaptığınız işin gereğinden fazla kontrol edilmesi" ve "Haketttiğiniz bir şeyi istememeniz veya talep etmemeniz için size baskı yapılması" örneklerine verilen yanıtlar ile kuşak değişkeni arasında anlamlı bir ilişki bulunmuştur. "Üstesinden gelebileceğinizden fazla iş yüklenmesi", "Diğer insanların sizi yok saymaları veya dışlamaları" ve "Hiçbir şey işten daha önemli değildir şeklinde sözler söylenmesi" örneklerine verilen yanıtlar ile kuşak değişkeni arasında sınırlı düzeyde anlamlı bir ilişki bulunurken "Fikir ve görüşlerinizin dikkate alınmaması", "Diğer insanların sizi yok saymaları veya dışlamaları", Cinsel içerikli kabaca şakalara maruz kalmanız", "Performansınızı artıracak bir bilginin sizden saklanması", "Hakkınızda aşağılayıcı ve çirkin sözler söylenmesi", ve "Bağırılma ya da sizin kabahatiniz olmayan konularda öfkenin hedefi olmanız" örneklerine verilen yanıtlar ile kuşak değişkeni arasında anlamlı bir ilişki bulunamamıştır. Cinsiyet değişkeni açısından yapılan değerlendirmede ise bütün maddeler için $p<0,05$ düzeyinde anlamlı bir farklılık tespit edilmiştir. Bu sonuç, kadın ve erkek katılımcıların söz konusu tutum ve davranışları iş yerinde psikolojik şiddet olarak değerlendirme düzeylerinin istatistiksel olarak farklılaştığını gösterebilmektedir. Yine bu bulgular, cinsiyetin, mobbing algısını etkileyen önemli bir faktör olduğunu ve kadınların bu tür olumsuz durumları erkeklerden daha yoğun şekilde deneyimleyebildiklerini ortaya koyabilmektedir. Yönetici olup olmama durumuna göre yapılan analizde ise, $p>0,05$ değeri ile hiçbir maddede istatistiksel olarak anlamlı bir ilişki bulunamamıştır. Bu durum, yönetici pozisyonunda olan ve olmayan katılımcıların ölçekteki örnekleri iş yerinde psikolojik şiddet olarak algılama düzeylerinin benzer olduğunu ortaya koyabilmektedir. Anket katılımcılarının %57 si daha önce iş ortamında psikolojik şiddete uğradığını iddia etmektedir. Katılımcılara ne kadar süreyle psikolojik şiddete maruz kaldınız sorusu yöneltildiğinde ise öncül bulgular kuşakların tecrübesine göre farklılaşmaktadır. X kuşağı ortalama 14 ay boyunca psikolojik şiddet görürken Y kuşağında bu sayı 2 yıla yakın. Z kuşağı ise ortalama 8 ay psikolojik şiddete maruz kalmış olabileceğini belirtmektedir. Bu durum Z kuşağının çalışma hayatlarında uzun yıllar geçmemiş olmasının bir sonucu da olabilir ve senaryolardaki cevaplarına paralel şekilde psikolojik şiddete katlanmayıp işi bırakma yoluna gitmiş de olabilirler. Soru formundaki "Psikolojik şiddete maruz kalsaydınız alacağınız aksiyon ne olurdu?" sorusuna verilen cevaplar derlenmiş ve kategorize edilmiştir. Yapılan çalışmanın sonucunda elde edilen bulgulara göre katılımcılar senaryo sorusundaki cevaplara ve aksiyonlara ek olarak "Psikolojik şiddeti yapan kişiyle iletişim kurardım", "Ekip değiştirirdim" ve "Herhangi bir aksiyon almazdım" cevaplarını vermişlerdir. Soru formunda açık uçlu şekilde sorulan "Nasıl bir psikolojik şiddete maruz kaldınız?" sorusuna gelen yanıtlar dört ayrı alt başlıkta derlenmiştir. Kadın katılımcıların en sık karşılaştığı psikolojik şiddet davranışı "küçümseme ve aşağılama" olup, hemen ardından gelen psikolojik şiddet çeşidinin "fiziksel ve sözlü taciz" olduğunu belirtmişlerdir. Buna karşın erkek katılımcıların en sık karşılaştığı psikolojik şiddet çeşidi "görmezden gelinme" ve "yalnızlaştırılma"dır. Yönetici pozisyonunda bulunan çalışanların karşılaştığı psikolojik şiddet ise "başarılarının küçümsenmesi" ve "değersizleştirilme" olarak ön plana çıkmaktadır. Çalışanlar ayrıca "firmalarına katkılarının yok sayılması," "emeklerinin küçümsenmesi" veya "yaptıkları işlerin beğenilmemesi" gibi şiddet türlerini soru formunda çokça belirtmişlerdir. İş ortamında yönetici pozisyonunda çalışmayan katılımcıların en sık karşılaştığı psikolojik şiddet ise "fazla iş yükü" ve "yetersiz hissettirilmedir". Ayrıca "yalnızlaşma" kavramına da bu sınıflandırmada çokça atıf yapılmaktadır.

5. SONUÇ

Bu çalışmada soru formu ile X, Y ve Z kuşağının iş yerinde psikolojik şiddet algıları ve psikolojik şiddete yönelik gerçekleşen ve olası tepkileri ölçülmüştür. Psikolojik şiddet eylemine dönük düzenlenen senaryolarda ise farklı kuşakların algı ve tepkileri ele alınmıştır. X kuşağının verdiği yanıtlardan yola çıkılarak psikolojik şiddete uğradıklarında çalıştıkları ortamı terk etmek yerine yüksek bir toleransla tepki verdikleri söylenebilir. Diğer kuşaklara göre yüksek seviyede psikolojik şiddet olan bir eylem, X kuşağı için düşük ya da orta seviye olarak algılanabilmektedir. Araştırma sonucunda, Y Kuşağı çalışanlarının, X ve Z kuşakları kadar belirgin tepkileri olmadığı, bazı konularda X kuşağının tepkilerini verdiği bazı durumlarda ise Z kuşağının algısıyla örtüşen cevaplar verdiği görülmektedir.

Ortalama 5 yıldır iş hayatında olan Z kuşağı ise psikolojik şiddete karşı en düşük toleranslı olan kuşak olup görece daha hafif psikolojik şiddet senaryosunu en yüksek oranla yüksek psikolojik şiddet olarak adlandırmaktadırlar. Aynı şekilde ölçeklendirme sorusunda da çoğu eylem Z kuşağı için yüksek psikolojik şiddet sınıfına girmektedir. Z kuşağı her ne kadar sorunlar karşısında pes etmeyen bir kuşak olsa da onlara karşı bir psikolojik şiddet olması durumunda, bu durumla baş etmek yerine işten ayrılmak ya da bu konuda yetkilileri bu sorunu çözmesini beklemek tercihleri olmaktadır. Araştırmanın sonucu olarak her ne kadar tepkilerinin farklılaştığı psikolojik şiddet eylemleri olmakla birlikte her kuşağın aynı fikirde olduğu durumlar da mevcuttur. Şirketler bu doğrultuda kendilerini ve farklı kuşaklardan çalışanlarını diğer kuşakların bakış açılarının farklılığı hakkında eğitebilir. İletişim becerilerinin artması ve bakış açısının genişletilmesi örgütsel olarak gelişimi ve hoşgörüyü geliştirebilir. Çalışmaya katılan kişilerin özel hayatlarındaki farklılıklar ve yaşam koşulları sebebiyle alabilecekleri aksiyonların sınırlılığı da söz konusu olabilmektedir. Mesela X kuşağı sorumlu olduğu bir ailesi olduğundan yeni bir iş aramak yerine psikolojik şiddeti tolere etmeyi seçebilmekte, yine Z kuşağı iş hayatına görece yeni dahil olduğundan beklentileriyle uyuşmayan eylem ve davranışlara karşı daha düşük toleranslı olabilmektedir. Sonuç olarak örgütlerin yukarıda değinilen farklılıklar çerçevesinde tekrar düzenleyeceği iletişim ve motivasyon araçlarının örgütlerdeki yeteneğin sürdürülebilirliği ve verimliliğine katkı sağlayabileceği değerlendirilmektedir. Yine yukarıda bahsedilen bu bulgular, kadınların iş yerindeki psikolojik şiddet unsurlarına karşı daha duyarlı olduklarını ve bu tür davranışları erkeklere kıyasla daha yüksek düzeyde psikolojik şiddet olarak değerlendirdiklerini göstermektedir. Kadınların, özellikle iletişim, dışlanma, bilgiye erişim, hakların bastırılması ve cinsiyet temelli şaka gibi maddelere verdikleri tepkiler, onların bu tür davranışları daha çok psikolojik şiddet olarak gördüklerini ve yukarıdaki ölçek maddelerinin gerçekleştiği olası bir senaryoda, aynı iş ortamında çalışmalarına rağmen erkeklere oranla daha yüksek psikolojik şiddet hissedeceklerini düşündürmektedir. Bu durum, kadınların empati düzeylerinin, duygusal farkındalıklarının ve ilişkisel bağlara verdikleri önemin daha yüksek olmasıyla açıklanabilir. Ayrıca toplumsal cinsiyet rolleri çerçevesinde kadınların bu tür davranışlara karşı daha tetikte ve hassas bir yaklaşım geliştirmelerine yol açmış olabilir. Öte yandan erkeklerin yanıtlarının daha düşük ortalamalara sahip olması, bu davranışları psikolojik şiddet olarak algılamada daha yüksek bir eşiğe sahip olduklarını veya bu tür durumları olağanlaştırma eğiliminde olduklarını gösteriyor olabilir. Bu durum, toplumsal olarak erkeklere yüklenen güçlü, dayanıklı ve duygularını dışa vurmakta çekimser

kalmaları gerektiği yönündeki normların bir yansıması olabilir. Dolayısıyla kadın ve erkeklerin psikolojik şiddet algıları arasındaki bu anlamlı fark, yalnızca bireysel değil, aynı zamanda toplumsal ve kültürel dinamiklerin de bir sonucu olarak değerlendirilebilir.

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UNDERSTANDING AI ADOPTION AT ORGANIZATIONS: LITERATURE REVIEW OF TOE FRAMEWORK

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ABSTRACT

Purpose- In the contemporary business landscape, we are witnessing the rapid development of Artificial Intelligence (AI), which is fundamentally reshaping organizational practices. These developments mark what can be described as the **"Era of AI"**, a significant milestone in technological history. While AI offers benefits, it also presents critical challenges, particularly concerning its adoption and the adaptation processes within organizations. Despite the swift evolution of AI technologies, research on their practical applications in organizational settings remains scarce and underdeveloped. This gap highlights a promising area for further exploration.

In alignment with the literature, it can be argued that organizations with higher AI adoption rates tend to achieve better innovation outcomes, which suggests a need to revisit and potentially expand the Technology-Organization-Environment (TOE) paradigm. Originally developed to explain technological adoption/embracement, the TOE framework may not capture the complexities introduced by AI. This study aims to explore whether an expanded TOE paradigm is necessary to better address the contemporary dynamics of AI adoption.

Methodology- This research investigates the historical development and consolidation of AI within organizations, using the TOE paradigm as a foundational theoretical look. The study examines whether the existing TOE model sufficiently explains AI adoption or whether it requires augmentation to remain relevant in the age of generative AI.

Findings- Literature review findings indicate that the traditional TOE framework exhibits limitations when applied to AI adoption. To address these gaps, another study was found in the literature that proposes the inclusion of a human factor—transforming the TOE into a TOEH (Technology-Organization-Environment-Human) model. In our research we would like to integrate critical thinking (CT) skills under Human Factor, as organizations increasingly seek employees who can critically assess and effectively utilize outputs from generative AI (GenAI) tools. The ability to make intelligent and ethical decisions in the context of AI is now a vital competency.

Conclusion- The proposed TOEH framework offers a more well-rounded approach to discovering AI adoption within organizations. By incorporating the human element, particularly critical thinking skills, organizations can better prepare to embrace AI in an ethical, effective, and innovative manner.

Keywords: TOE, organizations, artificial intelligence, innovation, critical thinking
**JEL Codes:** G12, G14, C22

1. INTRODUCTION

In the contemporary business landscape, there is an increasing focus on the rapid advancements in Artificial Intelligence (AI). AI is redefining organizational practices in essence. While AI exhibits numerous advantages, it also gives rise to considerable challenges, especially with regard to its adoption within organisations. In spite of the rapid advancement of AI technologies, investigation on their implementation in organizational domains remains insufficient. Studies concerning the utilization of AI in organisations have been insufficient. The procedure of evaluating organisations is facilitated by the incorporation of TOE (Technological, Organizational and Environmental) elements. TOE paradigm is organization-based theory, yet it evolved day by day. This framework helps us to frame AI adoption in organisations. In addition, today's organisations need to be ready to adopt this technology first. We will be discussing AI readiness and adoption literature in the following parts.

2. LITERATURE REVIEW

The designation AI was primitively coined by McCarthy in the year of 1956 (Russel & Norvig, 2010; Taşçı & Çelebi, 2020) and the formal birth of AI was agreed unanimously to be the Dartmouth Conference in the same year (Cordeschi, 2007). AI is a kind of technology designed to ensure robots and act in a human-like manner (Sucu, 2019). The growing role of AI in digital transformation emphasizes the necessity for organizations to evaluate their AI readiness (Andersson, 2025). The readiness/preparedness of an organization makes AI adoption increases its potential for successful adoption (Jöhnk, WeiBert & Wyrtki, 2021). AI readiness/preparedness mentions to an institution's capacity to adopt/embrace AI technology. It enables to progress organization's value (Neumann et al. 2024; Ali & Khan, 2025). It is apparent that organisational readiness largely influences organisational embracement (Sun et al. 2018). A large number of enterprises are not properly ready to adopt AI (Tehrani et al. 2024). Research related with AI preparedness/readiness and AI embracement/adoption is in its early stages. That is, there is paucity of existing literature on the embracement of AI (Jöhnk, WeiBert & Wyrtki, 2021). The TOE model shown below Figure 1, signifies a component of this procedure-namely, the way in which the firm structure impacts the espousal and administration of innovations (Tornatzky, Fleischer & Alok, 1990).

Figure 1: The TOE Model
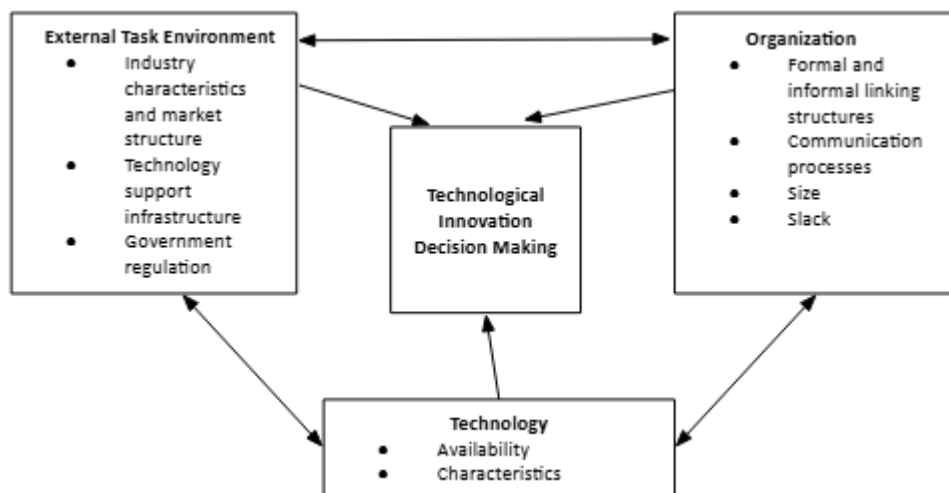
Although TOE explores technology deployment through the angles of technology, organization and environment, TOEH additionally incorporates human aspect. This human-centric emphasis is vital for evaluating an organisation's preparedness for AI adoption (Naheed, Pinto & Pirola, 2025) is shown below in Figure 2.

Figure 2: The TOEH Framework
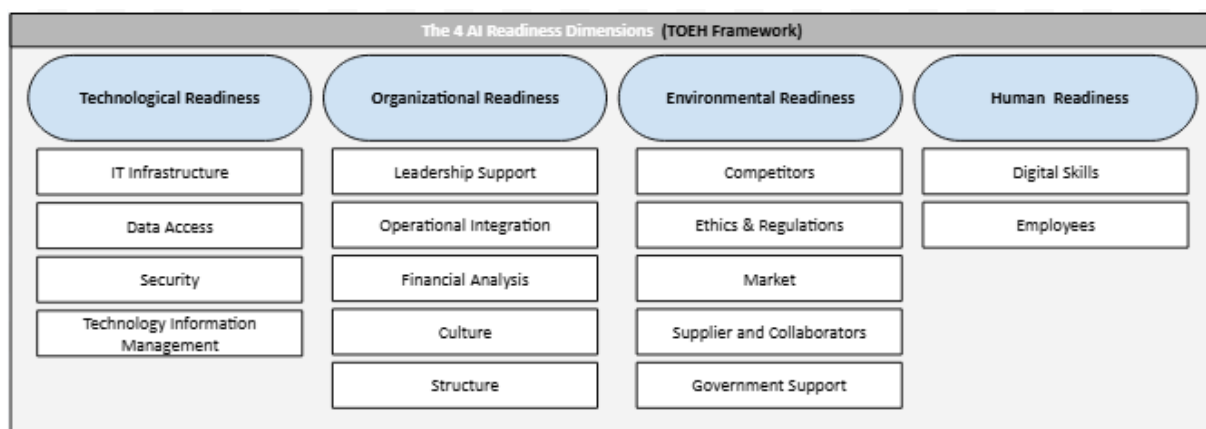
3. METHODOLOGY

The research question of this paper is "How can companies adopt to AI in today's businesses? The study examines whether the existing TOE model sufficiently explains AI adoption or whether it requires augmentation to remain relevant in the period of generative AI. That is, the literature review will be focused on clarifying references related to the article's hypotheses and variables such as independent, dependent

and mediator. Afterwards, comprehensive literature review findings assisted to prepare a proposed model. More detailed information regarding the literature is illustrated in Findings section of the paper Table 1. A Summary of the Literature Review.

4. FINDINGS

The literature review revealed inadequacies in the conventional TOE framework when applied to AI adoption. To resolve these gaps, further study was found in the literature mentioned earlier. This advocated for the reorganization of TOE into TOEH (Technology-Organization-Environment-Human) model. In our analysis, we want to blend critical thinking (CT) skills under the human factor, because organizations are ever-increasingly seeking employees who can skillfully evaluate and employ the outputs from GenAI (Generative AI) tools. The ability to make ethically-driven decisions in the paradigm of AI is now a vital competence. Technological, organizational, environmental and human readiness identified AI readiness. It means that organizations are ready for AI. They they may achieve a successful adoption of AI in their organizations. Figure 3 shown below illustrates how the authors utilize the TOEH Framework to analyze AI readiness and AI adoption. The literature review provided the foundation for this framework.

Table 1: A Summary of the Literature Review

Variables	Types of Variables	Hypotheses	Sources
IT Infrastructure	Independent Variable (X_1)	**H1:** IT Infrastructure positively relates to AI readiness.	Jöhnk, Weibert & Wyrtki, 2021; Alsheibani, Cheung & Messon, 2018; Ali & Khan, 2025; Bhattacherjee & Hikmet, 2008; Naheed, Pinto & Pirola, 2025; Felemban, Sohail & Ruikar, 2024.
Security	Independent Variable (X_2)	**H2:** Security positively relates to AI readiness.	Jöhnk, Weibert & Wyrtki, 2021; Coetzee, 2025; Naheed, Pinto & Pirola, 2025.
Data Access	Independent Variable (X_3)	**H3:** Data access positively relates to AI readiness.	Jöhnk, WeiBert & Wyrtki, 2021; Ali & Khan, 2025; Stenberg & Nilsson, 2020; Coetzee, 2025; Naheed, Pinto & Pirola, 2025.
Leadership Support	Independent Variable (X_4)	**H4:** Leadership support positively relates to AI readiness.	Jöhnk, Weibert & Wyrtki, 2021; Alsheibani, Cheung & Messom, 2018; Ali & Khan, 2025; Stenberg & Nilsson, 2010; Coetzee, 2025; Naheed, Pinto & Pirola, 2025; Baslom & Tong, 2019; Lokugeetal, 2019; Tursunbayeva & Gal, 2024.
Financial Analysis	Independent Variable (X_5)	**H5:** Financial analysis positively relates to AI readiness.	Jöhnk, Weibert & Wyrtki, 2021; Ali & Khan, 2025; Jun et al. 2021; Srisathan & Ketkaew, 2020; Naheed, Pinto & Pirola, 2025.
Culture	Independent Variable (X_6)	**H6:** Culture positively relates to AI readiness.	Jöhnk, Weibert & Wyrtki, 2021; Nortje & Grobbelaar, 2020; Naheed, Pinto & Pirola, 2025; Morandini et al. 2023.
Competitors	Independent Variable (X_7)	**H7:** Competitors positively relates to AI readiness.	Nortje & Grobbelaar, 2020; Naheed, Pinto & Pirola, 2025.
Ethics & Regulation	Independent Variable (X_8)	**H8:** Ethics & regulation positively relate to AI readiness.	Jöhnk, Weibert & Wyrtki, 2021; Coetzee, 2025; Naheed, Pinto & Pirola, 2025.
Government Support	Independent Variable (X_9)	**H9:** Government support positively relates to AI readiness.	Nortje & Grobbelaar, 2020; Naheed, Pinto & Pirola, 2025; Shonhe, Min & Phut ,2024; Felemban, Sohail & Ruikar, 2024.
Knowledge About AI	Independent Variable (X_{10})	**H10:** Knowledge about AI positively relates to AI readiness.	Jöhnk, Weibert & Wyrtki, 2021; Naheed, Pinto & Pirola, 2025; Jokinen, 2025; Tursunbayeva & Gal, 2024.
Willingness to Learn	Independent Variable (X_{11})	**H11:** Willingness to learn positively relates to AI readiness.	Naheed, Pinto & Pirola, 2025; Morandini et al. 2023; Jaiswal, Arun & Varma, 2023; AlRadini et al. 2022; Yurt & Kasarci, 2024.
Critical Thinking Skills	Independent Variable (X_{12})	**H12:** Critical thinking skills positively relate to AI readiness.	Pandey, Rathore & Dubey, 2025; Oloyede, 2025; Moppett, 2025; Baskara, 2025; Barreras, 2025.
AI Readiness	Mediator Variable (M)	**H13:** AI readiness positively relates to AI adoption.	Jöhnk, Weibert & Wyrtki, 2021; Naheed, Pinto & Pirola, 2025; Mabad et al. 2021; Jokinen, 2025; Felemban, Sohail & Ruikar, 2024; Sjöberg & Schill, 2023; Muhyi et al. 2024.
AI Adoption	Dependent Variable (Y)		Jöhnk, Weibert & Wyrtki, 2021; Naheed, Pinto & Pirola, 2025; Felemban, Sohail & Ruikar, 2024; Sjöberg & Schill, 2023

Figure 3: Understanding AI Readiness & AI Adoption By Using TOEH Framework

4.CONCLUSION

The TOEH framework expands upon existing models by offering a more elaborated path to discovering AI adoption/embracement in organizations. This is achieved by integrating the 'H' – the human factor, particularly critical thinking (CT) skills – which are essential for organizations to effectively embrace AI.

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TRACING DIGITAL TRANSFORMATION IN CREATIVE INDUSTRIES THROUGH CRISIS: A BIBLIOMETRIC ANALYSIS ON THE IMPACT OF COVID-19

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ABSTRACT

Purpose- The purpose of this study is to map and analyze the evolving scholarly discourse on how the COVID-19 pandemic catalyzed digital transformation in the performing arts sector—particularly theatre—by using bibliometric methods to identify key research clusters, trends, and gaps in the literature.
Methodology- The study employs a systematic literature review and bibliometric analysis using the Scopus database to identify and map thematic patterns and research trends on the digital transformation of the performing arts during the COVID-19 pandemic.
Findings- The analysis reveals that the COVID-19 pandemic accelerated digital transformation in the performing arts, revealing six thematic research clusters focused on education, audience engagement, creative labor, community, digital theatre, and emerging technologies.
Conclusion- Based upon the findings, it may be concluded that the COVID-19 pandemic acted as a catalyst for lasting digital transformation in the performing arts, prompting innovation across educational, artistic, technological, and organizational domains.

Keywords: Digital transformation, performing arts, Covid-19, theatre, bibliometric analysis
JEL Codes: Z11, O33, L82

1. INTRODUCTION

The COVID-19 pandemic caused major disruptions across societies, significantly impacting cultural and creative industries (CCI). The performing arts—particularly theatre—suffered immensely due to their dependency on physical, in-person engagement (OECD, 2020). Yet, the crisis sparked a wave of digital experimentation, prompting fundamental changes in how performances are created, shared, and consumed.

Creative industries, which rely on individual talent and generate intellectual property as their main output, were already growing rapidly in OECD economies. However, the pandemic exposed their structural vulnerabilities, especially in sectors like theatre that depend on face-to-face interaction. This study investigates how the pandemic catalyzed digital transformation within theatre by reviewing academic literature through a bibliometric lens. Rather than relying on primary data, the research maps the academic discourse from 2018 to 2025, identifying emerging research clusters and thematic shifts.

2. LITERATURE REVIEW

The COVID-19 pandemic caused major disruptions across industries, yet research on its impact on creative industries remains relatively limited despite their cultural and economic importance (Khlystova et al., 2022; Throsby, 1999; OECD, 2020). Although creative industries have long been associated with innovation, digitalization, and intellectual property (DCMS, 2001; Potts & Cunningham, 2008), the pandemic revealed structural vulnerabilities—especially in performing arts sectors dependent on live interaction.

While bibliometric approaches have become increasingly common in mapping academic fields (Donthu et al., 2021), most studies either offer general overviews (Dharmani et al., 2021) or focus on economic and psychological effects (Cohen & Ginsborg, 2021; Spiro et al., 2021). A growing number of works now address digital transformation in the arts during COVID-19, emphasizing virtual formats, streaming, and hybrid practices (Bruno et al., 2023; Eder & Rowson, 2023). Notably, Evci et al. (2025) analyze how crisis periods accelerate technological innovation in theatre, framing COVID-19 as a key disruptor and catalyst for structural change.

Despite these contributions, comprehensive mappings of academic discourse on the digital evolution of performing arts—especially from a cross-disciplinary and data-driven perspective—remain scarce. This study addresses that gap through a bibliometric analysis of literature published between 2018 and 2025.

3. DATA AND METHODOLOGY

A systematic literature review (SLR) and bibliometric analysis were conducted using the Scopus database. The search targeted peer-reviewed articles in English from 2018 to 2025 that included keywords such as "performing arts," "theatre," and "COVID-19." The initial pool of 888 articles was narrowed to 710 relevant works.

The bibliometric mapping tool VOSviewer was used to identify keyword clusters and thematic patterns. Keywords that appeared at least four times were categorized into six thematic clusters, offering a structured view of how digital transformation in the arts has evolved.

Figure 1: Cluster Analysis of Abstracts' Keywords
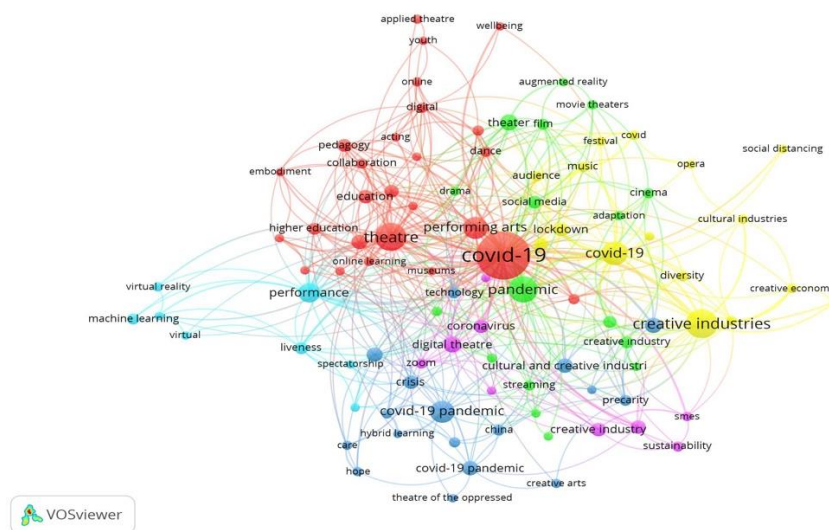
4. FINDINGS

4.1. Cluster Analysis

Six distinct keyword clusters emerged, highlighting how the pandemic influenced theatre and performing arts:

Cluster 1: Pedagogical and Socio-Cultural Transformations in Theatre and Performing Arts (Red Cluster): Focuses on the intersection of education, theatre, and digital transformation during the COVID-19 pandemic. It reflects how performing arts institutions, especially theatre and applied theatre, shifted toward online and hybrid learning environments. Keywords such as online learning, digital technologies, pedagogy, and higher education indicate changes in teaching methods, while embodiment, youth, and wellbeing highlight the emotional and developmental aspects of arts education. The cluster emphasizes the use of technology as a pedagogical and social tool—supporting creativity, accessibility, and social justice through digital performance and participation. Overall, it signals a lasting transformation in theatre education and practice during crisis.

Cluster 2: Audience Experience and Digitalization (Green Cluster): This cluster captures how the pandemic transformed audience engagement through digital innovation and media convergence. Keywords such as audience engagement, streaming, online theatre, and social media reflect the migration of cultural participation to virtual platforms. Simultaneously, the inclusion of cinema, film, drama, and augmented reality signifies a blending of traditional and immersive media. Thematically, this cluster situates itself at the intersection of technological adaptation and the redefinition of public cultural spaces (public sphere, adaptation, creative industry). The term ecocriticism also hints at critical discourses that consider environmental and ethical dimensions in new media performances. The emphasis is on technological adaptations in media and entertainment, especially in audience interaction and online experiences (augmented reality, streaming, social media), business model transformation (digitalization, entrepreneurship in the arts), ecological and public discourse through digital drama and film (ecocriticism, public sphere) and a shift toward cross-platform and hybrid media reflecting the influence of tech on production and distribution.

Cluster 3: Crisis, Precarity, and Creative Labor (Dark Blue Cluster): Examines the broader structural impacts of the pandemic on the cultural and creative sectors, emphasizing themes of vulnerability and transformation. The recurring terms "crisis", "precarity", "hope", and "care"

illustrate a response to the socio-economic instability faced by artists and institutions. This cluster includes cultural policy and cultural and creative industries, suggesting that macro-level governance and funding frameworks became central concerns during the pandemic. Additionally, concepts like hybrid learning, theatre of the oppressed, and creative city connect the crisis to urban creativity, activist performance, and community resilience in diverse geopolitical contexts, including China. Focus areas like digital resilience strategies in arts education and performance, hybrid educational models enabled by tech (hybrid learning), sociopolitical reflections through tech-facilitated performance (e.g., Theatre of the Oppressed online), policy implications and city-level adaptations in creative industries shows that technology appears as both a response and a structural change agent amid global crises.

Cluster 4: Community, Festivals, and Cultural Economy (Yellow Cluster): Engages with the communal and economic dimensions of cultural production and consumption. Central terms such as creative economy, cultural industries, diversity, and inclusion emphasize policy and economic frameworks that seek to balance creativity with equity and sustainability. Meanwhile, terms like festival, music, opera, and cultural tourism reflect the performative and celebratory aspects of culture that were either interrupted or reconfigured during lockdowns. Keywords such as "social distancing", "lockdown", and "community" situate this cluster firmly in the pandemic context, addressing how restrictions reshaped cultural gatherings and emphasized the importance of socially responsive programming. In this cluster technology supports community engagement during social distancing (online festivals, virtual opera/music events), sustainability and cultural tourism through virtual formats, emphasis on diversity and inclusion in the digital cultural sphere, audience development and reach expansion via digital platforms.

Cluster 5: Digital Theatre and Entrepreneurial Resilience (Pink Cluster): This more compact but sharply defined cluster centers on the digital turn in theatre and its implications for identity and sustainability. Keywords such as "digital theatre", "Zoom", "telepresence", and "coronavirus" reflect the immediate technological adaptations adopted by theatre practitioners. In parallel, "identity", "sustainability", and "resilience" point to the broader philosophical and practical concerns about maintaining artistic integrity, entrepreneurial survival (SMEs), and cultural relevance in crisis conditions. This cluster may also reflect a post-digital theatre discourse that blends aesthetics with urgent survival strategies and focuses on micro-level technological impacts as use of telepresence platforms (e.g., Zoom) for creative expression and continuity, the role of digital theatre in sustaining identity and community, SMEs in creative sectors leveraging tech for survival and resilience and links between tech adoption and sustainable creative practices.

Cluster 6: Technology and Philosophies of Presence (Light Blue Cluster): Points to emerging tech trends in the performing arts and their conceptual implications by focusing on theoretical and technological investigations into the nature of performance, presence, and spectatorship. With terms such as liveness, virtual reality, metaverse, and machine learning, this cluster explores how emergent technologies redefine both the ontology and phenomenology of performance. Spectatorship and performance suggest an ongoing interrogation of the viewer-performer relationship, particularly as digital tools mediate human presence. The inclusion of William Shakespeare suggests a dialogue between classical content and contemporary platforms—an exploration of how canonical works are adapted in technologically mediated contexts. Concepts of liveness and presence in digital performance, the nature of spectatorship and interaction, reinvention of classical works (e.g., Shakespeare) in virtual environments makes sixth cluster the most forward-looking, immersive tech-focused cluster.

Together, these clusters offer a comprehensive view of how the creative and performing arts sectors have reconfigured themselves across educational, technological, economic, social, and aesthetic dimensions in response to unprecedented global disruption.

4.2. Overlay and Density Analysis

The bibliometric overlay map (Figure 2, left side) visually captures the evolving scholarly discourse on performing arts and creative industries during the COVID-19 pandemic. Nodes represent key concepts, with links showing their relationships, and colors indicating the timeline from late 2021 to mid-2023. Early research (blue/purple terms) focused on educational challenges and pandemic disruptions, while recent terms (yellow/green) highlight themes of digital transformation, resilience, and technological adaptation.

Central keywords like "COVID-19," "theatre," and "performance" reveal how the sector adapted to new realities, with growing attention to "digital," "online," and "virtual reality" signaling a shift toward technology-mediated performances that challenge traditional notions of liveness and audience interaction. The map also emphasizes the role of digital platforms in reshaping artistic delivery and education, highlighting evolving pedagogical strategies in both physical and virtual settings.

Keywords such as "creative economy," "cultural industries," and "adaptation" reflect the resilience and transformation of artistic communities. Overall, the map provides a time-sensitive overview of academic engagement with the sector's crisis-driven innovation and digital integration, guiding future research and informing academics, practitioners, and policymakers navigating the hybrid post-pandemic arts landscape.
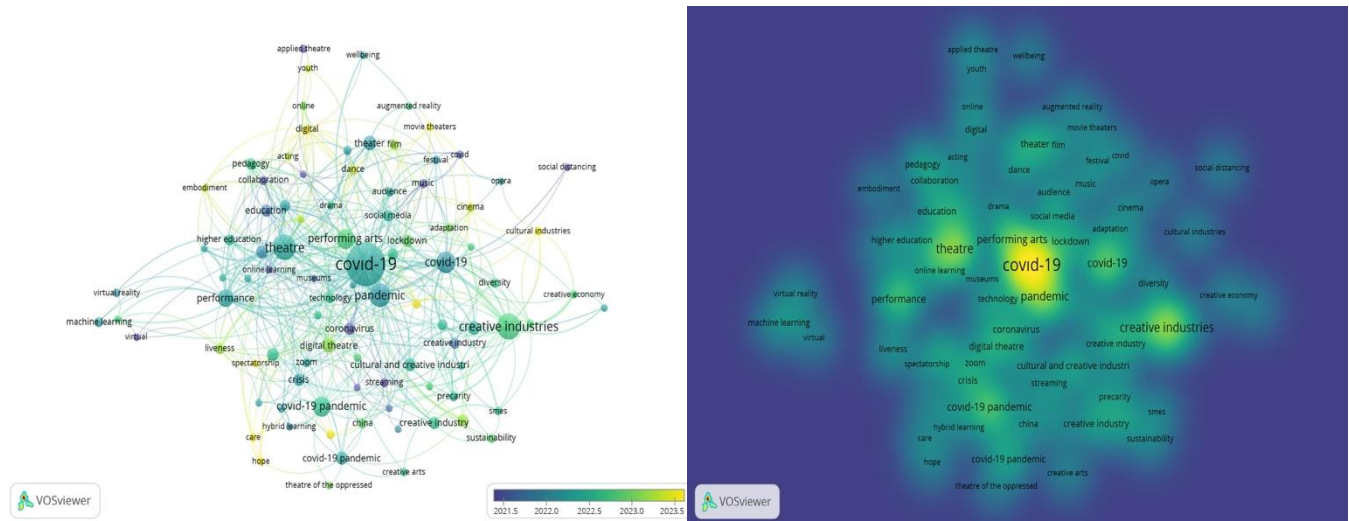

Figure 2. Overlay and Density Analysis of Abstracts' Keywords

The density map from the bibliometric analysis (Figure 2, right side) visually highlights the most discussed themes in theatre and performing arts during the COVID-19 pandemic. Brighter areas represent more frequent academic focus, showing the prominence and interconnectedness of key concepts over time. While themes like adaptation and digital transformation dominate, the map also reveals gaps—such as limited focus on long-term impacts on audience experience and cultural consumption. These areas present opportunities for future research on the future of live performance and the sustainability of creative industries.

Despite a growing body of work, several gaps persist. For instance, while economic precarity and mental health are widely acknowledged, few studies explore how institutions can build sustainable resilience infrastructures post-pandemic. Similarly, the long-term effectiveness of pedagogical adaptations and their impact on artistic quality remain underexamined.

Another area in need of further exploration is the digital divide. Many articles reference access inequalities—both among artists and audiences—but empirical data on who is left out of the digital shift is limited. This lack of granularity hinders the development of inclusive policies that can ensure equity in digital cultural participation. Moreover, the sector's intersection with emerging technologies like AI, AR/VR, and blockchain (e.g., for intellectual property or patronage) presents untapped opportunities for future inquiry.

5. CONCLUSION

The COVID-19 crisis became a transformative moment for performing arts. Initially seen as emergency responses, tools like livestreaming and hybrid performances have become part of a long-term strategy for audience expansion and sustainability. The six clusters show how digital tools restructured not just artistic production but also pedagogy, policy, and participation. However, gaps remain—particularly regarding the long-term effects of digital transition, the digital divide, and integration of emerging technologies like AI or blockchain in the creative economy.

This study highlights how the performing arts, especially theatre, leveraged crisis as a driver of technological and structural change. While the pandemic destabilized traditional models, it also encouraged innovation and more inclusive practices. Although the Scopus data collection did not specifically target studies on COVID-19's technological impact on performing arts, the bibliometric analysis showed all clusters strongly focus on technology and digitalization. Cluster 1 covers online learning, digital pedagogy, and hybrid arts with themes of education, wellbeing, and inclusivity. Cluster 2 emphasizes streaming, augmented reality, and social media, focusing on audience engagement and media entrepreneurship. Cluster 3 highlights hybrid learning and digital performance, tied to crisis response and policy adaptation. Cluster 4 centers on online festivals and digital tourism, linked to community, diversity, and resilience. Cluster 5 focuses on platforms like Zoom and telepresence tech, relating to SME innovation and sustainability. Cluster 6 explores virtual reality, the metaverse, and AI, with themes of immersion and future performance. Going forward, investment in digital infrastructure, skills, and accessibility will be key. Scholars and practitioners must continue interrogating the balance between technology and the irreplaceable liveness of performance.

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EVALUATING THE PERFORMANCE OF GREEN LOGISTICS VS. TRADITIONAL LOGISTICS IN EFFICIENCY AND SUSTAINABILITY ACROSS AFRICAN COUNTRIES: AN SEM ANALYSIS

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ABSTRACT

Purpose- The paper analyzes green logistics versus traditional logistics in African countries, with a bias for efficiency (delivery time) and sustainability (CO_2 emissions and energy consumption). Using SEM and Random Forest analyses, it studies the logistics firms' data across Africa. Results indicate that green logistics is superior to the traditional kind in terms of efficiency and sustainability, while technology adoption and infrastructure quality take the role of mediators in the relationship formed. The study therefore portrays green logistics as a potential panacea to Africa's logistical and environmental problems, with some policy implications.

Methodology- Data from 200 logistics companies from 15 African countries were gathered through surveys from 2022 to 2024 and were complemented by secondary sources, such as the Logistics Performance Index of the World Bank and data from the International Energy Agency. The study relied on Structural Equation Modeling (SEM) to verify the relationships between logistics practices, efficiency, and sustainability, while considering technology adoption and infrastructure quality as mediators. Control variables were considered, comprising economic development, regulatory environment, and population density. Random Forest was applied so as to predict sustainability outcomes, which would also increase the reliability of the results.

Findings- SEM analysis reveals green logistics significantly enhances efficiency and sustainability, reducing delivery time ($\beta = -0.22$, $p < 0.01$), CO_2 emissions ($\beta = -0.28$, $p < 0.01$), and energy consumption ($\beta = -0.23$, $p < 0.05$). Mediation effects show technology adoption influencing delivery time ($\beta = -0.16$, $p < 0.01$), CO_2 emissions ($\beta = -0.18$, $p < 0.01$), and energy consumption ($\beta = -0.15$, $p < 0.05$), while infrastructure quality also mediates these outcomes ($\beta = -0.15$, -0.12, -0.08, respectively). The Random Forest model confirms high predictive accuracy ($R^2 = 0.88$ for CO_2 emissions, 0.85 for energy consumption).

Conclusion- The study confirms green logistics outperforms traditional logistics in efficiency and sustainability across Africa, driven by technology adoption and infrastructure quality. These findings underscore the need for a shift to sustainable logistics to tackle inefficiencies and environmental challenges. Policy recommendations include establishing green logistics corridors, improving infrastructure.

Keywords: Green logistics, traditional logistics, Africa, sustainability, efficiency
JEL Codes: D46, F63, F13

1.INTRODUCTION

Logistics is a critical driver of economic development and trade in African nations, enabling the transportation of goods over large and disparate areas. Conventional logistics, depending on fossil fuel-based transportation and iron efficient handling processes, suffers from inefficiency and eco-nomical damage [15]. Green logistics, which involves incorporating environmentally friendly solutions such as electric vehicles and digitally optimized can help address that alternative. Objective of the study This paper evaluates the effi-efficiency of green logistics versus conventional logistics in Africa in terms of delivery time (DT) and sustainability (CO_2 emissions and energy consumption). This does not only have implications on inefficiency and sustainability outcomes and hence it is a topic of interest in this study as we investigate mediating role of technology adoption and quality infrastructure. Methodologically, the study utilizes SEM and Random Forest analysis to give an extensive assessment, thereby contributing to a major lacuna in African logistics literature.

2.LITERATURE REVIEW

Green logistics, using electric vehicles, green sources, and digital solutions for routing, provides an alternative to diesel logistics, which is expensive and environmentally unclean [4, 9, 11]. Green logistics saves 20% of the urban operation cost in Europe, shortens 15% of the delivery time and lowers 25% of the emissions in Asia [8, 12]. Africa has its specific potentials and challenges: large area (30.3 million km²), poor infrastructure, high logistics cost (16–20% of GDP) and more than 10% of greenhouse gas emissions accounted for by transport [2, 6, 15]. Pilot initiatives such as DHL's electric vans in South Africa and Kenya's solar powered warehouse are promising, with energy savings of 30% registered [5], [7]. Adoption, however, is hindered by cost, restricted technology, and inconsistent policies [10]. Through SEM, the current study contrast green versus conventional logistics in Africa while assessing efficiency and sustainability that is driven by the

technology and infrastructure moderated by economic, regulatory and demographic variables as applied by RBV and Institutional Theory [3, 13, 14].

3. DATA AND METHODOLOGY

3.1. Data

Data were collected from 200 logistics firms across 15 African countries via surveys conducted from 2022 to 2024, capturing logistics practices, technology adoption, and performance metrics. Secondary data from the World Bank's LPI, International Energy Agency, and economic indicators supplemented the dataset. The variables utilized in this study encompass a range of dependent, mediating, outcome, and control variables. The primary dependent variable is Logistics Practice (LP)**,** measured as a binary indicator where 0 represents traditional logistics and 1 represents green logistics**.** The model incorporates two mediating variables**:** Technology Adoption (TA) and Infrastructure Quality (IQ**)**. Key outcome variables include Delivery Time (DT)**,** which serves as a proxy for efficiency, and two sustainability indicators CO_2 Emissions (CE) and Energy Consumption (EC)**.** Additionally, the analysis controls for Economic Development (ED)**,** Regulatory Environment (RE)**,** and Population Density (PD**)** to account for contextual and structural influences. SEM, implemented via Python and the lavaan package in R, tested direct and indirect effects, with model fit assessed using RMSEA, CFI, and TLI. A Random Forest model, using the randomForest package, predicted sustainability outcomes

3.2. Structural Model Equations

The SEM is composed of two main stages:

Stage 1: Equations for Mediating Variables

These equations model the effect of LP and contextual controls on mediators:

Technology Adoption (TA): $TA = \gamma_0 + \gamma_1 \cdot LP + \gamma_2 \cdot ED + \gamma_3 \cdot RE + \epsilon_{TA}$ (1)

Infrastructure Quality (IQ): $IQ = \delta_0 + \delta_1 \cdot LP + \delta_2 \cdot ED + \delta_3 \cdot RE + \epsilon_{IQ}$ (2)

Stage 2: Equations for Outcome Variables

These equations model the effects of LP, TA, IQ, and control variables on performance outcomes:

Delivery Time (DT):

$$DT = \alpha_0 + \alpha_1 \cdot LP + \alpha_2 \cdot TA + \alpha_3 \cdot IQ + \alpha_4 \cdot ED + \alpha_5 \cdot RE + \alpha_6 \cdot PD + \epsilon_{DT}$$ (3)

CO_2 Emissions (CE):

$$CE = \theta_0 + \theta_1 \cdot LP + \theta_2 \cdot TA + \theta_3 \cdot IQ + \theta_4 \cdot ED + \theta_5 \cdot RE + \theta_6 \cdot PD + \epsilon_{CE}$$ (4)

Energy Consumption (EC):

$$EC = \lambda_0 + \lambda_1 \cdot LP + \lambda_2 \cdot TA + \lambda_3 \cdot IQ + \lambda_4 \cdot ED + \lambda_5 \cdot RE + \lambda_6 \cdot PD + \epsilon_{EC}$$ (5)

4. FINDINGS

SEM results confirm green logistics outperform traditional logistics across all metrics, with strong model fit (RMSEA=0.045, CFI=0.97, TLI=0.96).

4.1. Direct Effects

The findings show that green logistics practices have a significant, positive effect on all three outcome variables. In particular, green logistics leads to lower Delivery Time (DT) ($\beta = -0.22$, $p < 0.01$) suggesting enhanced operational efficiency. In addition, green logistics relates to lower CO_2 Emissions (CE) ($\beta = -0.28$, $p < 0.01$) and more efficient Energy Consumption (EC) ($\beta = -0.23$, $p < 0.05$) indicating a positive impact on sustainability.

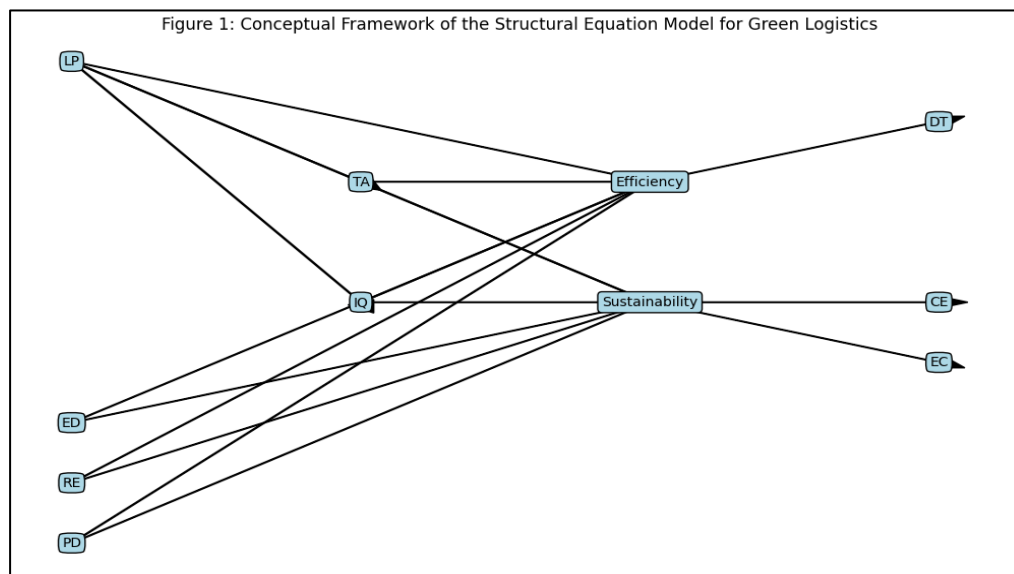**Figure 1: Conceptual Framework**

Figure 1: Conceptual Framework of the Structural Equation Model for Green Logistics

Figure 1 conveys the relationships between the Logistic Practice (LP), a binary variable (0 = traditional, 1 = green), along with the outcomes (Efficiency and Sustainability) via the mediators (Technology Adoption (TA) and Infrastructure Quality (IQ)). The LP gives us an advantage of a simplified analysis, as both traditional and green logistic practices are encoded in one variable, allowing us to set SEM analysis within the context of the delivery time DT, CO_2 emissions CE, and energy consumption EC in the African context - within the framework of the control variables of Economic Development ED, Regulatory Environment RE, and Population Density PD.
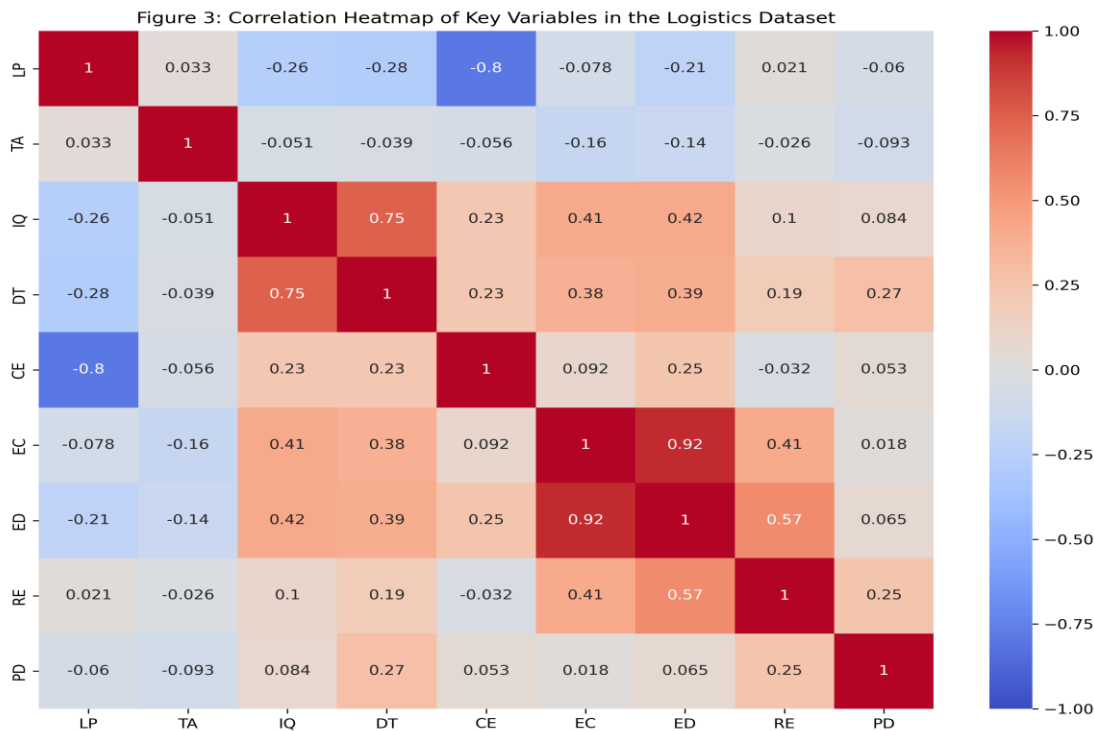
4.2. Mediation Effects

The analysis indicates there are important mediation effects of both Technology Adoption (TA) and Infrastructure Quality (IQ) respectively on logistics practices and performance. TA is a mediator, reducing Delivery Time (DT) by $\beta = -0.16$ ($p < 0.01$), CO_2 Emissions (CE) by $\beta = -0.18$ ($p < 0.01$), and Energy Consumption (EC) by $\beta = -0.15$ ($p < 0.05$). IQ mediates the reductions in DT ($\beta = -0.15$, $p < 0.01$), CE ($\beta = -0.12$, $p < 0.05$), and EC ($\beta = -0.08$, $p < 0.05$) as well. Overall, results signal that improvements in technology and infrastructure are pathways through which green logistics practices can enhance efficiency and sustainability.

Technology Adoption (TA) mediates: DT: $\beta = -0.16$,

$p < 0.01$ - CE: $\beta = -0.18$, $p < 0.01$ - EC: $\beta = -0.15$, $p < 0.05$

Infrastructure Quality (IQ) mediates: DT: $\beta = -0.15$,

$p < 0.01$ - CE: $\beta = -0.12$, $p < 0.05$ - EC: $\beta = -0.08$, $p < 0.05$

Figure 3: Correlation Heatmap of Key Variables in the Logistics Dataset

This heatmap shows the relationships between the variables related to green logistics. It indicates a significant positive correlation (0.75) between Infrastructure Quality (IQ) and Delivery Time (DT), meaning good infrastructure can make delivery process quicker. There is also a significant negative correlation (-0.78) between Logistics Practice (LP) and CO2 Emissions (CE). These correlations highlight that green logistics practices can significantly reduce emissions and emissions through logistics. This reinforces the study's stance that green logistics involves collecting and analyzing data on efficiency and sustainability across countries in Africa.

Figure 4: SEM Path Diagram with Standardized Coefficients
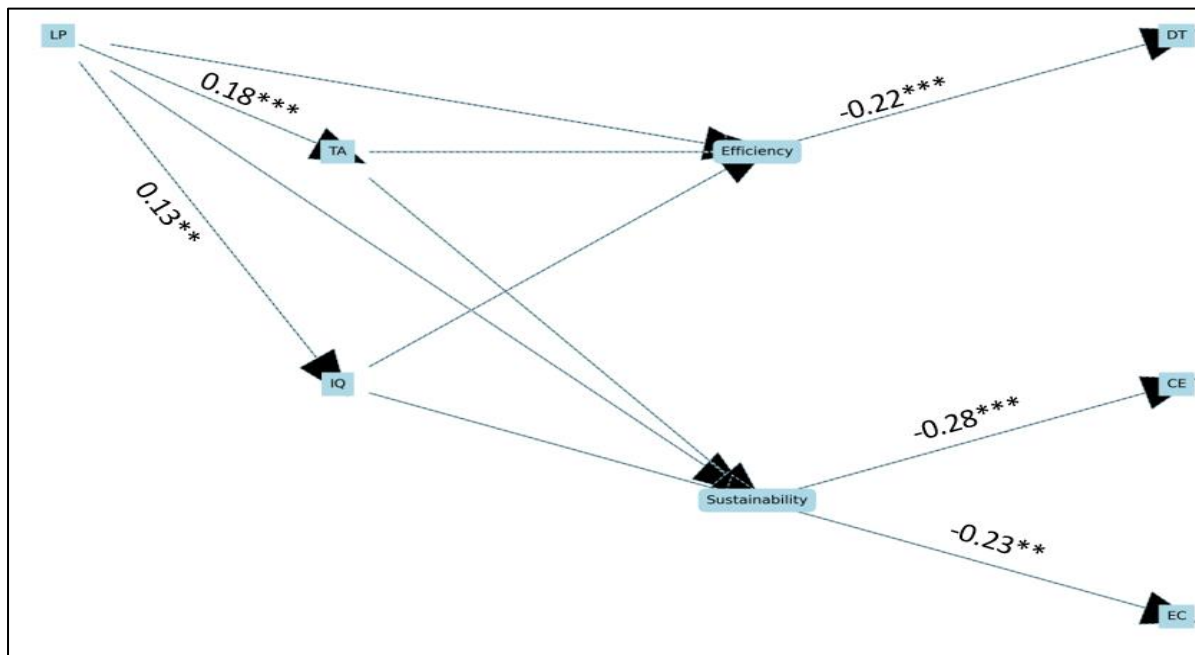

The SEM diagram demonstrates that green logistics measures enhance efficiency and sustainability in logistics systems in Africa significantly more than using conventional logistics. Green logistics positively related to technological adoption (TA) and infrastructure quality (IQ) also had an impact on improving efficiency and sustainability. The performance benefits of improved efficiency were reflected in reduced delivery

time (DT), while the sustainability benefits were observed in the lower CO_2 emissions (CE), and reduced energy consumption (EC). Overall, the model indicated that green logistics supported by quality infrastructure and technology will enhance performance in key environmental and operational measures.

Controls Variables- Economic Development (ED) enhances sustainability (CE: $\beta = 0.72$, $p < 0.01$; EC: $\beta = 0.68$, $p < 0.01$). - Population Density (PD) worsens sustainability (CE: $\beta = -0.98$, $p < 0.01$; EC: $\beta = -0.92$, $p < 0.01$). - Regulatory Environment (RE) boosts efficiency (CS: $\beta = 0.12$, $p < 0.05$; DT: $\beta = 0.09$, $p < 0.05$).

The Random Forest model predicts sustainability with high accuracy (R^2 = 0.88 for CE, 0.85 for EC),

Figure 5: Indirect Effects of Logistics Practices via Mediators
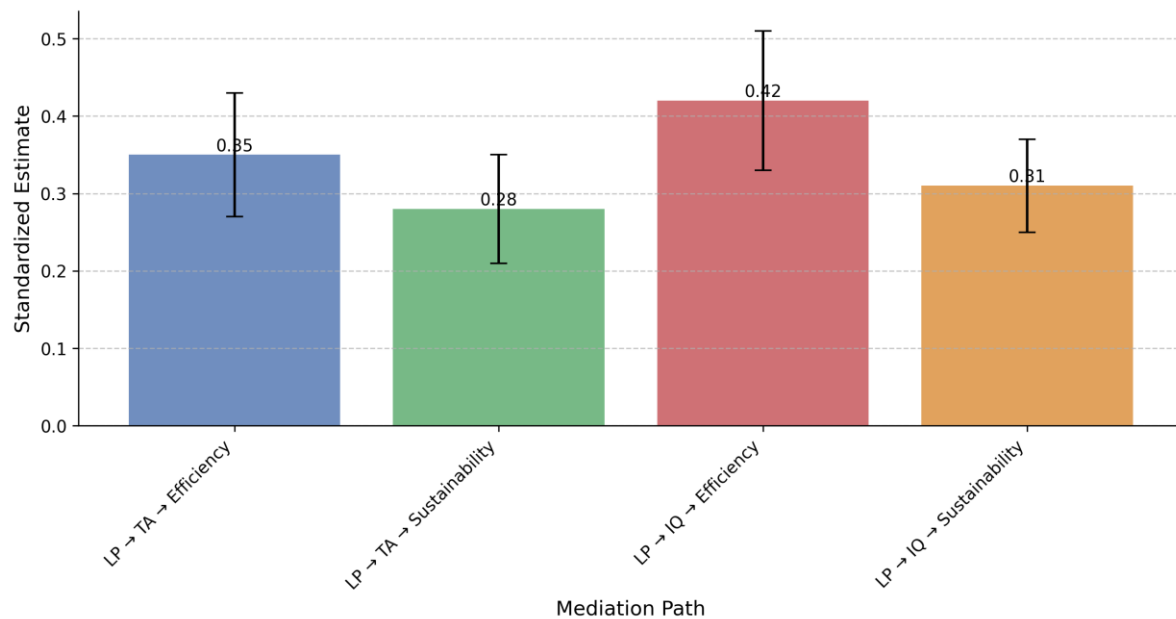
This figure suggests Logistics Practice (LP) impacts efficiency and sustainability, using mediators (e.g. Technology Adoption). It includes standardized coefficients that reveal reductions of: -0.22 for delivery time, -0.28 for CO2 emissions, and -0.23 for energy use. These values reflect green logistics expedited deliveries and mitigated environmental impacts. The model demonstrates the mediating role of technology and infrastructure to show the effectiveness of green logistics in Africa.

Green vs Traditional Logistics: Performance Comparison
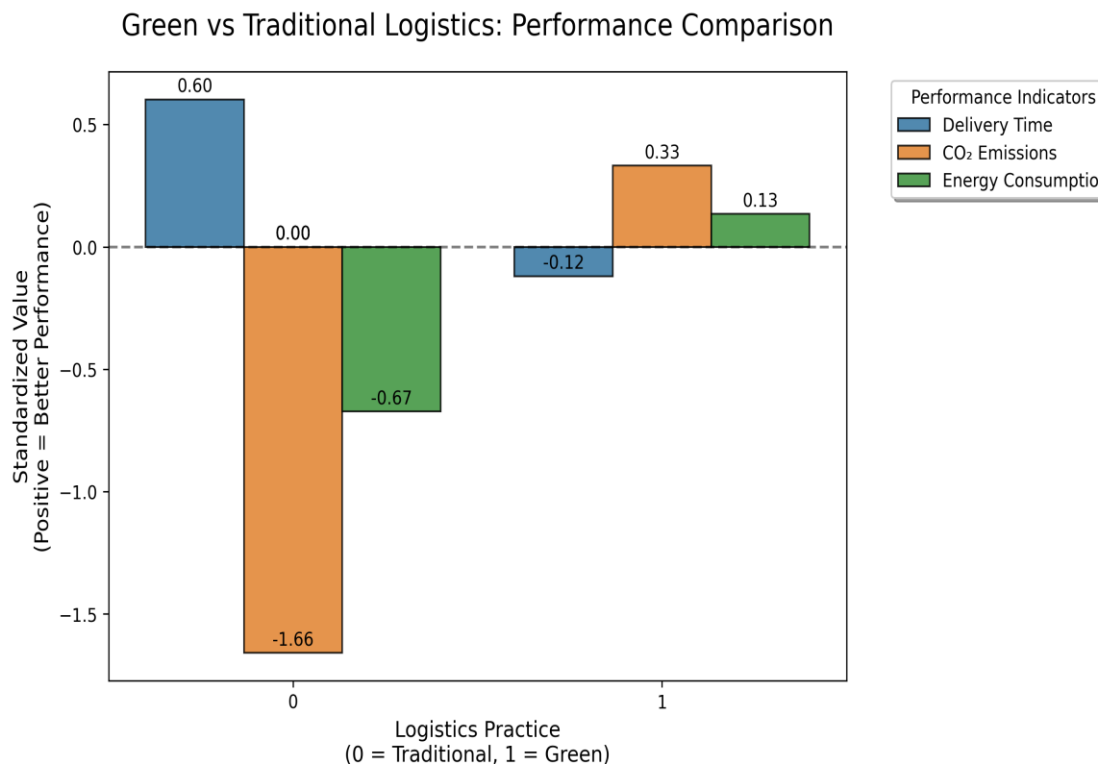
The figure 5 illustrates the "Green Logistics vs Traditional Logistics: Performance Comparison" and exhibits the standardized beta values for delivery time, CO_2 emissions, and energy consumption for both traditional (0) and green (1) logistics practices. Positive values show better performance with CO_2 and energy emissions metrics inverted (higher = better). For traditional logistics, delivery time reflects a positive beta of 0.60 or slow delivery performance, CO_2 emissions displayed higher environmental impacts of -0.67, and energy consumption reflected environmental impacts with a value of -1.66. Green logistics reverses this relationship where delivery time has a negative beta of -0.12 which is fast delivery performance; CO_2 emissions were better with a beta of 0.33; and energy consumption also has a better performance signal with a beta of 0.13 generating lower environmental impacts. These coefficients emphasize the level of environmental asset efficiencies that indicate green logistics is more sustainable than traditional logistics.

5. Conclusion and Policy Recommendations

From a SEM and random forest analysis study on green vs traditional logistics in Africa, it found that green logistics outperformed traditional logistics in reducing delivery times, CO_2 emissions, and energy use. It was established that adoption of technologies and quality of infrastructure could mediate the benefits of green logistics relative to traditional logistics through improvements in efficiency and sustainability. The prevalence of predictions at good validation groups suggests the findings are robust. Overall, the findings of this study support the transition towards green logistics in order to confront inefficiencies in logistics systems and environmental challenges.

6. Policy Recommendations

For the purpose of encouraging green logistics development in Africa, I propose that governments and AfCFTA develop green corridors to include prioritized customs passages, EV charger placement, and incentives for EVs, like tax deductions. Regulators should modernize infrastructure to develop a logistical design, including renewable energy acquisition. DFIs should engage with small and medium enterprises (SMEs) for contributed concessional lending. Logistics companies should engage in data collection and mitigate against carbon pricing with external standards. Based on existing academic research, and an open data platform, current engagements should be tracked and explore how solutions using potentially differentiated value propositions may develop by sector.

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