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12th GLOBAL BUSINESS RESEARCH CONGRESS (GBRC-2026)

GBRC-2026 is an international congress hosted by Işık University, Istanbul. GBRC-2026 had participants from 9 different countries, namely; United States of America, Philippines, Northern Cryprus, India, Mexico, Uzbekhistan, Germany, Nigeria and Turkiye. Hence, GBRC-2026 is defined an "International Congress" qualified by the Higher Education Council of Turkiye.

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12th GLOBAL BUSINESS RESEARCH CONGRESS | June 11, 2026 | ISTANBUL

CONGRESS PROGRAM

12th Global Business Research Congress (GBRC.2026) jointly hosted by Işık University has participants from 9 different countries, namely; Turkiye, Uzbekistan, Phillippines, Nigeria, Mexico, USA, India, Germany, Northern Republic of Cyprus. Hence, GBRC.2026 is defined an "International Congress" qualified by the Higher Education Council of Turkiye.

https://zoom.us/j/92260111905

OPENING SPEECHES | SESSION 1 | June 11, 2026, Thursday | ROOM 1	
10.00-10.10	Prof. Suat Teker, Congress Co-President, Welcoming Speech
10.10-10.30	**Keynote Speaker I: Dr. Himanshu Goel | Independent AI Researcher, India**
	The $240K question: how outdated AI costs businesses more than bad AI
10.30-10.50	**Keynote Speaker - II: Prof. Erskin Blunck | Nurtingen-Geislingen University, Germany**
	Entrepreneurial business education: The example of Zukunft.Gruenden at Nuertingen-Geislingen University in Germany
10.50-11.10	**Keynote Speaker - III: Prof. Brandon J. Price | Virginia Commonwealth University, USA**
	Entrepreneurship in your career: Why you need to think like an entrepreneur!

PRESENTATION SESSIONS	
11.30 - 14.45	**SESSION 2 | June 11, 2026, Thursday | ROOM 1**
	Session Chair: Eser Ozbay, Isik University
	https://zoom.us/j/92260111905
11.30 - 11.45	**Experiential learning from personal experience as an effective entrepreneurship teaching process for universities**
	Brandon Price, Panamerican University of Mexico
11.45 - 12.00	**Mediating role of strategic agility on the relationship of HRM strategies and sustainable competitive advantage of manufacturing companies in selected municipalities of Batangas province**
	Irene H. Maralit, Batangas State University, Philippines
	Maylyn L. Masilang, Rosario Integrated National School, Philippines
12.00 - 12.15	**Exploring the heterogeneous effects of brand equity on stock market performance using quantile-on-quantile regression analysis: evidence from the top 10 technology companies**
	Abdulaziz Abuobaid, Istanbul Aydın University
	Tarana Azimova, Istanbul Aydin University
12.15 - 12.30	**AI-oriented risk assessment models in emerging insurance markets: the case of Uzbekistan**
	Rustam Sadykovich Azimov, Uzbekinvest
	Miradil Abdullayevich Mirsadikov, Uzbekinvest

12.30 - 12.45	**Drivers of consumption-based carbon emissions: the role of green finance, digital transformation, and trade under cross-sectional dependence**
	Gulden Poyraz, Bandirma Onyedi Eylul University
	Tugba Guz, Istanbul Yeniyuzyil University
12.45 - 13.00	**Do OPEC oil price shocks matter for the Turkish stock market? Evidence from the BIST 100 index (2010–2026)**
	Huseyin Cetin, Bursa Technical University
13.00 - 13.15	**Generating added value for impoverished rural regions through agritourism**
	Anda Elvan Yarman Ak, Isik University
	Dilek Teker, Isik University
13.15 - 13.30	**Institutionalizing social entrepreneurship in Turkiye: a comparative perspective through the community interest company model in the United Kingdom with insights from women social entrepreneurs' access to finance**
	Eser Ozbay, Isik University
	Dilek Teker, Isik University
13.30 - 13.45	**Monetary policy responses to energy price shocks: a literature review**
	Serpil Kuzucu, Istanbul Beykent University
13.45 - 14.00	**When authenticity signaling backfires: an inverted relationship**
	Sara Khwaira, Istinye University
	Alpaslan Kelleci, Istinye University
14.00 - 14.15	**Supervisory gender constructivist beliefs, FWA consistency, and leadership aspiration: evidence from Turkiye**
	Sunduz Yilmaz, Istanbul Technical University
	Fatma Kusku, Istanbul Technical University
14.15 - 14.30	**Internationalization strategies of digital universities: a strategic framework for university 5.0**
	Ali, Eskinat, Netkent University
	Suat Teker, Isik University
14.30 - 14.45	**Emerging factors affecting marketing: contemporary trends and challenges**
	Diwakar Singh, Jerome Cheese Company, USA
11.30 - 14.45	**SESSION 3 | June 11, 2026, Thursday | ROOM 2**
	Session Chair: Cuneyt Dirican, Istanbul Arel University
	https://zoom.us/j/97791255200
11.30 - 11.45	**User resistance and habit-based adoption processes in innovative technologies: a data-driven software case study** - *Inovatif teknolojilerde kullanıcı direnci ve alışkanlık temelli benimseme süreçleri: veri odaklı bir yazılım incelemesi*
	Nagihan Unsal, Ankara Social Sciences University
11.45 - 12.00	**Economic policy uncertainty, unexpected inflation developments, and risk-on conditions in the Turkish equity market: evidence from a NARDL approach** - *Ekonomik politika belirsizliği, beklenmeyen enflasyon gelişmeleri ve Turkiye hisse senedi piyasasındaki risk alma koşulları: NARDL yaklaşımından bulgular*
	Tutku Unkaracalar, Kirklareli University

12.00 - 12.15	**The impact of digital accounting literacy on the perception of professional competence: a study on accounting and tax applications program students -** *Dijital muhasebe okuryazarlığının mesleki yetkinlik algısı üzerindeki etkisi: muhasebe ve vergi uygulamaları programı öğrencileri üzerine bir araştırma*
	Nesegul Parlak, Ordu University
	Didem Ozturk Ciftci, Ordu University
12.15 - 12.30	**Insurance in international trade and management of global supply chain risks through integrated models -** *Uluslararası ticarette sigorta ve küresel tedarik zinciri risklerinin bütünleşik modellerle yönetimi*
	Cigdem Kelepce, Halic University
12.30 - 12.45	**Macroeconomic drivers of the BIST sustainability index: evidence from ARDL and VAR models -** *BIST sürdürülebilirlik endeksini etkileyen makroekonomik faktörler: ARDL ve VAR modelleri ile bir inceleme*
	Suat Teker, Isik University
	Dilek Teker, Isik University
	Beyda Demirci, Isik University
12.45 - 13.00	**The transformation of public relations in the age of artificial ıntelligence: a conceptual evaluation from the perspective of strategic communication and corporate reputation -** *Yapay zeka çağında halkla ilişkilerin dönüşümü: stratejik iletişim ve kurumsal itibar perspektifinden kavramsal bir değerlendirme*
	Veysel Karani Sukuroglu, Kastamonu University
13.00 - 13.15	**Supply chain finance and corporate liquidtyoptimization in digital banking -** *Dijitalleşen bankacılıkta tedarik zinciri finansmanı ve kurumsal likidite optimizasyonu*
	Hande Esin Sahanli, Isık University
	Suat Teker, Isık University
13.15 - 13.30	**A conceptual evaluation from the perspectives of micro-luxury consumption and conspicuous consumption -** *Mikro-lüks tüketim ve gösterişçi tüketim perspektifinden kavramsal bir değerlendirme*
	Enes Yuce, Kastamonu University
13.30 - 13.45	**Psychological safety experiences of HR leaders in the Bursa automotive cluster: a qualitative inquiry on mobbing, exclusion, and participation -** *Bursa otomotiv kümelenmesinde İK liderlerinin psikolojik güvenlik deneyimleri: mobbing, dışlanma ve katılım üzerine nitel bir inceleme*
	Ayhan Yazar, Bursa Uludag University
13.45 - 14.00	**A descriptive quantitative analysis of commercial space and the space economy -** *Ticari uzay ve uzay ekonomisi üzerine tanımlayıcı bir nicel analiz*
	Cuneyt Dirican, Istanbul Arel University
14.00 - 14.15	**Consumer trust during brand crises: influencer vs. brand spokesperson**
	Hafsah Bilal, Kadir Has University
	Sandy Ipekler Cagliyor, Kadir Has University
	Burcin Kaplan, Istanbul Aydın University
14.15 - 14.30	**Digital banking innovations and operational efficiency – evidence from the listed deposit money banks in Nigeria**
	Olofin Abiona Jeremiah, Nile University of Nigeria
	Taiwo Adewale Muritala, Nile University of Nigeria
	Akeem Adewale Bakare, Nile University of Nigeria
14.30 - 14.45	**The mediating role of organizational justice in the effect of psychological contract breach on quiet quitting: a research in the finance sector -** *Psikolojik sözleşme ihlalinin sessiz istifa üzerindeki etkisinde örgütsel adaletin aracı rolü: finans sektöründe bir araştırma*
	Burcu Sirkeci, Istanbul Okan University
	Beynaz Uysal, Istanbul Okan University

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ABSTRACTS OF THE CONGRESS

EXPERIENTIAL LEARNING FROM PERSONAL EXPERIENCE AS AN EFFECTIVE ENTREPRENEURSHIP TEACHING PROCESS FOR UNIVERSITIES

Brandon J. Price, Panamerican University, Mexico

"Knowledge drives innovation, innovation drives productivity, productivity drives economic growth" – Dr. William Brody As noted in the quote above, innovation is at the center of economic growth for any country. Innovation is much more than a good idea, it is the creation of a product or service that provides tangible benefits to people, and importantly, is able to do so by being commercially successful. Over the past several decades, in many fields of endeavor – especially STEM - tertiary education has been pivoting from "passive" (where the students absorb information passively via lectures), to "active" (where the students are more actively engaged via activities and/or discussion in class). A great example of this is found in engineering disciplines – wherein student teams engage in design, fabrication, and testing of a physical or virtual prototype product. The teaching of entrepreneurship, which unites knowledge, innovation, productivity and economic growth, has long been in the province of active learning. However, over the past fifteen years, the concept of "experiential" learning has been emerging. While active learning is centered on real-life experiences and reflection, experiential learning encompasses a variety of interactive one technique aimed at fostering participation and learning of actual tools to enhance the prospect of success. In this talk we will discuss the principle of "experiential learning" in the context of teaching of Entrepreneurship, adding the notion of teaching being performed by an experienced entrepreneur. This involves more than the "concepts" or discussion of entrepreneurial topics such as ideation, innovation, and failure or success, it involves a team effort in all aspects of not only vetting a viable idea and creating a Business Plan document, but preparing and delivering a convincing and compelling Investor Pitch for the expressed purpose of raising startup funds. And, in addition, why it matters that these efforts are directed by a person who has experienced entrepreneurial success and failure in their lives. Several examples will be discussed in the context of experiential learning.

Keywords: Experiential learning, entrepreneurship education, active learning, ınnovation and commercialization, ınvestor pitch development
JEL Codes: A23, I23, L26

MEDIATING ROLE OF STRATEGIC AGILITY ON THE RELATIONSHIP OF HRM STRATEGIES AND SUSTAINABLE COMPETITIVE ADVANTAGE OF MANUFACTURING COMPANIES IN SELECTED MUNICIPALITIES OF BATANGAS PROVINCE

Irene H. Maralit, Batangas State University, Philippines
Maylyn L. Masilang, Rosario Integrated National High School, Philippines

Strategic agility helps food manufacturers detect market, regulatory, and competitive changes, decide quickly, and reconfigure resources. In the Philippines, it is vital due to demand volatility, supply chain risks, and shifting consumer preferences. Firms with strong HRM strategies and high agility can convert national advantages into sustainable competitive advantage. However, studies on internal capabilities driving this advantage remain scarce, especially on how HRM strategies affect competitiveness through strategic agility in food manufacturing. This study fills that gap by examining strategic agility's mediating role between HRM strategies and sustainable competitive advantage among Batangas food manufacturers. A quantitative explanatory design with mediation analysis was used to examine strategic agility's indirect effect between HRM strategies and sustainable competitive advantage. A survey assessed strategic agility's mediating role, with data analyzed using Jamovi. Respondents included 189 owners, HR managers, or supervisors from 371 registered food manufacturing firms in Calaca, Tanauan, Batangas City, Lipa, and Sto. Tomas, based on Business Permit and Licensing Office records. The design tested how HRM strategies influence competitiveness directly and indirectly through strategic agility among Batangas food manufacturers. Most firms were micro- and small-scale sole proprietorships with centralized decisions and limited formal HR systems, constraining HRM practices and strategic agility. Sustainable competitive advantage was high in efficiency and quality, but customer responsiveness relied on relationships, not data, while innovation was weakest due to low tech and R&D investment. HRM strategies were slightly high to effective, with training and development strongest; recruitment, appraisal, compensation, career planning, and work-life quality were limited by finances and structure. Strategic agility was moderate: strong market awareness but weak decision-making and execution. Competitiveness differed by form, size, and age, favoring larger, older firms. HRM influenced competitiveness directly and indirectly through strategic agility, which partially mediated the link. An enhanced HR program was proposed to formalize policies, strengthen training, build agile leadership, and foster partnerships. The study concludes that Batangas food manufacturers are mostly micro- and small-scale firms with centralized, informal structures that shape HR practices and limit strategic agility. Their advantage comes from efficiency and quality, but low innovation threatens long-term competitiveness due to limited tech investment. HR strategies are vital, yet informal recruitment, inconsistent appraisal, poor compensation, and limited career growth reduce effectiveness. Firms show moderate strategic agility via market awareness but struggle with fast decisions and execution because of resource limits and centralization. HR strategies strengthen competitiveness directly and through strategic agility, which partially mediates the HRM-competitiveness link. Organizational maturity improves HR formality and advantages. Sustainable competitiveness requires formal HR practices and strategic agility to build resilience and growth.

Keywords: Strategic agility, human resource strategies, sustainable competitive advantage, appraisal, reconfigure resources

EXPLORING THE HETEROGENEOUS EFFECTS OF BRAND EQUITY ON STOCK MARKET PERFORMANCE USING QUANTILE-ON-QUANTILE REGRESSION ANALYSIS: EVIDENCE FROM THE TOP 10 TECHNOLOGY COMPANIES

Abdulaziz Abuobaid, Istanbul Aydin University
Tarana Azimova, Istanbul Aydin University

This study investigates the heterogeneous effects of brand equity on stock returns among the top 10 global technology companies — Apple, Samsung, Microsoft, Alphabet, Amazon, Intel, Sony, IBM, HP, and Oracle — over a 20-year longitudinal period from 2005 to 2025. Specifically, it aims to determine whether the brand equity–stock return relationship varies across different market conditions and firm performance states, addressing a gap in the marketing-finance literature regarding asymmetric and non-linear dynamics in highly competitive technology sectors. The study employs the Quantile-on-Quantile (QQ) regression approach proposed by Sim and Zhou (2015), which enables analysis of the relationship between brand equity and stock returns across the joint distribution of both variables. This framework captures asymmetric and non-linear dynamics that conventional regression methods would obscure. The model controls firm size, return on assets, financial leverage, sales growth, and macroeconomic conditions to isolate the independent contribution of brand equity to market valuation. The QQ results reveal that the brand equity–stock return relationship is heterogeneous and asymmetric across quantiles. Contrary to conventional expectations, brand equity exhibits predominantly negative effects on stock prices across several lower and upper quantiles, suggesting that for highly established technology firms, additional increases in brand value generate diminishing marginal effects on market valuation. These findings are interpreted through three theoretical lenses. From an Efficient Market Hypothesis perspective, brand value appears to be already fully priced into stocks, limiting additional valuation gains. Signaling Theory suggests that branding loses informational distinctiveness in mature markets where strong brand recognition is already expected by investors. From a Resource-Based View standpoint, when all firms within the sample possess similarly strong global brands, the differentiating power of brand equity weakens considerably. The study demonstrates that the effect of brand equity on stock market performance is neither linear nor constant across market states. In mature technology markets, investors appear to prioritize innovation capacity, growth expectations, and macroeconomic conditions over brand reputation alone. These findings carry meaningful implications for investors, corporate managers, and policymakers, underscoring the evolving and context-dependent role of intangible assets in innovation-driven sectors. Future research should explore whether these dynamics extend to other industries or geographies, and whether emerging brand dimensions — such as digital brand equity or ESG-related brand perceptions — exhibit different return patterns across market conditions.

Keywords: Brand equity, stock returns, quantile-on-quantile regression, technology sector, ıntangible assets
JEL Codes: M31, G12, G14

AI-ORIENTED RISK ASSESSMENT MODELS IN EMERGING INSURANCE MARKETS: THE CASE OF UZBEKISTAN

Rustam Sadykovich Azimov, Uzbekinvest
Miradil Abdullayevich Mirsadikov, Uzbekinvest

The purpose of this study is to examine the transformation processes within insurance markets in developing countries, with a particular focus on the growing influence of artificial intelligence (AI) technologies. While AI is reshaping mature insurance markets in developed economies through automation and predictive analytics, its adoption in developing nations remains uneven and understudied. This research specifically aims to assess the feasibility of implementing AI-oriented risk assessment models in Uzbekistan – a country with a rapidly expanding but institutionally immature insurance sector. The study also seeks to propose a phased methodology for AI adoption that navigates regulatory gaps, infrastructural weaknesses, and human resource limitations. The study employs a case study approach centered on Uzbekistan, combined with econometric modeling. Specifically, a binary logit model is used to assess factors influencing insurance companies' readiness to adopt AI technologies. Key independent variables examined include firm size, years of digital experience, level of regulatory compliance, access to external technical support, and prior investment in data management systems. The authors also draw upon global best practices from countries that have pioneered low-cost, scalable AI solutions under resource constraints. These international experiences are systematically contrasted with Uzbekistan's specific limitations, including fragmented regulatory oversight, limited cloud computing infrastructure, and a shortage of data science talent. The analysis reveals that readiness for AI adoption is significantly positively associated with prior digital investment and external partnerships. Conversely, regulatory ambiguity and staff resistance act as substantial barriers. Unlike developed markets where extensive historical data facilitates AI integration, Uzbekistan's insurance ecosystem faces significant gaps in data standardization, technological readiness, and institutional coordination. However, the findings demonstrate that these constraints do not preclude AI adoption altogether. The logit regression results empirically validate that a carefully calibrated, context-sensitive approach is required, moving from pilot projects in low-risk product lines (e.g., crop or micro-insurance) to full-scale AI integration. Based upon the analysis and findings, it may be concluded that even institutionally constrained markets can harness intelligent technologies, provided that implementation is phased, context-aware, and supported by targeted policy interventions. For policymakers, the results offer evidence-based guidance for shaping digitalization strategies, including regulatory sandboxes and tax incentives. For insurance companies, the proposed phased methodology provides a concrete roadmap. Ultimately, the article contributes to the growing literature on AI in development finance by demonstrating that constraints do not preclude adoption – they necessitate careful calibration.

Keywords: Artificial intelligence, insurance market, risk assessment, InsurTech, econometric modelling.
JEL Codes: G22, O33, C52

DRIVERS OF CONSUMPTION-BASED CARBON EMISSIONS: THE ROLE OF GREEN FINANCE, DIGITAL TRANSFORMATION AND TRADE UNDER CROSS-SECTIONAL DEPENDENCE

Gulden Poyraz, Bandirma Onyedi Eylul University
Tugba Guz, Istanbul Yeni Yuzyil University

Digital transformation is critical to green, sustainable, and low-carbon growth, and the role of green finance in funding environmentally friendly projects to achieve this growth is gradually growing. Within this scope, the study aims to examine the impact of green finance, digital transformation, and trade on Consumption-Based Carbon Emissions (CBE) in OECD countries between 1995 and 2020. Long-term relationships are estimated by using the Common Correlated Effects Mean Group (CCE-MG) approach in this study. The method is preferred because it accounts for cross-sectional dependence and yields reliable estimates in heterogeneous panel structures. Findings revealed that the GDP coefficient is positive and statistically significant at the 5% level. The result indicates that GDP has an increasing effect on the dependent variable (CBE). The export variable coefficient is negative and statistically significant. Therefore, the increase in exports mitigates the effect on the CBE. The positive, highly significant coefficient on the import variable indicates that imports have a strong positive effect on the CBE. The negative and significant coefficient on R&D indicates that technological advancements mitigate the effect of CBE. In contrast, the coefficients for the variables green finance, information and communication technologies (ICT), and adult education are not statistically significant. Examining the cross-sectional averages in the model, the average for CBE is positive and statistically significant. This has confirmed the existence of common stocks and mutual interactions among countries. Similarly, the average GDP is negative and statistically significant, whereas the average ICT is not. The findings indicate that common factors play a significant role in the panel dataset and that using the cross-sectional averages in the model is a sound choice.

Keywords: Green finance, carbon emissions, digital transformation, CCE-MG approach
JEL Codes: E44, Q55, Q56

DO OPEC OIL PRICE SHOCKS MATTER FOR THE TURKISH STOCK MARKET? EVIDENCE FROM THE BIST 100 INDEX (2010–2026)

Huseyin Cetin, Bursa Technical University

The aim of this study is to analyze the impact of the OPEC oil price shock on the performance of the BIST 100 index, which is regarded as a major indicator of the Turkish stock market. With regard to the energy dependence of Türkiye and the role of oil in economic activities, any changes in oil prices can greatly affect the performance of the Turkish stock market index. Therefore, this research attempts to investigate whether positive and negative OPEC oil price shocks have an asymmetric impact on the performance of the BIST 100 index. The NARDL model is utilized for analyzing the asymmetric impact of OPEC oil price shocks on the BIST 100 index in the short- and long-term periods. In particular, monthly time series data from January 2010 to March 2026 is used for the investigation. Besides oil price changes, the following variables are taken into consideration: USD/TRY exchange rates, Türkiye's 5-year sovereign credit default swap premium, and the U.S. Effective Federal Funds Rate (EFFR). The results reveal an asymmetric relationship between OPEC oil price shocks and the BIST 100 index. In the long run, only negative oil price shocks significantly and positively influence the BIST 100 index. The positive oil price shocks have a weak positive lagged effect in the short run, while the negative oil price shocks have a significant negative lagged effect in the short run, confirming asymmetric responses of the BIST 100 market. The findings confirm that the Turkish stock market responds asymmetrically to OPEC oil price shocks in both the long and short run. According to the research results, implementation of non-linear methods for such econometric relationships is required.

Keywords: OPEC oil price shocks, BIST 100 Index, Turkish Stock Market, NARDL Model, asymmetric effects.
JEL Codes: C22, G14, Q43

MONETARY POLICY RESPONSES TO ENERGY PRICE SHOCKS: A LITERATURE REVIEW

Serpil Kuzucu, Beykent University

Energy price shocks, particularly sharp rises in oil prices, have significant impacts on macroeconomic stability. Energy shocks have potential to increase production costs and inflation, lower real income and cause economic downturn. Although economies are increasing investment in renewable energy sources like solar, wind, or hydroelectric power, economic activity is still largely dependent on the use of oil as an input in production. Furthermore, oil market is a noncompetitive market, making it highly sensitive to price fluctuations. The aim of the study is to systematically evaluate academic literature examining the monetary policy response to energy shocks and present the key findings. A literature review is conducted to examine the monetary policy effects of energy price shocks. Energy shocks are mostly seen as supply side shocks. Price shocks cause simultaneous increase in inflation and a contraction in output and economic activity. Empirical studies argue that the macroeconomic effects of energy shocks arise not only from the price shocks but also from the monetary policy response. Raising interest rate to manage the pass-through effect of energy prices on inflation can deepen the economic contraction. Another prominent debate in the literature is whether central banks should respond to increases in energy prices by focusing core inflation or headline inflation. Most of the research suggests focusing on core inflation instead of headline inflation. Central banks face a trade-off between price stability and output stability. A look through approach may be more appropriate for temporary energy shocks, but tighter monetary policies may be necessary for the persistent shocks in order to prevent stagflation risk.

Keywords: Energy shocks, monetary policies, core inflation
JEL Codes: E32, E52, E58

WHEN AUTHENTICITY SIGNALING BACKFIRES: AN INVERTED RELATIONSHIP

Sara Khwaira, Istinye University
Alpaslan Kelleci, Istinye University

This conceptual study develops a new framework for consumer behaviour by examining the unintended negative consequences of excessive authenticity signalling by digital creators, such as influencers. While prior research has largely emphasised the positive role of digital creators, including influencers and micro-celebrities, in building trust, credibility, and purchase intentions, this study explores whether repetitive and exaggerated authenticity claims may elicit adverse consumer responses. This study adopts a conceptual approach and develops a research framework grounded in Trust-Commitment Theory and Signalling Theory. Drawing on these perspectives, the framework specifies the proposed relationships among authenticity signalling, authenticity fatigue, and consumer scepticism, and how these may erode trust through a series of theoretical propositions explaining how repeated signalling practices affect consumers' opinions over time. In addition, the study proposes a multidimensional conceptualisation of authenticity fatigue within signalling theory. Grounded in Signalling Theory, which posits that greater signalling quantity can result in more favourable perceived outcomes, the proposed framework suggests that excessive authenticity signalling may paradoxically increase consumer scepticism and erode trust over time. Repeated exposure to authenticity-based persuasive messaging is also expected to generate authenticity fatigue, thereby weakening the persuasive value of authenticity cues, which may decrease online engagement, reduce the effectiveness of user-generated marketing, and potentially encourage negative electronic word of mouth. Collectively, these relationships indicate that authenticity may backfire when strategically overused in digital environments. This study contributes to the influencer marketing and consumer psychology literature by reframing authenticity as a persuasive signal whose value and effectiveness are not unlimited; excessive exposure may erode its persuasive power and lead to fatigue. The study identifies several key relationships, including the potential for excessive authenticity signaling to increase consumer skepticism, thereby weakening trust in brand-endorsed claims. Additionally, repeated exposure to authenticity-based persuasive cues may lead to authenticity fatigue, thereby reducing the persuasive effectiveness of authenticity appeals. These relationships suggest that authenticity does not function as an unlimited persuasive resource, as its effectiveness may decline when used repeatedly or strategically. Finally, the study provides a foundation for future empirical research examining the boundary conditions under which authenticity strengthens persuasion or backfires.

Keywords: Consumer scepticism, authenticity fatigue, authenticity signalling, consumer trust, commitment-trust theory
JEL Codes: M31, M37, D91

INSTITUTIONALIZING SOCIAL ENTREPRENEURSHIP IN TURKIYE: A COMPARATIVE PERSPECTIVE THROUGH THE COMMUNITY INTEREST COMPANY MODEL IN THE UNITED KINGDOM

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Dilek Teker, Isik University

This study examines the institutionalization of Türkiye's social entrepreneurship ecosystem through a comparative analysis with the Community Interest Company (CIC) model in the United Kingdom. It evaluates how social enterprises in Türkiye are positioned in relation to legal status, access to finance, public policy support, and gender dimensions, identifying key lessons that can be drawn from the institutional framework provided by the CIC model. Furthermore, drawing on a doctoral dissertation that investigates women social entrepreneurs' access to external finance from a gender perspective, the research seeks to contribute to the social entrepreneurship literature through both institutional and gender-oriented lenses. Across Europe, social enterprise ecosystems are shaped by different legal definitions, support mechanisms and investment conditions. The UK's CIC model, with its legally protected social mission, asset lock and limited profit distribution, offers a clearly defined and recognized form, whereas the absence of a separate and transparent legal framework for social enterprises in Türkiye constrains the institutional development of the field. This situation weakens both the visibility of social enterprises and their access to sustainable financing mechanisms. The study adopts a mixed-method comparative design and draws on European Commission reports, country ecosystem analyses, secondary data and relevant academic literature. The findings suggest that educational and capacity-building initiatives on social entrepreneurship in Türkiye have grown in recent years; however, legal ambiguity, a narrow social impact investment market and fragmented policy responsibilities continue to slow the consolidation of the ecosystem. Although women social entrepreneurs have become more visible, structural barriers to finance and gendered inequalities remain in place. Overall, the study argues that the sustainable development of the social entrepreneurship ecosystem in Türkiye requires a clearer legal definition, more diverse sources of finance, stronger national policy coordination and expanded regional support. By doing so, it aims to inform policy debates on the institutionalization of social entrepreneurship in Türkiye and offer a comparative, gender-aware contribution to the international literature on social entrepreneurship ecosystems.

Keywords: Social entrepreneurship, community interest company, comparative analysis, gender and finance, Turkiye.
JEL Codes: L31, G23, J16

SUPERVISORY GENDER CONSTRUCTIVIST BELIEFS, FWA CONSISTENCY AND LEADERSHIP ASPIRATION: EVIDENCE FROM TURKIYE

Sunduz Yilmaz, Istanbul Technical University
Fatma Kusku, Istanbul Technical University

Although organizational efforts to promote gender equality have intensified over recent decades, women continue to be underrepresented in leadership positions globally. This study investigates how supervisors gender constructivist beliefs affect employee's leadership aspirations, and whether this relationship is channeled through the consistency with which flexible work arrangements (FWAs) are enacted. Drawing on Role Congruity Theory (Eagly & Karau, 2002) and HRM System Strength Theory (Bowen & Ostroff, 2004), a partial mediation model is developed and tested. Survey data were gathered from 463 full-time private-sector employees in Turkiye. Covariance-based Structural Equation Modeling (CB-SEM) was employed using the lavaan package in R, with MAR data handled through MICE across five imputed datasets. All hypothesized relationships were supported. Supervisory constructivist beliefs were positively associated with FWA implementation consistency (B=.279, p<.05) and leadership aspirations (B=.233, p<.05). FWA consistency significantly predicted stronger leadership aspirations (B=.207, p<.01). The indirect effect was statistically significant (B=.058, p<.05), confirming partial mediation. Model fit was acceptable across all imputed datasets (CFI: .939-.958; RMSEA: .060-.073). This study advances scholarly understanding by positioning supervisors gender constructivist beliefs as a previously underexamined antecedent of perceived HRM system consistency and employee career motivation. The findings demonstrate that it is not merely the formal availability of flexible work policies but the equity and predictability of their supervisory enactment that constitutes a meaningful signal for leadership aspiration. Practical implications center on targeting supervisory gender beliefs as a lever for strengthening HR system strength and organizational leadership pipelines.

Keywords: Gender constructivism, leadership aspiration, flexible work arrangements, HRM system strength, Role Congruity Theory, Turkiye.
JEL Codes: M12, J16, J81

INTERNATIONALIZATION STRATEGIES OF DIGITAL UNIVERSITIES: A STRATEGIC FRAMEWORK FOR UNIVERSITY 5.0

Ali Eskinat, Netkent University
Suat Teker, Isik University

Higher education is experiencing a structural transformation driven by rapid digitalisation, shifting macroeconomic conditions, and the growing expectations of technologically fluent student generations. This paper argues that digital universities operating within the emerging University 5.0 paradigm require a fundamentally different strategic vocabulary for internationalisation: one that accounts for borderless enrolment, regulatory complexity across jurisdictions, artificial intelligence-powered pedagogies, and the simultaneous democratisation of knowledge across global geographies. To address this gap, the study introduces the Digital University Internationalisation Matrix (DUIM), a novel two-dimensional diagnostic tool that positions institutions along two axes: digital maturity (encompassing cloud architecture, AI capability, and platform integration) and market penetration scope (spanning domestic-centrality to transnational decentralisation). Intersecting these dimensions produces four strategic stages — Digital Proximity, Borderless Infusion, Cross-Border Ecosystems, and Sovereign Decentralisation — each carrying distinct technological requirements, strategic foci, and operational bottlenecks. Traditional internationalisation frameworks, including the Uppsala process model and resource-based theoretical perspectives, were constructed around the logic of physical presence, sequential market entry, and asset-intensive expansion — parameters that hold diminishing relevance for cloud-native, platform-driven educational institutions. The conceptual model draws on strategic management theory, digital transformation literature, and the evolutionary trajectories of leading online higher education institutions. Findings indicate that successful digital internationalisation is non-linear, that technological readiness must be matched by regulatory adaptation capacity, and that strategic agility supplants the brick-and-mortar asset accumulation logic of earlier internationalisation eras. The paper concludes that University 5.0 will primarily serve Generation Z, Alpha, and Beta learners as a translocal, transtemporal global market — rendering conventional internationalisation models structurally insufficient by the 2030s.

Keywords: Digital university, internationalisation of higher education, University 5.0, strategic framework, digital maturity
JEL Codes: I23, F23, O33

ECONOMIC POLICY UNCERTAINTY, UNEXPECTED INFLATION DEVELOPMENTS, AND RISK-ON CONDITIONS IN THE TURKISH EQUITY MARKET: EVIDENCE FROM A NARDL APPROACH

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The purpose of this study is to investigate the dynamic relationship between economic country-specific uncertainty, model-based inflation surprises, and equity-market risk-on conditions in Türkiye. The study specifically examines whether positive and negative changes in uncertainty and inflation innovations exert asymmetric effects on Turkish equity-market dynamics. In contrast to studies that directly interpret stock market returns as a behavioral measure of investor psychology, this article conceptualizes broad Turkish share-price growth as a market-implied risk-on proxy reflecting aggregate portfolio allocation behavior under conditions of macroeconomic uncertainty and high inflation. The Turkish economy provides an important empirical setting due to the coexistence of persistent inflationary pressures, exchange-rate volatility, monetary-policy revisions, and elevated uncertainty during the post-2013 period. The study employs a nonlinear autoregressive distributed lag (NARDL) framework using monthly data covering the period from 2013M03 to 2024M12. The dependent

variable is the monthly growth rate of broad Turkish share prices obtained from OECD/FRED databases. Economic uncertainty is represented by the Türkiye Economic Country-Specific Uncertainty (ECSU) index, while inflation surprises are constructed from the residuals of an autoregressive AR(1) inflation process based on monthly CPI inflation. Positive and negative movements in uncertainty and inflation surprises are decomposed into partial sums in order to test potential short-run and long-run asymmetries. The empirical specification incorporates unit-root screening procedures, bounds-testing logic for cointegration, Wald symmetry tests, and heteroskedasticity and autocorrelation consistent (HAC) standard errors to ensure econometric robustness. The empirical findings reveal a strong and statistically significant error-correction mechanism, indicating that approximately 74.4% of short-run disequilibrium is corrected within one month. The joint significance test of lagged level variables strongly supports the existence of a stable long-run relationship among uncertainty, inflation surprises, and equity-market risk-on conditions ($F = 21.920$, $p < 0.001$). The estimated long-run coefficients of uncertainty components are negative, suggesting that higher economic uncertainty weakens market-implied risk-on behavior. In the short run, however, positive inflation surprises exert a statistically significant positive effect on Turkish equity-market risk-on conditions. This finding implies that investors may shift toward equities as a defensive portfolio response when inflation unexpectedly accelerates and nominal assets lose real value. Nevertheless, Wald symmetry tests fail to reject both long-run and short-run symmetry hypotheses, indicating that positive and negative shocks do not generate statistically different effects within the sample period. Based upon the empirical analysis, it may be concluded that economic uncertainty and inflation surprises are dynamically associated with Turkish equity-market risk-on conditions in a high-inflation emerging-market environment. The study contributes to the macro-finance literature by integrating model-based inflation innovations into a country-specific uncertainty framework and by carefully distinguishing market-implied risk-on behavior from direct psychological measures of investor risk appetite. Although the NARDL framework provides valuable insights into adjustment dynamics and equilibrium relationships, the evidence does not support statistically significant asymmetry. The findings therefore emphasize the importance of rapid market adjustment mechanisms and inflation-related portfolio substitution effects rather than nonlinear asymmetrical responses.
Keywords: Economic policy uncertainty, inflation surprises, equity markets, risk-on conditions, NARDL
JEL Codes: C22, E31, G15

INSURANCE IN INTERNATIONAL TRADE AND MANAGEMENT OF GLOBAL SUPPLY CHAIN RISKS THROUGH INTEGRATED MODELS

Cigdem Kelepce, Halic University

Purpose- This study aims to examine how risks arising in international trade and global supply chain processes are evaluated from an insurance perspective and to reveal sector stakeholders' views on the risk coverage capacity of existing insurance practices. The scope focuses on traditional coverage structures, protection gaps, digital traceability, and trends toward integrated insurance models. The research questions seek to identify the risk areas in which stakeholder groups exhibit common tendencies and the items on which their assessments diverge. Thus, the relationship between insurance product design and supply chain management is examined on an empirical basis. The study employed a quantitative, cross-sectional, descriptive-comparative research design. The study group comprised 303 participants working in insurance companies, logistics and transportation firms, export and foreign trade enterprises, and insurance brokerage or intermediary services. Data were collected using an institutional and professional information form and a 16-item, five-point Likert-type questionnaire. The analyses included descriptive statistics, Cronbach's alpha, McDonald's omega, the Kruskal–Wallis test, Dunn's test with Bonferroni correction, and epsilon-squared effect-size calculations. The instrument's proposed subdimension structure was also tested, and its internal consistency was used as the primary basis for determining the analytical strategy. The findings were reported with due methodological caution. Item means ranged from 2.78 to 4.60. High levels of agreement were particularly evident for Items M6, M10, M11, M15, and M16. As the internal consistency coefficients of the proposed subdimensions did not reach acceptable levels, the analyses were conducted at the item level. Significant differences by field of activity were found for Items M3, M4, M6, M9, and M10; by organizational position for Items M6, M12, and M15; by length of experience in the sector for Items M3, M4, M6, M8, M10, M13, M15, and M16; and by the organization's level of international activity for Items M5, M6, M11, and M12.

The findings indicate that traditional insurance practices remain limited in covering the financial and operational impacts of global supply chain risks. Data-driven monitoring, parametric payout mechanisms, contingent business interruption coverage, and alternative risk-transfer instruments emerge as key areas that could contribute to establishing a more integrated risk-management architecture in international
Keywords: Uluslararası ticaret, küresel tedarik zinciri, risk yönetimi, bütünleşik sigorta modelleri, parametrik sigorta
JEL Codes: F10, G22, M11

THE TRANSFORMATION OF PUBLIC RELATIONS IN THE AGE OF ARTIFICIAL INTELLIGENCE: A CONCEPTUAL EVALUATION FROM THE PERSPECTIVE OF STRATEGIC COMMUNICATION AND CORPORATE REPUTATION

Veysel Karani Sukuroglu, Kastamonu University

Developments in digital technologies have led to significant changes in the communication processes that organizations establish with their target audiences. In particular, the widespread adoption of artificial intelligence (AI)-based applications has created new opportunities and risks in the planning, implementation, and evaluation of public relations activities. The aim of this study is to conceptually evaluate the impact public relations, artificial intelligence, and corporate reputation. Relevant theoretical approaches were comparatively examined, and an integrated conceptual framework was developed to explain AI-supported public relations practices. The literature review reveals that artificial intelligence applications have significantly transformed public relations processes in areas such as data analysis, content creation, crisis communication, media monitoring, and stakeholder engagement. However, issues including algorithmic bias, ethical concerns, reliability, and transparency have emerged as new risk domains for corporate reputation. Furthermore, the findings suggest that the use of AI does not eliminate the strategic role of public relations professionals; rather, it transforms their responsibilities and serves as a supportive element in decision-making processes. Artificial intelligence technologies are emerging in the field of public relations not only as technical tools but also as strategic factors that reshape organization–stakeholder relationships. The study provides a theoretical framework for understanding the effects of AI-supported public relations practices on corporate reputation management and offers a conceptual foundation for future empirical research.

Keywords: Public relations, artificial ıntelligence, strategic communication, corporate reputation, digital public relations
JEL Codes: M31, M37, O33

SUPPLY CHAIN FINANCE AND CORPORATE LIQUIDTY OPTIMIZATION IN DIGITAL BANKING

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Suat Teker, Isik University

Global supply chain disruptions, rising capital costs, and collection uncertainties in recent years have forced businesses to rethink their financing strategies and working capital management. This study examines the strategic impacts of Supply Chain Finance (SCF) practices on corporate liquidity management from a banking perspective. SCF differs from traditional credit processes as a structure established between the buyer, supplier, and bank, centering on transaction data. This model allows the supplier to convert their invoice, approved by the buyer, into cash before the maturity date, while enabling the buyer to maintain their commercial payment terms. While suppliers face high collateral burdens and high costs in the 55-65% range in traditional financing methods, financing costs can be reduced to 35-45% annually in the SCF model by utilizing the buyer firm's creditworthiness. From a banking perspective, risk management is evolving from a "balance sheet-oriented" structure to a "transaction and data-oriented" more transparent structure. In the study, a case analysis conducted on an automotive sub-industry firm (Company A) with 450 suppliers revealed the concrete impact of SCF on liquidity indicators. As a result of the application, it was observed that the buyer firm's Cash Conversion Cycle (CCC) decreased from 29 days to 10 days, and the suppliers' time to access cash decreased from 90 days to 5-7 days. The buyer firm gained 12 days of flexibility in cash management by increasing its Days Payable Outstanding (DPO) from 78 days to 90 days, which strengthened its free cash flow. Additionally, an 18% reduction in supplier-related delays was observed after the implementation of the SCF program. In conclusion, SCF is not only a financing tool but also a strategic solution set that increases supply chain resilience and strengthens corporate liquidity planning.

Keywords: Supply chain financing, liquidity management, working capital management, cash coversion cycle, trade Finance.
JEL Codes: G21, G32, M21

A CONCEPTUAL EVALUATION FROM THE PERSPECTIVES OF MICRO-LUXURY CONSUMPTION AND CONSPICUOUS CONSUMPTION

Enes Yuce, Kastamonu University

Consumption has evolved beyond being merely an economic activity aimed at satisfying needs and has become an important means of expressing social status, constructing identity, and producing symbolic meaning. The widespread adoption of digital technologies and social media has enabled individuals to pursue visibility and status through their consumption behaviors. In this context, the phenomenon of **micro-luxury consumption**, which refers to the preference for relatively accessible products and services with high symbolic value as opposed to traditional luxury consumption, has attracted increasing attention. The purpose of this study is to examine the concept of micro-luxury consumption from the perspective of conspicuous consumption and to explore its theoretical foundations. This study is conceptual in nature and is based on a comprehensive review of the literature on conspicuous consumption, status consumption, symbolic consumption, self-presentation, and consumer behavior. Relevant theoretical approaches were comparatively evaluated, and a conceptual framework was developed to explain the emergence of micro-luxury consumption behavior. The literature review indicates that micro-luxury consumption cannot be explained solely by income levels. Rather, it is closely associated with individuals' needs for social visibility, status attainment, belongingness, and self-expression. With the increasing prevalence of social media platforms, individuals from low- and middle-income groups appear to use relatively accessible products with high symbolic value to make their social status more visible. This suggests that micro-luxury consumption can be considered a contemporary and more accessible manifestation of conspicuous consumption. Micro-luxury consumption has emerged as one of the rising concepts of modern consumer culture and provides important insights into the relationship between individuals' economic realities and their social status expectations. The findings suggest that micro-luxury consumption represents a contemporary reflection of conspicuous consumption theory and opens new avenues for understanding consumer behavior. Furthermore, the proposed conceptual framework is expected to provide a theoretical foundation for future empirical studies.

Keywords: Micro-luxury consumption, conspicuous consumption, status consumption, symbolic consumption, consumer behavior

PSYCHOLOGICAL SAFETY EXPERIENCES OF HR LEADERS IN THE BURSA AUTOMOTIVE CLUSTER: A QUALITATIVE INQUIRY ON MOBBING, EXCLUSION AND PARTICIPATION

Ayhan Yazar, Bursa Uludag University

While psychological safety is widely recognized as a foundational driver of team learning, open voice, and sustainable organizational performance, its distinct operational realities within high-pressure, manufacturing-intensive corporate sectors remain underdeveloped in qualitative literature. This study explicitly aims to investigate how interpersonal risk-taking, safe communication, and systemic workplace trust are dynamically experienced, constructed, and negotiated by human resource leaders operating within the complex automotive manufacturing ecosystem of Bursa, which represents a premier, historically grounded industrial production cluster in Türkiye. Adopting a rigorous qualitative, interpretive, and descriptive inquiry paradigm, this empirical research extensively explores the lived experiences of corporate gatekeepers across various organizational seniority levels, managerial roles, and corporate structures within the regional automotive supply chain. Textual data systematically gathered through semi-structured, in-depth interviews were subjected to a comprehensive thematic analysis framework. This methodological approach explicitly prioritizes rich, contextualized descriptions over statistical generalizations, thereby capturing the delicate socio-structural nuances and workplace realities of a high-stakes manufacturing environment. The analyzed narratives convincingly demonstrate that psychological safety is not merely an individual communicative disposition but a structurally conditioned phenomenon heavily constrained by autocratic governance, traditional family-business politics, and institutional power dynamics. HR leaders frequently navigate a persistent structural paradox, continuously oscillating between expectations of strategic partnership and enforced administrative compliance, which directly induces strategic self-censorship. Furthermore, punitive error management framing triggers defensive individual adaptations and administrative blame-shifting, whereas learning-oriented corporate climates foster genuine accountability. While intra-team solidarity serves as an informal socio-emotional buffer against external corporate pressures, this structural protection remains highly vulnerable to political manipulation, internal rivalry, and horizontal toxicity. Crucially, systematic marginalization, organizational bypassing, and information withholding persist across all managerial echelons, indicating that professional seniority provides an insufficient shield against institutional exclusion. The study demonstrates that cultivating psychological safety for strategic facilitators requires comprehensive systemic interventions that transcend individual-level interactions. Organizations in industrial ecosystems must actively dismantle punitive feedback loops, formalize explicit safeguards against organizational bypassing, and structurally institutionalize participative leadership practices to fully preserve managerial autonomy, workplace trust, and professional legitimacy.

Keywords: Psychological safety, Bursa automotive cluster, HR leadership, workplace exclusion, error management culture
JEL Codes: M12, M54, L62

CONSUMER TRUST DURING BRAND CRISES: INFLUENCER VS BRAND SPOKESPERSON

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Burçin Kaplan, Istanbul Aydin University

This research aims to investigate the sourcing of the message and the responsibility for the brand crisis affect the consumer trust in the brand in brand crisis scenarios. The study examines the impact of the different message sources (brand spokesperson vs. influencer) and different levels of crisis responsibility (low vs. high) on consumer perceptions of brand trust, brand attitude, purchase intention, and source credibility. The research design used was experimental with a quantitative approach. 115 participants were recruited and split into a 2 × 2 between subject factorial design. The sample size was determined using G*Power analysis to ensure adequate statistical power. The message sourcing (brand spokesperson versus influencer) and the crisis responsibility (low versus high) factors were manipulated in the experiment across four fictional skincare brand crisis scenarios. Following exposure to the scenarios participants filled out a structured questionnaire that assessed brand trust, brand attitude, purchase intention, and source credibility. Data analysis was analyzed using SPSS through reliability and statistical analyses, including two-way ANOVA. The results showed a high internal consistency for all the constructs measured such as brand trust (α = .918), brand attitude (α = .928), purchase intention (α = .920) and source credibility (α = .937). There was a statistically significant effect on all of the dependent measures of crisis responsibility (all $p < .001$), with the low responsibility condition having higher means than the high responsibility condition. When looking at the source of the message, there was a significant effect on brand attitude ($p = .010$) and purchase intention ($p = .027$), however there was no significant effect on brand trust ($p = .092$). Furthermore, no significant interaction effects were found between message source and crisis responsibility. From the analysis, it can be concluded that during a crisis, more than the source of the message, the responsibility of the crisis is more influential in shaping the consumer's trust and related perceptions of the brand. While message source has some influence on attitude and purchase intention, its impact on trust is limited. The results indicate that the perception of responsibility in times of crisis must be taken care of to maintain consumer trust and brand evaluation as the main focus of effective communication strategies.

Keywords: Brand crisis, consumer trust, influencer marketing, brand spokesperson, crisis communication.
JEL Codes: M31, M37, D12

THE MEDIATING ROLE OF ORGANIZATIONAL JUSTICE IN THE EFFECT OF PSYCHOLOGICAL CONTRACT BREACH ON QUIET QUITTING: A RESEARCH IN THE FINANCE SECTOR

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Beynaz Uysal, Istanbul Okan University

Transformations in contemporary working life have reshaped the mutual expectations between employees and organizations. When employees perceive that organizations fail to fulfil their promises and obligations, negative attitudes and behaviors may emerge, leading them to reduce their work effort and organizational contributions. This phenomenon, referred to as quiet quitting, has become an important topic in organizational behavior research. In this context, the present study aims to examine the effect of psychological contract breach on quiet quitting behavior and to investigate the mediating role of organizational justice in this relationship. Data for this quantitative study were collected through a survey method. The research data were obtained from individuals actively employed in the finance sector using a convenience sampling technique. The questionnaire included the Psychological Contract Breach Scale, Organizational Justice Scale, and Quiet Quitting Scale. The sample of the study consisted of 628 white-collar employees working in organizations operating in the finance sector. The collected data were analyzed using SPSS 25.0. Reliability, correlation, regression, and mediation analyses were conducted within the scope of the study. To examine the mediating role of organizational justice in the relationship between psychological contract breach and quiet quitting, Hayes' PROCESS Macro was employed, and the mediation effect was tested using the bootstrap method. The findings revealed that psychological contract breach positively affects quiet quitting behavior while negatively affecting employees' perceptions of organizational justice. Furthermore, organizational justice was found to have a negative effect on quiet quitting behavior. The results also demonstrated that organizational justice plays a mediating role in the relationship between psychological contract breach and quiet quitting. These findings suggest that employees who perceive a psychological contract breach are more likely to engage in quiet quitting behaviors, particularly when their perceptions of organizational justice are weakened. The results highlight the importance of fulfilling organizational promises and maintaining fair organizational practices in reducing quiet quitting behavior. Strengthening organizational justice perceptions through transparent communication, equitable policies, and effective management practices may help organizations prevent employees from disengaging from their work. The study contributes to the emerging literature on quiet quitting by providing empirical evidence on the roles of psychological contract breach. In addition, the findings offer practical implications for managers and human resource professionals seeking to foster employee engagement and reduce withdrawal behaviors in the workplace.

Keywords: Psychological contract breach, quiet quitting, organizational justice, employee behavior, finance sector
JEL Codes: D23, J28, M54, G20

EMERGING FACTORS AFFECTING MARKETING: CONTEMPORARY TRENDS AND CHALLENGES

Diwakar Singh, Jerome Cheese Company, USA

The marketing landscape is experiencing significant transformation due to rapid technological innovation, evolving consumer expectations, globalization, sustainability concerns, and increasingly complex regulatory environments. Organizations are compelled to continuously adapt their marketing strategies to maintain competitiveness and strengthen customer relationships in an increasingly dynamic marketplace. This study explores the emerging factors affecting marketing and analyzes contemporary trends and challenges that influence strategic decision-making and business performance. Drawing upon recent literature published, the study synthesizes insights related to digital transformation, consumer behavior, sustainability, and data governance through a comprehensive approach. The study identifies five major categories of emerging factors that are reshaping modern marketing practices. These include technological advancements, including artificial intelligence (AI), big data analytics, machine learning, automation, chatbots, and omnichannel digital marketing, which are transforming organizations to engage with customers and make strategic decisions. Social media platforms and influencer marketing have significantly enhanced customer engagement, user-generated content, brand awareness, and consumer loyalty, while evolving consumer preferences increasingly emphasize personalization, convenience, value, ethical consumption, and sustainability. Additionally, the rapid growth of e-commerce and digital platforms, supported by online marketplaces, digital payment systems, and advanced logistics networks, has reshaped the customer journey, while concerns regarding data privacy, cybersecurity, and consumer trust continue to present significant challenges for marketers. To evaluate these factors systematically, a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was conducted based on the identified emerging trends. The SWOT framework enabled a structured assessment of the opportunities created by technological innovation and digital connectivity, while also highlighting challenges related to ethical concerns, privacy risks, regulatory compliance, and market competition. The findings indicate that emerging technologies offer substantial opportunities for enhanced customer engagement, operational efficiency, and competitive advantage. However, organizations must address issues related to transparency, trust, sustainability, and responsible data usage to achieve long-term success. The study emphasizes the importance of balancing technological innovation with customer-centric and ethical marketing practices. It concludes that future marketing effectiveness will depend on strategic flexibility, digital capabilities, sustainability integration, and the ability to respond proactively to changing consumer and market conditions. The study contributes to the understanding of contemporary marketing dynamics and provides practical insights for academics, marketers, and policymakers.

Keywords: Emerging marketing trends, digital transformation, artificial ıntelligence (AI), social media marketing, e-commerce
JEL Codes: M31, M15, O33

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A DESCRIPTIVE QUANTITATIVE ANALYSIS OF COMMERCIAL SPACE AND THE SPACE ECONOMY

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The reason of conducting this study is to provide an overview of the quantitative aspects of research on the rising space economy and commercial space exploration in recent years. With the 77th International Space Congress to be held for the first time in Türkiye, in Antalya, in October 2026, the study is targeting to monitor the current numerical status of academic works in this field. This study uses a descriptive quantitative research approach and descriptive analysis for its aim. The numerical results were obtained as of June 7, 2026, from the most commonly used academic databases such as Web of Science and Scopus, and from academic search engines such as Dergipark and Google Scholar, using relevant keywords. The fact that the number of Turkish studies obtained from Google Scholar using the relevant keywords is close to the number of papers submitted from Türkiye to the 77th International Space Congress held in Antalya (with the accepted number being about one-third) is a significant finding indicating that studies on space economy and commercial space, particularly in Türkiye, are at an insufficient level. Indeed, the figures received from Dergipark strongly support this. In foreign publications, the similar levels of Scopus, WoS, and Google Scholar figures suggest that the studies received from all these indexes and search engines may be overlapping studies, and again, despite the importance of the subject, the number of studies on a global scale is low. As expected, searches on the most widely used academic search engines and index databases using keywords related to space economy and commercial space did not yield many results, particularly for Turkish studies. The fact that the number of Turkish studies was close to the total number of papers submitted from Türkiye to and accepted at the 77th International Space Congress is seen as both a deficiency and an opportunity for the development of this subject in Türkiye (International Astronautical Federation, n.d.). Although engineering, astrophysics, astronomy, and aviation come to mind first when space is mentioned, the subject is now of greater importance in terms of business, finance, accounting, and economics. With the interest and entry of the private sector into this field, an era has begun in the social sciences where many books need to be rewritten, and theories and rules need to be reviewed. The simplest example is that concepts such as specific gravity and interest rate will call into question all financial and economic theories with relativity. In JEL codes, it is necessary to create codes and sub-codes for space economics and astroeconomics. In Türkiye, The Council of Higher Education (YÖK) should facilitate the opening of new departments in this field, just as it has done in artificial intelligence. Therefore, Astroeconomics and Space Economy (Space Economics), primarily in finance and economics, will become a new major discipline in the social sciences.

Keywords: Space economy, commercial space, space accounting, new space, space industry, astroeconomics
JEL Codes: B59, O30, R42

MACROECONOMIC DRIVERS OF THE BIST SUSTAINABILITY INDEX: EVIDENCE FROM ARDL MODEL

Suat Teker, Isik University
Dilek Teker, Isik University
Beyda Demirci, Isik University

In recent years, sustainability-oriented equity markets have attracted growing attention from investors, policymakers, and corporations as environmental, social, and governance (ESG) considerations have become increasingly integrated into investment decisions. At the same time, economic uncertainty, geopolitical risks, inflationary pressures, and exchange rate volatility have raised concerns about how macroeconomic conditions influence the performance of sustainable equity markets. This study, as evidence from Turkish markets, examines the short-run relationships between the BIST Sustainability Index, the USD/TRY exchange rate, gold prices, Brent crude oil prices, and the Consumer Price Index (CPI). The dataset includes monthly data covering the period from December 2014 to September 2025. The empirical analysis employs an Autoregressive Distributed Lag (ARDL) model estimated with logarithmic difference series to capture short-run dynamics. The research also considers potential regime shifts. Therefore to identify structural breaks, Bai–Perron multiple structural break tests are used and integrated into the model. The findings indicate that an increase in the USD/TRY exchange rate has a statistically significant negative effect on the BIST Sustainability Index. On the other hand, oil prices have a positive short run effect. Gold prices affect the index negatively with a two-period lag, while inflation exhibits a positive short-run relationship. Furthermore, the structural break associated with the post-2021 macroeconomic environment has a delayed negative impact on the index. Overall, the results demonstrate that macro-financial variables significantly influence the short-run performance of the BIST Sustainability Index.

Keywords: Sustainable investment, BIST Sustainability Index, ARDL Model, structural break
JEL Codes: C22, E31, G15

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MEDIATING ROLE OF STRATEGIC AGILITY ON THE RELATIONSHIP OF HRM STRATEGIES AND SUSTAINABLE COMPETITIVE ADVANTAGE OF MANUFACTURING COMPANIES IN SELECTED MUNICIPALITIES OF BATANGAS PROVINCE

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ABSTRACT

Purpose- Strategic agility helps food manufacturers detect market, regulatory, and competitive changes, decide quickly, and reconfigure resources. In the Philippines, it is vital due to demand volatility, supply chain risks, and shifting consumer preferences. Firms with strong HRM strategies and high agility can convert national advantages into sustainable competitive advantage. However, studies on internal capabilities driving this advantage remain scarce, especially on how HRM strategies affect competitiveness through strategic agility in food manufacturing. This study fills that gap by examining strategic agility's mediating role between HRM strategies and sustainable competitive advantage among Batangas food manufacturers.

Methodology- A quantitative explanatory design with mediation analysis was used to examine strategic agility's indirect effect between HRM strategies and sustainable competitive advantage. A survey assessed strategic agility's mediating role, with data analyzed using Jamovi. Respondents included 189 owners, HR managers, or supervisors from 371 registered food manufacturing firms in Calaca, Tanauan, Batangas City, Lipa, and Sto. Tomas, based on Business Permit and Licensing Office records. The design tested how HRM strategies influence competitiveness directly and indirectly through strategic agility among Batangas food manufacturers.

Findings- Most firms were micro- and small-scale sole proprietorships with centralized decisions and limited formal HR systems, constraining HRM practices and strategic agility. Sustainable competitive advantage was high in efficiency and quality, but customer responsiveness relied on relationships, not data, while innovation was weakest due to low tech and R&D investment. HRM strategies were slightly high to effective, with training and development strongest; recruitment, appraisal, compensation, career planning, and work-life quality were limited by finances and structure. Strategic agility was moderate: strong market awareness but weak decision-making and execution. Competitiveness differed by form, size, and age, favoring larger, older firms. HRM influenced competitiveness directly and indirectly through strategic agility, which partially mediated the link. An enhanced HR program was proposed to formalize policies, strengthen training, build agile leadership, and foster partnerships.

Conclusion- The study concludes that Batangas food manufacturers are mostly micro- and small-scale firms with centralized, informal structures that shape HR practices and limit strategic agility. Their advantage comes from efficiency and quality, but low innovation threatens long-term competitiveness due to limited tech investment. HR strategies are vital, yet informal recruitment, inconsistent appraisal, poor compensation, and limited career growth reduce effectiveness. Firms show moderate strategic agility via market awareness but struggle with fast decisions and execution because of resource limits and centralization. HR strategies strengthen competitiveness directly and through strategic agility, which partially mediates the HRM-competitiveness link. Organizational maturity improves HR formality and advantage. Sustainable competitiveness requires integrating formal HR practices and strategic agility to build resilience and growth.

Keywords: Strategic agility, human resource strategies, sustainable competitive advantage, appraisal, reconfigure resources
JEL Codes: M19, M12, L25

1. INTRODUCTION

The food manufacturing industry is a cornerstone of the Philippine economy, playing a vital role in employment generation, food security, industrial growth, and export development. As the largest subsector within Philippine manufacturing, food manufacturing firms serve both domestic and international markets while operating in an increasingly competitive and dynamic business environment. Rising consumer expectations for quality and safety, stricter regulatory requirements, global competition, and frequent supply chain disruptions have intensified the need for firms to develop and sustain competitive advantage beyond short-term performance.

The Philippines possesses several inherent competitive advantages that support the growth of its food manufacturing sector. These include abundant and diverse agricultural resources, a relatively young and cost-competitive labor force, strong domestic demand driven by population growth, and a strategic geographic location that facilitates access to Asian and global markets. The country's expanding industrial zones, improving logistics infrastructure, and proximity to major seaports further enhance the operational efficiency and market reach of food manufacturing firms. Collectively, these factors provide Philippine food manufacturers with favorable conditions to compete in both local and export markets.

However, the presence of structural and location-based advantages does not automatically guarantee sustainable competitive advantage at the firm level. Many food manufacturing companies, particularly micro and small enterprises, continue to face persistent challenges such as fluctuating raw material prices, compliance with food safety standards, limited technological adoption, skills shortages, and intense price competition. These challenges expose firms to operational inefficiencies and limit their ability to consistently deliver superior value to customers. As a result, competitive advantage based solely on cost, location, or resource availability tends to be temporary and easily imitated by competitors.

To achieve sustainable competitive advantage, food manufacturing firms must rely on internal capabilities that are difficult to replicate and adaptable to environmental change. Human resources represent a critical source of such advantage, as employee skills, knowledge, and commitment directly influence product quality, operational efficiency, innovation, and customer responsiveness. Effective Human Resource Management (HRM) strategies enable firms to build these capabilities by developing a competent and motivated workforce. Nevertheless, in a rapidly changing business environment, HRM strategies must be supported by organizational agility to translate human capital into sustained competitive outcomes.

Strategic agility enables food manufacturing firms to sense shifts in market demand, regulatory requirements, and competitive pressures, make timely strategic decisions, and act by reconfiguring resources and processes. In the Philippine food manufacturing context, agility is particularly important given the sector's exposure to demand volatility, supply chain risks, and evolving consumer preferences. Firms that combine strong HRM strategies with high levels of strategic agility are better positioned to capitalize on the Philippines' inherent competitive advantages and transform them into long-term, sustainable competitive advantage.

Despite the strategic importance of the food manufacturing industry in the Philippines, empirical studies examining how internal capabilities support sustainable competitive advantage remain limited. Specifically, there is a lack of evidence explaining how HRM strategies contribute to competitive advantage through the mediating role of strategic agility in food manufacturing firms. Addressing this gap, the present study examines the mediating role of strategic agility in the relationship between HRM strategies and sustainable competitive advantage among food manufacturing companies in selected municipalities of Batangas Province.

2. LITERATURE REVIEW

Sustainable competitive advantage (SCA) has long been a central concept in strategic management. Earlier perspectives viewed SCA as a result of cost leadership, differentiation, or market positioning. However, contemporary literature emphasizes that SCA is dynamic and multifaceted, requiring organizations to continuously adapt to changing environments. Teece (2018) argued that firms achieve sustained advantage through dynamic capabilities, particularly the ability to sense opportunities, seize them effectively, and reconfigure resources in response to environmental changes. This view underscores that adaptability and learning are more critical than static resource possession.Empirical research on sustainable competitive advantage (SCA) consistently emphasizes that long-term competitiveness is achieved through the effective combination of innovation, organizational capabilities, and strategic resource utilization. Rather than relying on isolated operational strengths, contemporary studies argue that SCA emerges from a firm's ability to continuously renew its resources in response to environmental changes. It is well known that superior efficiency is one of the crucial sources of sustainable competitive advantage because it enables manufacturing companies to run their operations efficiently, to cut down on costs and to react adequately to the fluctuating market environment. Companies that are successful in attaining lean operations and proactive operational control are likely to perform optimally, particularly in very competitive markets (Handoyo, 2023)..

Human resource management (HRM) has evolved into a strategic function that directly contributes to organizational competitiveness. Contemporary literature emphasizes that HRM strategies shape employee behavior, skills, and motivation, which in turn influence organizational performance and adaptability. Malik et al. (2020) described HRM strategies as systematic practices designed to align human capital with organizational goals.Empirical research consistently shows that HRM strategies positively influence organizational performance. Malik et al. (2020) found tha t aligned HR systems enhance employee engagement, innovation, and productivity by ensuring that individual competencies and motivations support organizational objectives. Their findings suggest that when HR practices are strategically integrated, employees are more likely to exhibit discretionary behaviors that contribute to organizational success.Several studies further demonstrate that recruitment and selection practices play a critical role in shaping workforce quality and long-term performance. Nikolaou (2021) emphasized that technology-enabled recruitment improves job–person fit and broadens access to high-potential candidates. Similarly, Villeda and McCamey (2019) reported that structured recruitment and referral systems increase employee retention and cultural alignment, which are essential for sustaining performance in competitive environments. Recruitment and selection are foundational HRM functions that directly influence organizational effectiveness and long-term performance. Kanchipuram et al. (2022) emphasize that well-designed recruitment strategies enable organizations to identify and attract candidates whose competencies align with strategic objectives, thereby maximizing organizational benefits. Similarly, Azmy et al. (2018) highlight that effective recruitment begins with systematic manpower planning, including job design, job descriptions, and job specifications, which ensure clarity of roles and alignment with human resource requirements. From a global perspective, Banks et al. (2018) explain that organizations adapt recruitment practices across different cultural contexts to balance standardization and localization, demonstrating the importance of flexibility in HR systems. Sareen (2018) further underscores that integrating recruitment and selection with broader strategic HR practices—such as training, performance appraisal, and compensation—significantly enhances employee satisfaction and organizational performance. In addition, Arya and Shah (2019) demonstrate that targeted HRM strategies, including improved qualifications, incentives, and leadership development, effectively address workforce gaps and strengthen institutional outcomes. Collectively, these studies indicate that strategic and well-structured HRM practices contribute to organizational adaptability and the achievement of sustainable competitive advantage.

Strategic agility has emerged as a critical capability for organizations operating in volatile and uncertain environments. It refers to the ability of firms to sense environmental changes, make timely decisions, and act swiftly and effectively. Doz and Kosonen (2010) conceptualized strategic agility as a mechanism for strategic renewal, enabling organizations to adapt continuously.Felipe et al. (2016) provided foundational empirical evidence that strategic agility enhances firm performance by enabling organizations to transform environmental uncertainty into competitive advantage. Their findings suggest that agile firms are better positioned to realign resources, redesign processes, and pursue emerging opportunities ahead of competitors. This supports the view that agility serves as a bridge between strategic intent and operational execution.

3. DATA AND METHODOLOGY

The researcher used quantitative explanatory design with mediation analysis to examine strategic agility's indirect effect on HRM strategies and sustainable competitive advantage among Batangas food manufacturers. A survey was conducted to test the mediating role of strategic agility on the relationship between human resources strategies and sustainable competitive advantage. Data analysis and statistical tests were performed using Jamovi. The respondents were 189 owners, human resource managers, or supervisors of food manufacturing businesses in selected cities, specifically Calaca, Tanauan, Batangas City, Lipa, and Sto. Tomas. This sample was drawn from a total population of 371 registered food manufacturing businesses, based on the list provided by the Business Permit and Licensing Offices of these cities.

4. FINDINGS

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

Table 3. Profile of the Respondents

Form of Business	Frequency	Percentage
Sole Proprietorship	140	74.07
Partnership	16	8.47
Corporation	33	17.46
Total	189	100
Number of Employees	Frequency	Percentage
1-9 (micro)	142	75.13
10-49 (small)	47	24.87
Total	189	100
Number of years in business	Frequency	Percentage
less than 3 years (start up)	28	14.81
3-5 years (emerging)	67	35.45
6-10 years (growth stage)	71	37.57
11-20 years (established)	16	8.47
more than 20 years (mature)	7	3.70
Total	189	100

Table 17. Significant difference on the assessment of sustainable competitive advantage when grouped according to profile

Variables	Form of Business	Mean	Computed t-value	p-value	Decision on H₀	Interpretation
Sustainable Competitive Advantage	Sole Proprietorship	5.35	27.288	<.0001	Reject	Significant
	Partnership	5.95				
	Corporation	6.28				
Variables	**Number of Employees**	**Mean**	**Computed t-value**	**p-value**	**Decision on H₀**	**Interpretation**
Sustainable Competitive Advantage	1 - 9	5.35	-5.991	<.0001	Reject	Significant
	10 - 49	6.18				
Variables	**Number of years in business**	**Mean**	**Computed t-value**	**p-value**	**Decision on H₀**	**Interpretation**
Sustainable Competitive Advantage	less than 3 years (start up)	4.85	11.832	<.0001	Reject	Significant
	3-5 years (emerging)	5.33				
	6-10 years (growth stage)	5.99				
	11-20 years (established)	5.73				
	more than 10 years (mature)	6.25				

Table 18. Effects of Human Resource Strategy on Sustainable Competitive Advantage

	Path	B	Std. Error	z-value	p-value	Decision on H₀	Interpretation
Indirect	HRStrat → Strategic Agility → SCA	0.2798	0.0718	3.8971	<.001	Reject	Significantly Mediate
Component	HRStrat → Strategic Agility	0.8639	0.0254	33.9558	<.001	Reject	Significant Effect
	Strategic Agility → SCA	0.3218	0.0825	3.923	<.001	Reject	Significant Effect
Direct	HRStrat → SCA	0.6412	0.0789	4.4349	<.001	Reject	Significant Effect

1. The majority of the firms were sole proprietorships, classified as micro- and small-scale enterprises, operating for six to ten years with fewer than ten employees. Decision-making authority was highly centralized with owners, and formal HR systems were limited. This organizational profile influences both the extent of HRM implementation and the level of strategic agility within the firms.

2. The level of sustainable competitive advantage of the food manufacturing companies was generally high, with superior efficiency and superior quality rated highest, responsiveness to customer needs rated high but largely relationship-based rather than data-driven, and superior innovation rated lowest due to limited investment in research, technology, and product development.

3. The effectiveness of human resource management strategies was assessed as slightly high effective to highly effective, with training and development emerging as the strongest practice, recruitment relying primarily on informal referral systems, performance appraisal implemented inconsistently, and compensation, career path planning, and work-life quality practices remaining weak because of financial and structural limitations.

4. The composite level of strategic agility was moderate. The sensing agility of the manufacturing companies revealed that there is strong awareness of market changes. Decision-making agility was hindered by centralized authority and limited analytics. Acting agility was lowest, constrained by financial and technological resources. This pattern suggests that while awareness exists, execution speed and flexibility remain areas for growth (Doz & Kosonen, 2010).

5. The statistics show there are significant differences in the assessment of sustainable competitive advantage (SCA) when respondents are grouped according to form of business, number of employees, and number of years in operation, as indicated by p-values below the 0.05 level, leading to the rejection of the null hypothesis. Corporations report higher levels of SCA than partnerships and sole proprietorships, likely due to stronger capital, more structured management, and greater access to resources. Firms with a larger number of employees also demonstrate significantly higher SCA, as they are better able to

implement formal HRM practices, invest in innovation, and adapt to market changes compared to smaller firms. Additionally, companies with longer years in business exhibit higher SCA than newer firms, suggesting that organizational maturity, accumulated experience, and established processes contribute to sustained competitiveness. Overall, the findings indicate that sustainable competitive advantage is shaped not only by internal strategies but also by organizational size, structure, and experience in the food manufacturing industry.

6. Human Resource Management was found to have a significant effect on sustainable competitive advantage, indicating that HRM strategies influence competitiveness both directly and indirectly through the development of organizational agility.
7. Strategic agility was found to partially mediate the relationship between human resource management strategies and sustainable competitive advantage, signifying that HRM strategies influenced competitiveness both directly and indirectly through the development of organizational agility.
8. 8.Based on the results of the study, an enhanced human resource program was proposed both on micro and small manufacturing business to institutionalize HR policies, strengthen competency-based training, develop agile leadership and cross-functional teams, and establish strategic partnerships to support innovation and long-term competitiveness.

5. CONCLUSION

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

1. Batangas food manufacturers are mainly micro- and small-scale with centralized, informal structures, which shape HR practices and limit strategic agility.
2. Competitive advantage relies on efficiency and quality, but low innovation threatens long-term competitiveness without strategic technology and capability investment.
3. HR strategies are critical for performance, yet informal recruitment, inconsistent appraisal, poor compensation, and limited career growth weaken their impact.
4. Strategic agility is moderate; firms sense market changes but lack speed and resources for rapid, effective decision-making.
5. HR strategies significantly enhance competitive advantage by improving efficiency, quality, customer responsiveness, and innovation.
6. Strategic agility partially mediates HRM's effect on competitiveness, increasing effectiveness when firms act swiftly on opportunities.
7. Differences in size, structure, and years of operation show that maturity supports formal HR systems and sustained competitive advantage.
8. Sustainable competitive advantage requires integrating formal HR practices with strategic agility to transform human capital into resilience and long-term growth.

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INTERNATIONALIZATION STRATEGIES OF DIGITAL UNIVERSITIES: A STRATEGIC FRAMEWORK FOR UNIVERSITY 5.0

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ABSTRACT

Purpose- Higher education is experiencing a structural transformation driven by rapid digitalization, shifting macroeconomic conditions, and the growing expectations of technologically fluent student generations. This paper argues that digital universities operating within the emerging University 5.0 paradigm require a fundamentally different strategic vocabulary for internationalization: one that accounts for borderless enrolment, regulatory complexity across jurisdictions, artificial intelligence-powered pedagogies, and the simultaneous democratization of knowledge across global geographies. To address this gap, the study introduces the Digital University Internationalization Matrix (DUIM), a novel two-dimensional diagnostic tool that positions institutions along two axes: digital maturity (encompassing cloud architecture, AI capability, and platform integration) and market penetration scope (spanning domestic-centrality to transnational decentralization). Intersecting these dimensions produces four strategic stages — Digital Proximity, Borderless Infusion, Cross-Border Ecosystems, and Sovereign Decentralization — each carrying distinct technological requirements, strategic foci, and operational bottlenecks.
Methodology- Traditional internationalization frameworks, including the Uppsala process model and resource-based theoretical perspectives, were constructed around the logic of physical presence, sequential market entry, and asset-intensive expansion parameters that hold diminishing relevance for cloud-native, platform-driven educational institutions. Utilizing a conceptual framework grounded in strategic management and higher education governance, this study analyzes the evolutionary path of online higher education institutions globally. It proposes a novel "Digital University Internationalization Matrix (DUIM)" that categorizes institutions based on their digital maturity and market penetration scope.
Findings- The analysis reveals that absence of physical constraints does not guarantee frictionless international operations. Digital universities face highly complex invisible barriers — regulatory, cultural, and competitive. Successful digital internationalization is non-linear, that technological readiness must be matched by regulatory adaptation capacity, and that strategic agility supplants the brick-and-mortar asset accumulation logic of earlier internationalization eras. Technological readiness must be matched by international regulatory adaptation capability. Tech-only strategies without regulatory intelligence will fail at Stage 3–4.
Conclusion- The paper concludes that University 5.0 is a paradigm shift demanding a complete rethinking of what internationalization means from physical mobility to translocal, transtemporal borderless education delivery. The Digital University Internationalization Matrix and the 4-Stage Process Model together provide a practical map for this borderless transition combining diagnostic and prescriptive power. Global scaling depends on simultaneously combining technological maturity (cloud, AI, edge) with regulatory agility (accreditation, data sovereignty, financial compliance. Digital university (University 5.0) — foreseen to reach critical mass by the 2030s — primarily attracts Gen Z, Alpha, and Beta students. Institutions that delay this transition risk structural irrelevance.

Keywords: Digital university, internationalization of higher education, University 5.0, strategic framework, digital maturity
JEL Codes: I23, F23, O33

1. INTRODUCTION

The landscape of global higher education has shifted more dramatically in the past decade than at any comparable period in its modern history. Technological acceleration, post-pandemic institutional reconfiguration, and the emergence of generationally distinct learner cohorts have collectively rendered many of the foundational assumptions of university management and international strategy obsolete. Where internationalization once implied the physical movement of students and faculty across borders — or the capital-intensive establishment of branch campuses in foreign markets — the contemporary reality is one of cloud-based delivery, algorithmically personalized instruction, and digital enrolment pipelines that operate irrespective of geographic proximity.

This transformation has outpaced the theoretical frameworks available to institutional leaders and policymakers. The Uppsala model (Johanson & Vahlne, 1977, 2009), which remains one of the most widely cited internationalization frameworks across both business and higher education scholarship, rests on the premise that firms and institutions expand internationally through a process of incremental commitment, guided by experiential learning and modulated by psychic distance. For traditional universities entering foreign markets through partnership agreements or physical presence, this logic retains partial applicability. For digital universities — institutions whose entire operational and pedagogical infrastructure is cloud-native — the model's sequential assumptions effectively dissolve. There is no psychic distance when enrolment, instruction, assessment, and certification occur entirely on digital platforms accessible from any jurisdiction at any time.

Parallel theoretical challenges apply to the resource-based view (Barney, 1991), which ties competitive advantage to the ownership of rare, inimitable, and non-substitutable physical and human resources. In a digital university operating across dozens of national markets simultaneously, the relevant resources are not campuses, libraries, or physical laboratories. They are AI-driven learning management systems, cloud architectures, data analytics capabilities, and the institutional capacity to navigate fragmented regulatory and accreditation environments across jurisdictions. Static asset logic, in short, is insufficient for understanding the competitive positioning of digitally-delivered higher education.

The present study responds to these theoretical gaps by proposing a new strategic framework tailored specifically to digital universities in the University 5.0 era — a term increasingly used in the academic literature to describe the next phase of higher education, characterized by the synthesis of high-velocity automation, hyper-personalized learning, and the treatment of the global student population as a single unified market (Dong, 2024; Zhao & Rong, 2025). The framework, termed the Digital University Internationalization Matrix (DUIM), is designed to serve both as a diagnostic instrument for institutional self-assessment and as a prescriptive map for navigating the complexity of digital internationalization at scale.

The paper proceeds as follows. Section 2 reviews the relevant theoretical and empirical literature. Section 3 articulates methodology and findings presenting the DUIM and the associated four-stage process model with key findings. Section 4 concludes with reflections on the future trajectory of University 5.0 internationalization.

2. LITERATURE REVIEW

Scholarship on the internationalization of higher education has grown substantially over the past three decades, yet its core frameworks remain anchored in assumptions derived from campus-bound, mobility-centric institutional models. Knight (2003) provided the canonical definition — internationalization as "the process of integrating an international, intercultural, or global dimension into the purpose, functions and delivery of post-secondary education" — a definition broad enough to encompass digital delivery in principle, but rarely operationalized in that way within the literature that followed. De Wit and Altbach (2021, 2023) have consistently noted that internationalization theory lags behind institutional practice, with the post-pandemic period accelerating a divergence that the field has yet to fully address conceptually.

The Uppsala internationalization model (Johanson & Vahlne, 1977) described a staged progression from domestic operations through indirect exports to the eventual establishment of foreign subsidiaries, driven by the gradual accumulation of market knowledge that reduces perceived risk. The 2009 revision (Johanson & Vahlne, 2009) shifted emphasis toward network relationships and the liability of outsidership — the disadvantage of not belonging to relevant business networks in foreign markets. Vahlne and Johanson (2017) subsequently extended the model to incorporate dynamic capabilities, yet, as multiple scholars have observed, the revised model remains largely silent on the implications of digital context (Hult et al., 2020). Born-digital firms, and by extension born-digital universities, routinely leapfrog the sequential stages the Uppsala model describes; their internationalization is simultaneous rather than staged, and their liability is not physical outsidership but regulatory and accreditation outsidership — a fundamentally different challenge.

The resource-based view (Barney, 1991) offers complementary but similarly bounded insight. Its focus on VRIN resources — valuable, rare, inimitable, and non-substitutable — provides a useful lens for understanding competitive differentiation, but its application to digital universities requires reconceptualization. Cloud infrastructure, AI-driven learning engines, and proprietary student data analytics constitute the VRIN resources of digital higher education institutions; none of these fit comfortably within the physical asset categories the original theory privileged.

More directly relevant to the present study, a growing body of empirical and conceptual work has examined the digitalization of higher education internationalization in recent years. The core values and missions of universities have lasted for centuries. However, they are not immune to the changes of digital transformation era (Eskinat&Teker, 2026). Higher education institutions have been recently forced to deliver education services in new ways and operate in a global marketplace. Therefore, universities must rethink and redesign how they provide access to their courses anywhere and at any time. (Eskinat&Teker,2023). Lazari and Matsoukas (2025), writing in Frontiers in Education, documented the role of MOOCs and virtual exchange programs in enabling institutions to reach genuinely global audiences irrespective of physical and geopolitical barriers, characterizing this as a new era of borderless university development. The International Association of Universities (IAU) 6th Global Survey (2024), drawing on responses from 722 institutions across 110 countries, found that digital delivery has become a primary vector for internationalization while simultaneously identifying regulatory fragmentation as the single most significant structural barrier to its expansion., Tang Huang, and Yan (2025) proposed a conceptual model of digital transformation in higher education grounded in SECI-based knowledge sharing and cloud-native pedagogical delivery. Castañeda et al. (2023) linked digital maturity directly to academic quality and progress toward the United Nations Sustainable Development Goals.

On the market scale dimension, Grand View Research (2025) projected that the global digital education market will grow from approximately USD 26 billion in 2024 to USD 133 billion by 2030, representing a compound annual growth rate of 31.5%, with Asia-Pacific growing fastest at 33%. Coursera alone reported 191 million total global learners in 2025, reflecting the genuinely transnational scope that leading digital platforms have already achieved. These figures underscore the strategic urgency of developing internationalization frameworks commensurate with the scale and pace of the market. The IAU (2024) survey and the broader digital transformation literature reviewed here together point toward a common conclusion: existing frameworks require substantial rethinking rather than incremental adaptation.

3. METHODOLOGY AND FINDINGS

This study adopts a conceptual-analytical methodology rooted in strategic management theory and grounded in a systematic review of the digital higher education literature. Rather than generating primary empirical data through surveys or case studies, the research synthesizes theoretical frameworks, market intelligence, and institutional evolution patterns to construct a novel analytical model applicable across institutional contexts. This approach is consistent with established practice in strategic management scholarship where original frameworks are introduced through conceptual reasoning and theoretical synthesis (Barney, 1991; Teece, 2007).

The analytical process unfolded in three stages. First, dominant internationalization frameworks — principally the Uppsala model and the resource-based view — were reviewed to identify their structural assumptions and the specific ways in which these assumptions are violated by cloud-native educational institutions. Second, the digital higher education literature was surveyed to identify the empirical phenomena that any new framework would need to accommodate: simultaneous global reach, AI-driven personalization, regulatory heterogeneity, blockchain credentialling, and the non-linear progression of institutional digital capability. Third, these inputs were synthesized into the Digital University Internationalization Matrix (DUIM) and its accompanying four-stage process model, which together constitute the primary theoretical contribution of the paper.

3.1. The Digital University Internationalization Matrix (DUIM)

The DUIM positions institutions within a two-dimensional space. The vertical axis — digital maturity — captures an institution's technological capability and infrastructure integration, ranging from low maturity (standard learning management systems operating as siloed, content-export vehicles) to high maturity (cloud-native architectures incorporating AI-driven instruction, automated compliance monitoring, and edge computing for distributed credential verification). The horizontal axis — market penetration scope — reflects the geographic and demographic breadth of an institution's reach, ranging from centralized domestic dominance to transnational boundlessness characterized by decentralized, locally-compliant operational nodes across multiple jurisdictions simultaneously.

The intersection of these two dimensions produces four quadrants, each corresponding to a distinct strategic stage. Stage 1, Digital Proximity, describes institutions of low digital maturity operating in centralized, culturally-proximate markets. These institutions extend legacy platforms to regional audiences, rely on content-export mindsets, and face language barriers and brand recognition deficits as their primary operational constraints. Stage 2, Borderless Infusion, captures high-digitally-mature institutions operating in centralized mode: they achieve rapid global student acquisition through cloud-native AI-translated content delivery without requiring localized physical bodies, but face challenges related to currency conversion complexity and home-country regulatory dependencies. Stage 3, Cross-Border Ecosystems, describes institutions of lower digital maturity that have nonetheless achieved transnational reach through joint degree alliances, public-private partnerships, and shared digital credit systems. Their primary constraint is fragmented technological stacks and complex partner alignment across jurisdictions. Stage 4, Sovereign Decentralization, represents the University 5.0 ideal: fully digitally-mature institutions operating as globally decentralized networks of locally-compliant, autonomous institutional nodes underpinned by edge computing, blockchain-verified micro-credentials, and multi-node regional micro-campuses. The principal bottlenecks at this stage are data sovereignty legislation (including instruments such as GDPR and equivalent national frameworks) and the absence of harmonized international accreditation standards.

3.2. The Four-Stage Process Model

Unlike the Uppsala model's assumption of linear, experience-driven progression, the DUIM-based four-stage model is explicitly non-linear. Institutions may enter at any quadrant depending on their founding architecture and market positioning, may leapfrog stages as technological infrastructure improves, or may regress under regulatory pressure. An institution born as a fully cloud-native platform — analogous to a born-global firm in international business — may begin operations already positioned at Stage 2 or Stage 4, without passing through the Stage 1 experience of gradual regional market extension. Conversely, a well-established online institution with a strong transnational student base but fragmented legacy technology stacks may occupy Stage 3 until a deliberate technology investment program moves it toward Stage 4.

The model also identifies three categories of resource requirements that shift across the four stages. Technological requirements escalate from basic LMS infrastructure to cloud architecture, AI-based translation, API-driven institutional middleware, and ultimately edge computing and distributed ledger technology for credential verification. Regulatory requirements shift from managing language and brand localization constraints at Stage 1 to navigating complex multi-jurisdictional data sovereignty frameworks at Stage 4. Strategic competency requirements move from content adaptation at Stage 1 to the management of global public-private ecosystem partnerships and autonomous legal entity governance at Stage 4. The implication is that each stage transition demands not simply more of the same capability but qualitatively different institutional capacities — a point that existing internationalization frameworks, focused predominantly on market knowledge accumulation, do not adequately capture.

Figure 1 presents the Digital University Internationalization Matrix (DUIM), the central analytical tool introduced in this study. The matrix positions higher education institutions within a two-dimensional space defined by digital maturity on the vertical axis and market penetration scope on the horizontal axis. Digital maturity spans the range from low-integration legacy learning management systems operating in content-export mode to high-integration cloud-native architectures supported by AI-driven instruction, automated compliance management, and edge computing infrastructure. Market penetration scope ranges from centralized domestic dominance — in which an institution's operational and regulatory logic remains anchored in its home jurisdiction — to transnational decentralization, whereby autonomous, locally-compliant institutional nodes operate across multiple jurisdictions simultaneously as part of a coherent global network. The intersection of these two dimensions produces four quadrants, each representing a distinct internationalization stage: Stage 1 (Digital Proximity), Stage 2 (Borderless Infusion), Stage 3 (Cross-Border Ecosystems), and Stage 4 (Sovereign Decentralization). The dashed diagonal arrow traversing the matrix from Stage 1 toward Stage 4 denotes the non-linear leapfrog trajectory available to born-digital institutions — a key departure from the sequential logic of the Uppsala model. Each quadrant identifies the primary strategic focus, core technology lever, and principal operational bottleneck characterizing that stage, enabling institutional leaders to conduct a structured self-assessment of their current positioning and to identify the capability investments required for stage transition.

Figure 1: Digital University Internationalization Matrix (DUIM)

Figure 2 elaborates the four-stage trajectory described by the DUIM through a process-oriented visualization that maps the specific operational characteristics, technology requirements, and strategic resources associated with each stage. Stage 1, Digital Proximity, is characterized by culturally proximate market targeting via asynchronous content delivery on basic localized platforms, with language barriers and brand recognition deficits as the principal constraints; it serves primarily early Generation Z student cohorts and requires modest LMS licensing and content localization investment. Stage 2, Borderless Infusion, scales global student acquisition through centralized cloud architecture and AI-driven translation without requiring localized physical presence; its operational bottlenecks are currency conversion complexity and home-country regulatory dependency, and it targets global Generation Z populations at the cost of significant cloud and AI infrastructure investment. Stage 3, Cross-Border Ecosystems, trades some technological sophistication for transnational reach through joint degree alliances and public-private digital partnerships; partner alignment and split tuition administration constitute its primary operational friction, and it begins to address Generation Alpha learner expectations. Stage 4, Sovereign Decentralization — the University 5.0 ideal — establishes fully autonomous, locally-compliant legal nodes tied into a global mesh network underpinned by edge computing and blockchain-verified micro-credentials; it confronts data sovereignty legislation and the current absence of harmonized international accreditation standards, and it is calibrated for Generation Alpha and Generation Beta learners for whom geographically fixed campuses will carry only historical significance. The dashed arc spanning the top of the figure represents the non-linear leapfrog path by which a born-digital institution may enter directly at Stage 2 or Stage 4 without passing through the preceding stages, reflecting the collapse of the sequential commitment logic that the Uppsala model assumes.

Figure 2: Four-Stage Process Model of Digital University Internationalization

3.3. Key Findings

Four principal findings emerge from the analysis. First, digitization does not automatically produce frictionless internationalization. Digital universities encounter a distinct topology of invisible borders — regulatory, cultural, accreditation-based, and competitive — that conventional internationalization frameworks were not designed to map. Second, digital university internationalization follows a non-linear evolutionary logic that is better modelled as a strategic positioning problem than as a sequential stage progression. Third, strategic agility — the institutional capacity to reconfigure resources, partnerships, and technological architectures rapidly in response to shifting market and regulatory conditions — replaces physical asset accumulation as the core source of competitive advantage in digital higher education markets. Fourth, technological readiness and regulatory adaptation capacity must develop in tandem; institutions that invest exclusively in AI and cloud infrastructure without building commensurate expertise in multi-jurisdictional compliance, accreditation navigation, and data sovereignty management are likely to encounter severe operational constraints at Stage 3 and Stage 4.

4. CONCLUSION

University 5.0 represents not merely a further technological iteration of higher education delivery but a fundamental paradigm shift in the meaning and practice of internationalization. The assumption that universities expand internationally by moving people, credentials, and physical assets across borders has been progressively invalidated by the emergence of cloud-native educational platforms capable of simultaneous global reach. What remains underdeveloped — and what the present paper has sought to address — is the strategic framework adequate to this new reality.

The Digital University Internationalization Matrix offers a practical diagnostic and prescriptive tool that accommodates the non-linear, multi-dimensional character of digital higher education expansion. By mapping institutions along digital maturity and market penetration scope dimensions, the DUIM enables institutional leaders to identify their current strategic position, diagnose the specific capability gaps and regulatory bottlenecks they face, and chart investment priorities appropriate to the stage transition they aspire to achieve. The four-stage process model provides a conceptual map for this journey without imposing the false linearity of earlier internationalization frameworks.

Successful global scaling for digital universities depends on simultaneously combining technological maturity (cloud, AI, edge) with regulatory agility (accreditation, data sovereignty, financial compliance). A dynamic alignment between technological capabilities and international regulatory adaptation is emerging rather than conventional physical resource deployment strategies.

The generational dimension of this transition should not be underestimated. Generation Z students — already the primary market for higher education worldwide — are digital natives whose educational expectations were formed in environments of continuous connectivity, algorithmic personalization, and peer-to-peer global interaction. Generation Alpha, currently approaching university age, will have grown up with AI tutors and immersive digital learning as baseline experiences. Generation Beta will likely regard the notion of a geographically fixed campus as historically curious. Digital universities that delay the structural and strategic transitions the DUIM describes risk not marginal competitive disadvantage but structural irrelevance within a decade.

Several limitations of this study warrant acknowledgement. The DUIM is a conceptual model without empirical validation across a representative sample of digital higher education institutions. Future research should test the model's stage classifications and transition pathways through large-N comparative institutional analysis and longitudinal case study research focusing on institutions that have successfully navigated Stage 3-to-Stage 4 transitions. Additionally, the model's current formulation does not fully address equity and access dimensions — the extent to which sovereign decentralization strategies serve or exclude students in low-bandwidth, low-regulatory-capacity national contexts is a question that demands sustained scholarly attention. Notwithstanding these limitations, the DUIM and its accompanying four-stage model represent a contribution to the strategic management of digital higher education that the field has lacked: a framework built specifically for the institutional realities of University 5.0 rather than retrospectively adapted from frameworks designed for a campus-bound world.

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AI-ORIENTED RISK ASSESSMENT MODELS IN EMERGING INSURANCE MARKETS: THE CASE OF UZBEKISTAN

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ABSTRACT

Purpose- The purpose of this study is to examine the transformation processes within insurance markets in developing countries, with a particular focus on the growing influence of artificial intelligence (AI) technologies. While AI is reshaping mature insurance markets in developed economies through automation and predictive analytics, its adoption in developing nations remains uneven and understudied. This research specifically aims to assess the feasibility of implementing AI-oriented risk assessment models in Uzbekistan – a country with a rapidly ex-panding but institutionally immature insurance sector. The study also seeks to propose a phased methodology for AI adoption that navigates regulatory gaps, infrastructural weaknesses, and human resource limitations.

Methodology- The study employs a case study approach centered on Uzbekistan, combined with econometric modeling. Specifically, a binary logit model is used to assess factors influencing insurance companies' readiness to adopt AI technologies. Key independent variables examined include firm size, years of digital experience, level of regulatory compliance, access to external technical support, and prior investment in data management systems. The authors also draw upon global best practices from countries that have pioneered low-cost, scalable AI solutions under resource constraints. These international experiences are systematically contrasted with Uzbekistan's specific limitations, including fragmented regulatory oversight, limited cloud computing infrastructure, and a shortage of data science talent.

Findings- The analysis reveals that readiness for AI adoption is significantly positively associated with prior digital investment and external partner-ships. Conversely, regulatory ambiguity and staff resistance act as substantial barriers. Unlike developed markets where extensive historical data facilitates AI integration, Uzbekistan's insurance ecosystem faces significant gaps in data standardization, technological readiness, and institutional coordination. However, the findings demonstrate that these constraints do not preclude AI adoption altogether. The logit re-gression results empirically validate that a carefully calibrated, context-sensitive approach is required, moving from pilot projects in low-risk product lines (e.g., crop or micro-insurance) to full-scale AI integration.

Conclusion- Based upon the analysis and findings, it may be concluded that even institutionally constrained markets can harness intelligent technolo-gies, provided that implementation is phased, context-aware, and supported by targeted policy interventions. For policymakers, the results offer evidence-based guidance for shaping digitalization strategies, including regulatory sandboxes and tax incentives. For insurance com-panies, the proposed phased methodology provides a concrete roadmap. Ultimately, the article contributes to the growing literature on AI in development finance by demonstrating that constraints do not preclude adoption – they necessitate careful calibration.

Keywords: Artificial intelligence, insurance market, risk assessment, InsurTech, econometric modelling.
JEL Codes: G22, O33, C52

1. INTRODUCTION

Emerging insurance markets, including Uzbekistan, are characterized by high growth potential, low penetration of insurance services, and active development of the regulatory framework. As noted by R.S. Azimov [1, pp. 45–67], countries with transition economies face specific challenges in the development of the insurance sector: a lack of relevant historical data, low insurance literacy among the population, and limited applicability of classical actuarial methods under conditions of structural instability. In a later study [2], it is emphasized that the implementation of ESG (environmental, social, and governance) principles in the insurance markets of Central Asia creates institutional prerequisites for digital transformation, including the use of alternative data and predictive analytics.

In this context, artificial intelligence (AI) and machine learning (ML) technologies open opportunities for a qualitative leap in the development of the industry, making it possible to compensate for the "information vacuum" through the use of alternative data, improve pricing accuracy, reduce fraud, and develop personalized insurance products. According to estimates by McKinsey & Company, by 2030 underwriting in the segments of personal and small business insurance will undergo fundamental changes: the widespread adoption of gadgets and data collection technologies will enable the automation of risk assessment processes that previously required significant manual effort [4].

The global AI in insurance market was valued at USD 6.4 billion in 2024 and is projected to reach USD 63.2 billion by 2032, with a compound annual growth rate of 33% in 2025–2032. Key drivers include the development of predictive analytics, integration with the Internet of Things, and the acceleration of claims processing [10].

Recent literature highlights a growing body of empirical research on AI applications in insurance. Dhanekulla (2024) shows that deep learning can significantly improve real-time risk assessment, especially when working with large amounts of telematics data. Ninsin (2025) reviews InsurTech innovations in both developed and emerging markets, concluding that AI helps insurers move from simply detecting risks to predicting and preventing them; however, challenges remain in data privacy, outdated systems, and regulation. In fraud detection, new methods such as unsupervised learning and ensemble models now achieve detection rates above 90%, while reducing false alarms and improving efficiency (class imbalance study, 2026; CNN-based fraud detection, 2026). Research by Owens et al. (2022) and a 2025 study in Technological Forecasting and Social Change finds that Explainable AI (XAI) – especially SHAP and LIME applied to XGBoost models — can help overcome regulatory barriers by making AI decisions understandable and transparent. Regarding AI adoption in developing economies, a 2025 global survey by SAS and the Economist Intelligence Unit reports that the main barriers are outdated technology systems, slow innovation, and siloed departments; at the same time, government support and AI-powered platforms are driving growth in emerging markets. In Uzbekistan, recent developments include the launch of fully digital insurance products and active discussions at regional InsurTech summits on integrating AI into the national insurance framework. Together, these studies highlight both the great potential of AI in insurance and the specific barriers that emerging markets need to address.

The purpose of the study is to develop conceptual foundations for the implementation of AI-oriented risk assessment models in emerging insurance markets, taking into account global experience and the specifics of Uzbekistan, building on the authors' previous research in the field of insurance business transformation and ESG integration.

The research objectives of the study are to systematize theoretical and methodological approaches to AI-based risk assessment, including a comparative analysis of machine learning algorithms and the issue of interpretability of decisions; generalize global experience in the application of AI in insurance across developed and developing markets; diagnose the current state and key challenges of the insurance market of Uzbekistan, taking into account the conclusions presented in studies [1; 2]; develop an econometric model for assessing factors influencing the adoption of AI by insurance companies; propose practical recommendations for the phased implementation of AI models, taking into account local conditions.

2. RESEARCH METHODOLOGY

The study employs a mixed research design, including:

Theoretical analysis – a review of academic literature, industry reports (McKinsey, EIOPA, World Bank), and materials from specialized conferences (Digital Insurance Agenda). Particular attention is given to the works of R.S. Azimov [1; 2], which systematize the features of insurance markets in transition economies and the prospects for ESG transformation in Central Asia.

Comparative analysis – a comparison of traditional and AI-oriented approaches to risk assessment, as well as implementation cases in the United States, Europe, China, India, and South Africa.

Econometric modeling – to quantitatively assess the factors determining the readiness of insurance companies in Uzbekistan to adopt AI, a binary logit model is constructed. The initial data were obtained through a survey of 37 insurance organizations (2025), covering 84% of the market by gross written premiums.

SWOT analysis and expert evaluation method – used to identify barriers and opportunities for AI implementation in the national context, taking into account institutional features highlighted in [1].

3. THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF AI-ORIENTED RISK ASSESSMENT

Classical actuarial science is based on probability theory and long-term deterministic models. However, in the context of increasing complexity of the risk environment (climate change, cyber risks, pandemics), traditional approaches demonstrate insufficient flexibility. As emphasized by R.S. Azimov [1, pp. 112–115], in countries with transition economies this problem is exacerbated by the fragmentation of statistical data and the high volatility of socio-economic indicators.

AI models, unlike traditional ones, make it possible to process large volumes of structured and unstructured data (texts, images, IoT data); identify nonlinear relationships and hidden patterns; adapt to new data in near real time; perform micro-segmentation and hyper-personalization of customers.

At the same time, fully automated decision-making in complex or force majeure situations remains impossible: the human factor retains a key role, and AI acts as a decision-support tool [11]. A comparative analysis of traditional and AI-oriented underwriting is presented in Table 1.

Table 1: Differences between AI-Oriented and Traditional Underwriting[1]

Process	Traditional Underwriting	AI-Based Underwriting
Risk assessment	Based on historical data and human judgment	Predictive, based on alternative data, self-learning
Data collection and analysis	Manual, slow, error-prone	Automated, high-precision, real-time
Personalization	Standard policies, limited flexibility	Dynamic individualized approach based on insights
Processing speed	Requires extensive documentation and manual work	Instant processing with elements of automation
Fraud detection	Reactive, based on analysis of submitted claims	Proactive, anomaly detection using AI

Key classes of AI models in insurance include regression models and ensembles (Gradient Boosting, Random Forest) – forecasting the probability of insured events and the size of losses; neural networks (CNN, RNN) – analysis of images (damage assessment) and time series; NLP models – processing of claim texts, medical reports, and news background; generative models (GANs) – data synthesis under conditions of scarcity, which is especially relevant for developing markets (Azimov, 2026).

4. GLOBAL EXPERIENCE IN THE IMPLEMENTATİON OF AI IN THE INSURANCE INDUSTRY

Developed Markets - Swiss Re uses predictive models to assess climate risks based on 600 layers of geodata (vegetation, precipitation, wind) integrated into the CatNet platform. Lemonade Inc. processed 96% of initial claims through its AI bot Jim in Q2 2025, with 27% of claims settled fully automatically. Allianz UK implemented the generative AI tool BRIAN, saving approximately 65,000 minutes of underwriters' working time in the first months of use. AXA SA invests in research projects on insurance of AI-related risks and automates claim payments (for example, in cases of flight delays or floods).

Developing Markets (Asia, Africa) - Ping An (China) – more than 50 AI applications, including facial micro-expression analysis for credit risk assessment and the AiDAP platform, which increased underwriting efficiency by 40%. Acko Insurance (India) – telematics and machine learning for dynamic pricing in motor insurance, resulting in a 15% increase in sales. Naked Insurance (South Africa) – a fully automated AI broker that sells policies without human involvement in less than 90 seconds. As noted by R.S. Azimov [2, pp. 78-92], successful cases in developing markets demonstrate that the key success factor is not merely the implementation of technologies, but their adaptation to local institutional conditions, including regulatory constraints, the level of digital literacy of the population, and the specifics of insurance culture.

The results of comparing the performance indicators of traditional and AI-oriented underwriting are presented in Table 2.

Table 2: Comparison of Performance Indicators of Traditional and AI-Oriented Underwriting[2]

Indicator	Traditional Process	AI-Based Process
Average processing time, days	15,3	2,3
Risk assessment accuracy, %	67,5	91,2
Number of variables per assessment, units	23	847
Fraud detection rate, %	45,8	88,7
Share of manual review, %	82,4	23,5
Premium pricing accuracy, %	72,3	94,3

[1] Compiled by the authors [1; 2; 4].
[2] Compiled by the authors [1; 4; 10].

5. ANALYSIS OF THE INSURANCE MARKET OF UZBEKISTAN AND ECONOMETRIC ASSESSMENT OF FACTORS INFLUENCING AI ADOPTION

The insurance market of Uzbekistan demonstrates steady growth: the volume of gross written premiums in 2024 increased by 28% compared to the previous year, while insurance penetration reached 0.75% of GDP. The country is implementing the "Digital Uzbekistan – 2030" strategy, IT parks with tax incentives are operating, and smartphone penetration exceeds 80%.

However, as emphasized by R.S. Azimov [1, pp. 134–150], the implementation of AI solutions in transition economies is constrained by a set of interrelated factors:

Regulatory constraints – insufficient clarity regarding the processing of personal data and the use of algorithmic decision-making in underwriting. Study [2] highlights that ESG principles require increased attention to the transparency and accountability of algorithms.

Lack of high-quality data – insurers possess datasets suitable for machine learning primarily in mass insurance segments (MTPL, motor casco).

Infrastructure limitations – weak integration of corporate IT systems with government databases.

Human capital shortage – a lack of specialists in Data Science and actuaries with expertise in machine learning methods.

To identify the factors influencing the probability of adopting AI-based risk assessment models, a binary logit model was constructed:

$$P(y_i=1/X) = \frac{1}{1+e-(\beta 0+\beta 1X1i+\cdots+\beta kXki)}$$

where y_i – Is a dummy variable equal to 1 if a company has implemented or plans to implement AI solutions within the next 2 years; X – Is a set of explanatory variables.

The results of the logit model estimation are presented in Table 3.

Table 3: Results of Logit Model Estimation[3]

Variable	Coefficient	Standard Error	z-Statistic	P>|z|
Asset size (logarithm)	0,782	0,312	2,51	0,012
Share of digital sales channels (%)	0,094	0,028	3,36	0,001
Availability of a dedicated IT budget for analytics	1,453	0,587	2,48	0,013
Share of premiums from mass insurance lines	0,067	0,039	1,72	0,086
Market concentration index (HHI)	-2,104	0,941	2,24	0,025
ESG integration (binary)	1,212	0,542	2,24	0,025
Constant	-4,873	1,452	-3,36	0,001

Notes: Significance levels: $p < 0.01$, $p < 0.05$, $p < 0.1$, Number of observations: 37, Pseudo $R^2 = 0.342$, Percentage of correct predictions: 83.7%

The results indicate that the key drivers of readiness for AI adoption are business scale (asset size), the development of digital sales channels, the availability of targeted funding for analytics projects, and the integration of ESG principles into corporate strategy. High market concentration (HHI) has a negative effect, which may indicate reduced incentives for innovation in environments dominated by a few large players.

The inclusion of the variable "ESG integration" supports the hypothesis proposed in [2] that ESG transformation creates institutional prerequisites for the implementation of AI solutions, as it requires the development of data collection systems, increased transparency, and the cultivation of a culture of responsible data management.

6. FINDINGS

Conceptual Model for Implementing AI-Oriented Risk Assessment in Uzbekistan

Based on the conducted analysis, as well as the conclusions presented in [1] and [2], a phased implementation model is proposed, taking into account local specificities.

Stage 1. Establishing Regulatory and Infrastructure Framework

Creation of a "regulatory sandbox" at the National Agency for Advanced Projects (NAAPP) for testing AI solutions. Adoption of national data exchange standards in line with GDPR principles and ESG requirements for algorithm transparency [2]. Formation of a centralized industry platform for anonymized data based on the Unified Automated Information System of NAPP.

Stage 2. Development of Human Capital

Introduction of Data Science and InsurTech courses in finance and economics universities. Retraining programs for actuaries and underwriters at training centers of insurance companies from developed countries. Organization of forums involving international experts.

[3] Calculations by the authors using Stata 17

Stage 3. Pilot Projects (2026–2027)

Fraud detection algorithms in MTPL and property insurance. Telematics-based motor insurance with individualized pricing.

AI scoring in agricultural insurance using satellite imagery and meteorological data.

Stage 4. Scaling and Integration (2028–2030)

Implementation of NLP chatbots for consultations and claims settlement. Creation of a predictive analytics system for both regulators and insurers (monitoring financial stability). Integration with government information systems (tax, cadastral, healthcare) using secure protocols.

Expected Effects

Economic: reduction of operational costs by 15–25%, decrease in loss ratios by 10–20%, insurance penetration growth to 1.5–2% of GDP by 2030.

Social: improved accessibility of insurance products, promotion of responsible behavior among policyholders.

Technological: development of an InsurTech startup ecosystem, export of IT solutions to Central Asian countries.

ESG: increased transparency of insurance operations, reduced carbon footprint through automation, improved data governance [2].

5. CONCLUSION

AI-based risk assessment models open new opportunities for insurance markets in developing countries, allowing them to overcome the limita-tions of traditional actuarial approaches and compensate for the lack of historical data. Global experience demonstrates the high efficiency of these solu-tions: risk prediction accuracy can exceed 90%, processing time is reduced 5–7 times, and the share of manual operations decreases from 80% to 20–25%.

For the insurance market of Uzbekistan, currently undergoing active digital transformation, implementing AI-oriented risk assessment models is a strategic priority. Econometric modeling based on data from 27 insurance organizations confirms that key success factors include company scale, devel-opment of digital channels, targeted investment in analytics infrastructure, and ESG integration. High market concentration, however, may act as a re-straining factor, requiring additional regulatory incentives for innovation.

Based on the author's previous studies [1; 2], this paper proposes a phased AI implementation model that considers the institutional characteris-tics of transition economies and is aligned with the ESG agenda. Implementing this model will enable Uzbekistan not only to modernize its national insur-ance market but also to establish a regional competence center in InsurTech, transferring successful practices to other Central Asian countries.

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ECONOMIC POLICY UNCERTAINTY, UNEXPECTED INFLATION DEVELOPMENTS, AND RISK-ON CONDITIONS IN THE TURKISH EQUITY MARKET: EVIDENCE FROM A NARDL APPROACH

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ABSTRACT

Purpose – The purpose of this study is to investigate the dynamic relationship between economic country-specific uncertainty, model-based inflation surprises, and equity-market risk-on conditions in Türkiye. The study specifically examines whether positive and negative changes in uncertainty and inflation innovations exert asymmetric effects on Turkish equity-market dynamics. In contrast to studies that directly interpret stock market returns as a behavioral measure of investor psychology, this article conceptualizes broad Turkish share-price growth as a market-implied risk-on proxy reflecting aggregate portfolio allocation behavior under conditions of macroeconomic uncertainty and high inflation. The Turkish economy provides an important empirical setting due to the coexistence of persistent inflationary pressures, exchange-rate volatility, monetary-policy revisions, and elevated uncertainty during the post-2013 period.

Methodology – The study employs a nonlinear autoregressive distributed lag (NARDL) framework using monthly data covering the period from 2013M03 to 2024M12. The dependent variable is the monthly growth rate of broad Turkish share prices obtained from OECD/FRED databases. Economic uncertainty is represented by the Türkiye Economic Country-Specific Uncertainty (ECSU) index, while inflation surprises are constructed from the residuals of an autoregressive AR(1) inflation process based on monthly CPI inflation. Positive and negative movements in uncertainty and inflation surprises are decomposed into partial sums in order to test potential short-run and long-run asymmetries. The empirical specification incorporates unit-root screening procedures, bounds-testing logic for cointegration, Wald symmetry tests, and heteroskedasticity and autocorrelation consistent (HAC) standard errors to ensure econometric robustness.

Findings – The empirical findings reveal a strong and statistically significant error-correction mechanism, indicating that approximately 74.4% of short-run disequilibrium is corrected within one month. The joint significance test of lagged level variables strongly supports the existence of a stable long-run relationship among uncertainty, inflation surprises, and equity-market risk-on conditions ($F = 21.920$, $p < 0.001$). The estimated long-run coefficients of uncertainty components are negative, suggesting that higher economic uncertainty weakens market-implied risk-on behavior. In the short run, however, positive inflation surprises exert a statistically significant positive effect on Turkish equity-market risk-on conditions. This finding implies that investors may shift toward equities as a defensive portfolio response when inflation unexpectedly accelerates and nominal assets lose real value. Nevertheless, Wald symmetry tests fail to reject both long-run and short-run symmetry hypotheses, indicating that positive and negative shocks do not generate statistically different effects within the sample period.

Conclusion – Based upon the empirical analysis, it may be concluded that economic uncertainty and inflation surprises are dynamically associated with Turkish equity-market risk-on conditions in a high-inflation emerging-market environment. The study contributes to the macro-finance literature by integrating model-based inflation innovations into a country-specific uncertainty framework and by carefully distinguishing market-implied risk-on behavior from direct psychological measures of investor risk appetite. Although the NARDL framework provides valuable insights into adjustment dynamics and equilibrium relationships, the evidence does not support statistically significant asymmetry. The findings therefore emphasize the importance of rapid market adjustment mechanisms and inflation-related portfolio substitution effects rather than nonlinear asymmetrical responses.

Keywords: Economic policy uncertainty, inflation surprises, equity markets, risk-on conditions, NARDL
JEL Codes: C22, E31, G15

EKONOMİK POLİTİKA BELİRSİZLİĞİ, BEKLENMEYEN ENFLASYON GELİŞMELERİ VE TÜRKİYE HİSSE SENEDİ PİYASASINDAKİ RİSK ALMA KOŞULLARI: NARDL YAKLAŞIMINDAN BULGULAR

ÖZET

Amaç- Bu çalışmanın amacı, Türkiye'de ekonomik ülkeye özgü belirsizlik, modele dayalı enflasyon sürprizleri ve hisse senedi piyasasındaki risk alma eğilimi arasındaki dinamik ilişkiyi incelemektir. Çalışma özellikle, belirsizlikteki ve enflasyon yeniliklerindeki pozitif ve negatif değişimlerin Türk hisse senedi piyasası dinamikleri üzerinde asimetrik etkiler oluşturup oluşturmadığını araştırmaktadır. Yatırımcı psikolojisinin davranışsal bir göstergesi olarak hisse senedi getirilerini doğrudan yorumlayan çalışmalardan farklı olarak bu makale, Türkiye'de geniş kapsamlı hisse fiyat artışını, makroekonomik belirsizlik ve yüksek enflasyon koşulları altında toplam portföy tahsis davranışını yansıtan, piyasa tarafından ima edilen bir *risk-on* göstergesi olarak kavramsallaştırmaktadır. Türkiye ekonomisi; 2013 sonrası dönemde kalıcı enflasyonist baskılar, döviz kuru oynaklığı, para politikası revizyonları ve yüksek belirsizliğin eşzamanlı olarak görülmesi nedeniyle önemli bir ampirik araştırma ortamı sunmaktadır.

Metodoloji- Çalışmada, 2013M03–2024M12 dönemini kapsayan aylık veriler kullanılarak doğrusal olmayan gecikmesi dağıtılmış otoregresif sınır testi (NARDL) yaklaşımı uygulanmıştır. Bağımlı değişken, OECD/FRED veri tabanlarından elde edilen Türkiye'deki geniş kapsamlı hisse

fiyatlarının aylık büyüme oranıdır. Ekonomik belirsizlik, Türkiye Ekonomik Ülkeye Özgü Belirsizlik (ECSU) endeksi ile temsil edilirken, enflasyon sürprizleri aylık TÜFE enflasyonuna dayalı AR(1) otoregresif enflasyon sürecinin hata terimlerinden oluşturulmuştur. Belirsizlikteki ve enflasyon sürprizlerindeki pozitif ve negatif hareketler, olası kısa ve uzun dönem asimetrilerini test etmek amacıyla kısmi toplamlar biçiminde ayrıştırılmıştır. Ampirik modelde ekonometrik sağlamlığı temin etmek amacıyla birim kök testleri, eşbütünleşme için sınır testi yaklaşımı, Wald simetri testleri ile değişen varyans ve otokorelasyona dayanıklı (HAC) standart hatalar kullanılmıştır.
Bulgular- Ampirik bulgular, güçlü ve istatistiksel olarak anlamlı bir hata düzeltme mekanizmasına işaret etmekte; kısa dönem dengesizliğin yaklaşık %74,4'ünün bir ay içerisinde giderildiğini göstermektedir. Gecikmeli seviye değişkenlerinin ortak anlamlılık testi, belirsizlik, enflasyon sürprizleri ve hisse senedi piyasasındaki *risk-on* koşulları arasında istikrarlı bir uzun dönem ilişkisinin varlığını güçlü biçimde desteklemektedir ($F = 21.920$, $p < 0.001$). Belirsizlik bileşenlerine ilişkin tahmin edilen uzun dönem katsayıları negatif olup, artan ekonomik belirsizliğin piyasa tarafından ima edilen risk alma davranışını zayıflattığını göstermektedir. Bununla birlikte kısa dönemde, pozitif enflasyon sürprizlerinin Türkiye hisse senedi piyasasındaki *risk-on* koşulları üzerinde istatistiksel olarak anlamlı ve pozitif bir etkisi olduğu tespit edilmiştir. Bu bulgu, enflasyonun beklenmedik şekilde hızlandığı ve nominal varlıkların reel değer kaybettiği dönemlerde yatırımcıların savunmacı bir portföy tepkisi olarak hisse senetlerine yönelebileceğini ima etmektedir. Ancak Wald simetri testleri, hem uzun dönem hem de kısa dönem simetri hipotezlerini reddetmemiş; bu da örneklem döneminde pozitif ve negatif şokların istatistiksel olarak farklı etkiler üretmediğini göstermektedir.
Sonuç- Ampirik analiz bulgularına dayanarak, yüksek enflasyonlu gelişmekte olan piyasa ortamında ekonomik belirsizlik ile enflasyon sürprizlerinin Türkiye hisse senedi piyasasındaki *risk-on* koşullarıyla dinamik biçimde ilişkili olduğu sonucuna ulaşılabilir. Çalışma, modele dayalı enflasyon yeniliklerini ülkeye özgü belirsizlik çerçevesine entegre ederek ve piyasa tarafından ima edilen *risk-on* davranışını yatırımcı risk iştahının doğrudan psikolojik ölçümlerinden dikkatle ayırarak makro-finans literatürüne katkı sunmaktadır. NARDL yaklaşımı, uyum dinamikleri ve denge ilişkileri konusunda değerli içgörüler sağlamakla birlikte, bulgular istatistiksel olarak anlamlı bir asimetriyi desteklememektedir. Dolayısıyla sonuçlar, doğrusal olmayan asimetrik tepkilerden ziyade hızlı piyasa uyum mekanizmalarının ve enflasyona bağlı portföy ikame etkilerinin önemini vurgulamaktadır.

Anahtar Kelimeler: Ekonomik politika belirsizliği, enflasyon sürprizleri, hisse senedi piyasaları, risk alma koşulları, NARDL
JEL Kodları: C22, E31, G15

1. GİRİŞ

Ekonomik belirsizlik, makroekonomik koşulların finansal piyasalara aktarılmasında merkezi bir mekanizma olarak işlev görmektedir. Politika ortamının öngörülebilirliğinin azalması durumunda yatırımcılar; gelecekteki faiz oranları, enflasyonun kontrolü, döviz kuru yönetimi, maliye politikası tepkileri ve düzenleyici müdahaleler konusunda belirsizlikle karşı karşıya kalmaktadır. Bu tür belirsizlik yalnızca beklenen nakit akışlarını ve iskonto oranlarını etkilemekle kalmamakta, aynı zamanda piyasa katılımcılarının riskli varlıkları portföylerinde tutma istekliliğini de şekillendirmektedir. Bu çalışma, söz konusu mekanizmayı Türkiye örneğinde, doğrudan gözlemlenemeyen yatırımcı psikolojisinden ziyade hisse senedi piyasasındaki *risk alma (risk-on)* koşullarına odaklanarak incelemektedir.

Yatırımcı risk iştahı, kavramsal olarak riskli varlıkları elde tutmaya yönelik davranışsal istekliliği ifade etmektedir. Uzun dönemli aylık anket verilerinin veya işlem hacmine dayalı kapsamlı panel verilerin yokluğunda, bu çalışma yatırımcı psikolojisini doğrudan gözlemlediği iddiasında bulunmamaktadır. Bunun yerine, piyasa tarafından ima edilen bir *risk-on* göstergesi olarak Türkiye'de geniş kapsamlı hisse senedi fiyatlarındaki büyüme incelenmektedir. Pozitif değerler piyasa genelinde *risk-on* koşullarına, negatif değerler ise *riskten kaçış (risk-off)* baskısına işaret etmektedir. Bu yaklaşım, hisse senedi getirilerinin doğrudan risk toleransının bir ölçütü olarak ele alınmasından kaynaklanabilecek kavramsal geçerlilik sorununu bertaraf etmektedir.

Türkiye, 2013 yılından itibaren belirsizlik, enflasyon, döviz kuru baskısı ve para politikası revizyonlarının sıklıkla eşzamanlı biçimde ortaya çıkması nedeniyle açıklayıcı bir ampirik araştırma alanı sunmaktadır. Düşük enflasyon ortamında standart beklenti, belirsizliğin *risk-on* koşullarını zayıflatması yönündedir. Ancak yüksek enflasyon ortamında bu öngörü daha az doğrusal bir nitelik taşımaktadır. Enflasyon, iskonto oranlarını artırarak ve makroekonomik istikrarı zedeleyerek değerlemeleri olumsuz etkileyebileceği gibi, nakit ve nominal varlıkların reel değer kaybettiği dönemlerde hisse senetlerine yönelik savunmacı talep de yaratabilmektedir. Dolayısıyla enflasyonist dönemlerde hisse senedi piyasasında gözlenen artışlar; iyimserlikten, nominal yeniden fiyatlamadan veya değer kaybeden nominal varlıklardan hisse senetlerine yönelen savunmacı portföy ikamesinden kaynaklanabilmektedir.

Bu çalışmanın temel araştırma sorusu, Türkiye'ye özgü ekonomik belirsizlik ile enflasyon sürprizlerinin Türkiye hisse senedi piyasasındaki *risk-on* koşullarıyla dinamik olarak ilişkili olup olmadığı ve bu değişkenlerdeki pozitif ile negatif hareketlerin farklı etkiler üretip üretmediğidir. Ampirik analizde, asimetrik ayrıştırmalara olanak tanıması ve kısa dönem uyum dinamiklerini uzun dönem ilişkilerden ayrıştırabilmesi nedeniyle NARDL yaklaşımı tercih edilmiştir. Bu yaklaşım, hiçbir değişkenin ikinci dereceden bütünleşik [I(2)] olmaması koşuluyla, orta büyüklükteki aylık örneklemler ve farklı durağanlık özelliklerine sahip değişkenler için uygun bir yöntem sunmaktadır.

Çalışmanın katkısı bilinçli olarak sınırlı ancak belirgin biçimde tanımlanmıştır. İlk olarak, Türkiye'ye özgü ekonomik belirsizlik ile hisse senedi piyasasındaki *risk-on* koşulları arasındaki ilişkiyi incelemektedir. İkinci olarak, modele dayalı enflasyon yeniliklerini belirsizlik–hisse senedi piyasası ilişkisine dahil etmektedir. Üçüncü olarak, pozitif ve negatif belirsizlik ile enflasyon sürprizi bileşenlerinin asimetrik etkiler üretip üretmediğini varsaymak yerine ampirik olarak test etmektedir. Bulgular güçlü bir uyum mekanizmasına ve uzun dönem açısından tutarlı katsayı işaretlerine işaret etmekle birlikte, istatistiksel olarak anlamlı bir asimetriyi desteklememektedir. İstatistiksel olarak anlamlı bir asimetri bulgusuna ulaşılamamış olması da önemli bir ampirik sonuçtur; çünkü doğrusal olmayan modelin yorum alanını sınırlandırmakta ve aşırı yorum riskini azaltmaktadır.

2. LİTERATÜR

Ekonomik politika belirsizliği literatürü, belirsizlik şoklarının yatırım, üretim, istihdam, varlık fiyatları ve oynaklık üzerinde önemli etkiler yarattığını ortaya koymaktadır. Baker, Bloom ve Davis (2016), ekonomik politika belirsizliğini ölçmek amacıyla yaygın biçimde kullanılan metin tabanlı bir endeks geliştirmiş; Bloom (2009) ise belirsizlik şoklarının reel ekonomik faaliyet üzerinde keskin daralmalara yol açabileceğini göstermiştir. Jurado, Ludvigson ve Ng (2015), gelecekteki makroekonomik ve finansal sonuçların öngörülemeyen bileşenini ölçerek gerçekleşen oynaklık ile belirsizlik arasındaki ayrımı daha net biçimde ortaya koymuştur. Finansal piyasalarda belirsizlik; yatırımcıların talep ettiği getiri oranlarını artırabilmekte, likiditeyi azaltabilmekte, beklemenin opsiyonel değerini yükseltebilmekte ve iskonto oranı etkilerini güçlendirebilmektedir.

Gelişmekte olan piyasalar, yerel yatırımcıların aynı anda politika riski, enflasyon riski, döviz kuru riski ve dış finansman riskiyle karşı karşıya kalmaları nedeniyle belirsizliğe karşı özellikle hassastır. Türkiye açısından değerlendirildiğinde, yerel bilgi ortamı; para politikası iletişimi, döviz kuru beklentileri, enflasyon verileri, ülke risk primi algıları ile politik ve ekonomik haber akışını içermektedir. Bu nedenle, genel küresel belirsizlik göstergeleri yerine ülkeye özgü bir belirsizlik endeksinin kullanılması daha uygun görünmektedir. Kilic ve Balli (2024) tarafından geliştirilen Türkiye Ekonomik Ülkeye Özgü Belirsizlik (Türkiye Economic Country-Specific Uncertainty) endeksi, yerel belirsizlik anlatılarını yansıtması ve yerel piyasa katılımcılarının bilgi setiyle daha yüksek uyum göstermesi bakımından işlevsel bir gösterge sunmaktadır.

İlgili ikinci literatür alanı, risk iştahı, yatırımcı duyarlılığı ve piyasalardaki *risk alma (risk-on)* koşullarına odaklanmaktadır. Risk iştahı, belirli beklenen getiri düzeyleri ve algılanan belirsizlik koşulları altında yatırımcıların riskli varlıkları elde tutma istekliliğini ifade etmektedir. Bunun doğrudan gözlemlenemeyen (örtük) bir kavram olması nedeniyle ampirik çalışmalar; işlem hacmi, fon akımları, yatırımcı katılımı, oynaklık farkları, duyarlılık anketleri veya hisse senedi getirileri gibi çeşitli vekil göstergeler kullanmaktadır. Ancak bu göstergeler birbirinin doğrudan ikamesi değildir. İşlem hacmi alım-satım yoğunluğunu, fon akımları portföy tahsis davranışını, yatırımcı sayıları piyasa katılımını, getiriler ise denge fiyatlamasındaki değişimleri yansıtmaktadır. Bu nedenle mevcut çalışmada, bağımlı değişken doğrudan davranışsal bir ölçüm yerine hisse senedi fiyatlarındaki büyüme oranı olduğundan, *piyasa tarafından ima edilen risk alma (market-implied risk-on) koşulları* kavramsallaştırması tercih edilmiştir.

Davranışsal finans literatürü, belirsizlik ile risk alma davranışı arasındaki ilişkiyi açıklayan çeşitli teorik mekanizmalar sunmaktadır. Ellsberg (1961) ile ilişkilendirilen belirsizlikten kaçınma (*ambiguity aversion*) yaklaşımı, yatırımcıların bilinmeyen olasılık dağılımlarına kıyasla bilinen olasılık yapılarını tercih ettiğini öngörmektedir. Beklenti teorisi (*prospect theory*) ise Kahneman ve Tversky (1979) tarafından geliştirilen çerçevede, yatırımcıların kayıplara kazançlardan daha fazla ağırlık atfettiğini ortaya koymaktadır. Bu bağlamda olumsuz belirsizlik anlatıları, olumlu haberlerin risk alma davranışını yeniden tesis etmesinden daha güçlü biçimde risk üstlenme kapasitesini azaltabilmektedir. Belirsizlik geniş yatırımcı kitlesi açısından belirgin hale geldiğinde dikkat etkileri ve sürü davranışı bu tepkileri daha da güçlendirebilmektedir.

Enflasyon, belirsizlik ile *riskten kaçış (risk-off)* arasındaki geleneksel ilişkiyi daha karmaşık bir yapıya dönüştürmektedir. Fama ve Schwert (1977), Fama (1981), Bodie (1976), Nelson (1976) ile Geske ve Roll (1983) tarafından ortaya konulan klasik çalışmalar, hisse senedi–enflasyon ilişkisinin teorik ve ampirik açıdan belirsiz bir yapıya sahip olduğunu göstermektedir. Enflasyon, para politikasında sıkılaşmaya yol açarak ve reel ekonomik faaliyeti zayıflatarak hisse senedi piyasalarını olumsuz etkileyebilmektedir. Bununla birlikte, nominal gelirleri artırabilmekte ve yatırımcıları reel değeri koruyacak varlık arayışına yönlendirebilmektedir. Bu nedenle yüksek enflasyonlu ekonomilerde, hisse senedi piyasasındaki *risk-on* koşulları ile makroekonomik baskılar eşzamanlı olarak varlık gösterebilmektedir. Bu çerçevede enflasyon yenilikleri, yalnızca arka planı kontrol eden bir değişken olarak değil, ampirik araştırma tasarımının aktif bir bileşeni olarak ele alınmıştır.

3. VERİ VE METODOLOJİ

Bu çalışmanın teorik çerçevesi, belirsizlikten kaçınma (*ambiguity aversion*), kayıptan kaçınma (*loss aversion*), enflasyon sürprizleri ve savunmacı portföy ikamesi mekanizmalarını bütünleştirmektedir. Belirsizlikten kaçınma yaklaşımına göre ekonomik belirsizlikte meydana gelen artışlar, yatırımcıların politika sonuçlarına ilişkin güvenilir olasılık dağılımları oluşturmasını zorlaştırdığı için piyasalardaki risk alma (*risk-on*) koşullarını zayıflatmaktadır. Türkiye özelinde bu belirsizlik; faiz oranı kararları, döviz kuru yönetimi, enflasyonun kontrol altına alınması, maliye politikası tepkileri ve düzenleyici değişiklikler gibi çeşitli unsurları kapsamaktadır. Bu unsurlar hem beklenen nakit akışlarını hem de iskonto oranlarını etkileyerek finansal piyasa davranışlarını şekillendirmektedir.

Kayıptan kaçınma teorisi ise olumsuz belirsizlik hareketlerinin olumlu belirsizlik azalışlarına kıyasla daha güçlü etkiler yaratabileceğini ileri sürmektedir. Özellikle döviz kuru değer kaybı veya enflasyon baskılarının ardından yaşanan belirsizlik artışları, yatırımcıların aşağı yönlü risk senaryolarını daha belirgin algılamasına yol açabilmektedir. Buna karşılık belirsizlikteki azalma, yatırımcı güvenini aynı hızda yeniden tesis etmeyebilir; çünkü yatırımcılar yakın dönem kayıplarına psikolojik olarak bağlı kalabilmektedir. Bu teorik çerçeve, belirsizliğin asimetrik etkilerinin ampirik olarak test edilmesini motive etmekte; ancak çalışmada kullanılan model bu asimetriyi önsel olarak varsaymamaktadır.

Enflasyon sürprizleri ise alternatif bir etki mekanizması sunmaktadır. Pozitif bir enflasyon yeniliği, politika yapıcıların karşı karşıya olduğu zorlukları ve makroekonomik istikrarsızlığı işaret ederek piyasalardaki risk alma koşullarını zayıflatabilir. Buna karşılık yatırımcılar hisse senetlerini reel varlıklar, nominal gelirler veya fiyatlama gücüne sahip firmalar üzerindeki dolaylı haklar olarak değerlendirdiğinde, pozitif enflasyon sürprizleri hisse senedi piyasasında daha güçlü risk alma eğilimleriyle de ilişkilendirilebilir. Dolayısıyla bu ilişkinin yönü teorik olarak belirsiz olup ampirik olarak belirlenmelidir. Bu doğrultuda çalışmada dört temel hipotez test edilmektedir. İlk hipotez, Türkiye'ye özgü ekonomik belirsizliğin Türkiye hisse senedi piyasasındaki risk alma koşullarıyla negatif yönde ilişkili olduğunu ileri sürmektedir. İkinci hipotez, belirsizlikteki pozitif ve negatif hareketlerin risk alma koşulları üzerinde asimetrik etkiler yarattığını öne sürmektedir. Üçüncü hipotez, pozitif ve negatif enflasyon sürprizlerinin risk alma davranışı üzerinde farklı etkiler oluşturduğunu savunmaktadır. Dördüncü hipotez ise savunmacı hisse senedi talebinin veya nominal yeniden fiyatlama etkisinin enflasyona bağlı makroekonomik baskılardan daha baskın olması durumunda, pozitif enflasyon sürprizlerinin kısa dönemde risk alma yönlü piyasa hareketleriyle ilişkili olabileceğini ifade etmektedir.

Ampirik analizde kullanılan örneklem, gecikmeli değişkenlerin oluşturulmasının ardından 2013M03–2024M12 dönemini kapsayan aylık gözlemlerden oluşmaktadır. Bağımlı değişken olan MRI, OECD veri setinden FRED aracılığıyla elde edilen Türkiye'ye ait geniş kapsamlı hisse senedi fiyatlarının aylık büyüme oranını temsil etmektedir. Bu değişken, yatırımcı davranışını doğrudan ölçen bir gösterge değil; piyasa tarafından ima edilen bir risk alma göstergesi olarak yorumlanmaktadır. Temel belirsizlik göstergesi ise Türkiye Ekonomik Ülkeye Özgü Belirsizlik (ECSU) endeksidir. Enflasyon değişkeni, Türkiye'ye ait tüketici fiyat endeksinin logaritmik farkının 100 ile çarpılması yoluyla hesaplanan aylık TÜFE enflasyon oranıdır.

Enflasyon sürprizleri modele dayalı enflasyon yenilikleri şeklinde oluşturulmuştur. Bu amaçla aylık enflasyon kendi birinci gecikmeli değeri üzerine regresyona tabi tutulmuş ve elde edilen hata terimi, bir önceki döneme koşullu olarak aylık enflasyonun beklenmeyen bileşeni şeklinde yorumlanmıştır. Bu yaklaşım anket temelli beklenti göstergelerinin yerini almamakla birlikte, şeffaf, yeniden üretilebilir ve ham enflasyon değişimlerini doğrudan sürpriz olarak etiketleme sorununu ortadan kaldıran metodolojik olarak tutarlı bir çerçeve sunmaktadır. Tahmin edilen AR(1) enflasyon süreci aşağıdaki gibidir:

$INF_t = 0.610 + 0.658\ INF_{t-1} + u_t$

Burada $\mathbf{u_t}$, enflasyon sürprizi göstergesini ifade etmektedir.

NARDL modelinin uygulanabilmesi amacıyla logaritmik ECSU serisindeki aylık değişimler pozitif ve negatif kısmi toplamlar biçiminde ayrıştırılmıştır. Benzer şekilde enflasyon sürprizleri de pozitif ve negatif kümülatif yenilik bileşenlerine ayrılmıştır. Bu yapı, belirsizlikteki ve enflasyon sürprizlerindeki artış ve azalışların hisse senedi piyasasındaki risk alma koşulları üzerindeki kısa ve uzun dönem etkilerinin birbirinden farklı olup olmadığının test edilmesine imkan tanımaktadır.

Tablo 1: Değişken Tanımları

Değişken	Tanım	Dönüşüm	Rolü
MRI	Türkiye geniş kapsamlı hisse senedi fiyatlarının aylık büyüme oranı	Düzey ve birinci fark	Bağımlı değişken; piyasa tarafından ima edilen risk alma göstergesi
ECSU	Türkiye ekonomik ülkeye özgü belirsizlik endeksi	Doğal logaritma; pozitif/negatif kısmi toplamlar	Temel belirsizlik değişkeni
INF	Aylık TÜFE enflasyonu	TÜFE'nin log farkı × 100	Enflasyon sürprizi tahmin modelinin temel girdisi
ISURP	Modele dayalı enflasyon sürprizi	AR(1) hata terimi; pozitif/negatif kısmi toplamlar	Enflasyon sürprizi değişkeni
$ECSU^+$ / $ECSU^-$	ln(ECSU)'daki pozitif ve negatif hareketler	Kümülatif kısmi toplamlar	NARDL asimetri bileşenleri
$ISURP^+$ / $ISURP^-$	Pozitif ve negatif enflasyon yenilikleri	Kümülatif kısmi toplamlar	NARDL asimetri bileşenleri

Ampirik model, doğrusal olmayan gecikmesi dağıtılmış otoregresif (**NARDL**) yaklaşımına dayanmaktadır. Genel bir $\mathbf{x_t}$ değişkeni için pozitif ve negatif kısmi toplamlar şu şekilde tanımlanmaktadır:

$x_t^+ = \Sigma \max(\Delta x_t, 0)$
$x_t^- = \Sigma \min(\Delta x_t, 0)$

Tahmin edilen hata düzeltme modeli aşağıdaki gibidir:

$$\Delta MRI_t = \alpha + \rho MRI_{t-1} + \theta_1 ECSU^+_{t-1} + \theta_2 ECSU^-_{t-1} + \theta_3 ISURP^+_{t-1} + \theta_4 ISURP^-_{t-1} + \beta_1 \Delta ECSU^+_t + \beta_2 \Delta ECSU^-_t + \beta_3 \Delta ISURP^+_t + \beta_4 \Delta ISURP^-_t + \varepsilon_t$$

Negatif ve istatistiksel olarak anlamlı bir ρ katsayısı, sistemin uzun dönem dengesine geri dönüş eğiliminde olduğunu göstermektedir. Uzun dönem katsayıları $-\theta_j/\rho$ biçiminde hesaplanmıştır. Kısa ve uzun dönem simetrisini test etmek amacıyla Wald kısıt testleri uygulanmıştır. Model, üç gecikme kullanılarak heteroskedastisite ve otokorelasyona dayanıklı (HAC) standart hatalar ile En Küçük Kareler (OLS) yöntemi kullanılarak tahmin edilmiştir. Durağanlık analizlerinde ADF, KPSS ve Zivot-Andrews yapısal kırılmalı birim kök testleri kullanılmıştır. Ayrıca gecikmeli seviye değişkenlerinin ortak anlamlılığı, Pesaran-Shin-Smith sınır testi yaklaşımı çerçevesinde değerlendirilmiştir.

4. BULGULAR

Ampirik bulguların değerlendirilmesine öncelikle çalışmada kullanılan değişkenlere ilişkin tanımlayıcı istatistiklerin incelenmesiyle başlanmıştır. Tablo 2'de sunulan sonuçlar, Türkiye hisse senedi piyasasındaki piyasa tarafından ima edilen risk alma göstergesinin (MRI) analiz dönemi boyunca yüksek düzeyde oynaklık sergilediğini ortaya koymaktadır. Aylık bazda gözlenen belirgin pozitif ve negatif hareketler, hisse senedi piyasasının makroekonomik gelişmelere duyarlı ve dinamik bir yapıya sahip olduğunu göstermektedir. Benzer şekilde, Türkiye ekonomik ülkeye özgü belirsizlik endeksinin (ECSU) örneklem dönemi boyunca önemli ölçüde dalgalandığı görülmektedir. Bu durum, Türkiye ekonomisinin incelenen dönemde belirsizlik şoklarına maruz kaldığını göstermektedir. Modele dayalı enflasyon sürprizi göstergesinin (ISURP) ortalamasının yaklaşık sıfır olması ise serinin bir yenilik süreci olarak teorik beklentiyle tutarlı biçimde oluşturulduğunu göstermektedir.

Tablo 2: Tanımlayıcı İstatistikler

Değişken	Ortalama	Standart Sapma	Minimum	Medyan	Maksimum
MRI	1.999	6.781	-19.186	1.512	21.889
ECSU	144.037	81.678	49.904	132.586	521.295
INF	1.778	2.082	-1.453	1.157	12.730
ISURP	0.000	1.567	-3.796	-0.183	9.849
$ECSU^{+}$	9.742	6.373	0.000	8.412	20.992
$ECSU^{-}$	-10.661	6.317	-21.389	-9.402	-0.726
$ISURP^{+}$	22.197	21.215	0.000	17.065	69.577
$ISURP^{-}$	-37.087	20.397	-69.577	-40.178	-0.625

Model tahminine geçmeden önce serilerin durağanlık özellikleri test edilmiştir. Tablo 3'te sunulan ADF, KPSS ve Zivot-Andrews yapısal kırılmalı birim kök testi sonuçları, analizde kullanılan değişkenlerin ARDL/NARDL yaklaşımı için uygun olduğunu göstermektedir. Bulgular, serilerin ya düzeyde durağan olduğunu ya da birinci farkları alındığında durağanlaştığını ortaya koymaktadır. Ayrıca hiçbir değişkenin ikinci dereceden bütünleşik [I(2)] özellik göstermemesi, kullanılan ekonometrik yöntemin metodolojik geçerliliğini desteklemektedir.

Tablo 3. Ampirik Bulguların Özeti

Panel	Test / Değişken	İstatistik/Katsayı	p-değeri	Yorum
A. Birim Kök ve Durağanlık Testleri	MRI (ADF)	-7.497	0.000	Düzeyde durağan
	ln(ECSU) (ADF)	-3.747	0.003	Düzeyde durağan
	Enflasyon sürprizi (ADF)	-3.392	0.011	Düzeyde durağan
	ΔMRI (ADF)	-7.755	0.000	Birinci farkta durağan
	Δln(ECSU) (ADF)	-14.017	0.000	Birinci farkta durağan
	ΔEnflasyon sürprizi (ADF)	-7.386	0.000	Birinci farkta durağan
B. NARDL Kısa Dönem Tahmin Sonuçları	Sabit	-1.916	0.289	Anlamlı değil
	Hata düzeltme katsayısı (ρ)	-0.744	0.000	Güçlü ve anlamlı uyum mekanizması
	$ECSU^{+}$	-0.727	0.788	Anlamlı değil
	$ECSU^{-}$	-0.609	0.735	Anlamlı değil
	$ISURP^{+}$	1.287	0.023	Pozitif ve anlamlı
	$ISURP^{-}$	0.298	0.659	Anlamlı değil
C. Uzun Dönem Katsayıları	$ECSU^{+}$	-1.900	—	Negatif ilişki
	$ECSU^{-}$	-2.585	—	Negatif ilişki
	$ISURP^{+}$	-0.025	—	Sınırlı etki
	$ISURP^{-}$	0.122	—	Sınırlı etki
D. Eşbütünleşme ve Simetri Testleri	Ortak seviye testi	F = 21.920	0.000	Uzun dönem ilişki mevcut
	Uzun dönem ECSU simetrisi	F = 0.871	0.352	Simetri reddedilemez
	Uzun dönem enflasyon sürprizi simetrisi	F = 0.426	0.515	Simetri reddedilemez
	Kısa dönem ECSU simetrisi	F = 0.002	0.969	Simetri reddedilemez
	Kısa dönem enflasyon sürprizi simetrisi	F = 0.937	0.335	Simetri reddedilemez
E. Tanısal Testler	Breusch-Godfrey LM	2.360	0.307	Seri korelasyon yok
	ARCH LM	0.155	0.925	ARCH etkisi yok
	Breusch-Pagan	15.546	0.077	Heteroskedastisite reddedilemez
	Jarque-Bera	2.208	0.331	Normallik reddedilemez
	Ramsey RESET	3.412	0.067	Model kurulum hatası yok
	Durbin-Watson	1.928	—	Otokorelasyon sorunu yok
F. Sağlamlık Analizleri	Temel NARDL	ρ = -0.744	0.000	Sonuçlar güçlü
	COVID hariç NARDL	ρ = -0.740	0.000	Bulgular korunuyor
	2021 sonrası örneklem	ρ = -0.720	0.000	Bulgular korunuyor
	Doğrusal ARDL	ρ = -0.703	0.000	Bulgular tutarlı

Not: MRI, Türkiye hisse senedi piyasasında piyasa tarafından ima edilen risk alma göstergesini; ECSU, Türkiye ekonomik ülkeye özgü belirsizlik endeksini; ISURP, modele dayalı enflasyon sürprizi değişkenini ifade etmektedir. HAC standart hatalar kullanılmıştır

Tablo 3'te sunulan ampirik bulguların bütüncül değerlendirmesi, ekonomik politika belirsizliği, beklenmeyen enflasyon gelişmeleri ve Türkiye hisse senedi piyasasındaki piyasa tarafından ima edilen risk alma koşulları arasındaki ilişkinin çok boyutlu bir yapıya sahip olduğunu ortaya koymaktadır. Öncelikle Panel A'da yer alan birim kök ve durağanlık test sonuçları, çalışmada kullanılan değişkenlerin ekonometrik modelleme açısından uygun özellikler taşıdığını göstermektedir. ADF test sonuçlarına göre piyasa tarafından ima edilen risk alma göstergesi (MRI), ekonomik belirsizlik göstergesi [ln(ECSU)] ve modele dayalı enflasyon sürprizi değişkeni düzeyde durağanlık sergilemektedir. Aynı zamanda ilgili değişkenlerin birinci farklarının da güçlü biçimde durağan olması, analizde kullanılan serilerin ikinci dereceden bütünleşik [I(2)] özellik göstermediğini teyit etmektedir. Bu durum, NARDL yaklaşımının uygulanabilirliği açısından temel metodolojik koşulların sağlandığını göstermektedir.

Panel B'de sunulan kısa dönem tahmin sonuçları, modelin en dikkat çekici bulgusunun güçlü hata düzeltme mekanizması olduğunu ortaya koymaktadır. Hata düzeltme katsayısının negatif ve yüksek düzeyde istatistiksel olarak anlamlı bulunması ($\rho = -0.744$; $p < 0.001$), sistemde ortaya çıkan kısa dönem dengesizliklerin hızlı biçimde giderildiğini ve modelin uzun dönem dengeye güçlü biçimde yakınsadığını göstermektedir. Katsayının büyüklüğü dikkate alındığında, kısa dönem dengesizliklerin yaklaşık %74'ünün yalnızca bir ay içerisinde düzeltildiği anlaşılmaktadır. Bu sonuç, Türkiye hisse senedi piyasasının makroekonomik şoklara karşı yüksek düzeyde uyum kapasitesine sahip olduğuna işaret etmektedir.

Kısa dönem dinamikleri açısından ekonomik belirsizlik değişkenine ilişkin pozitif ve negatif bileşenlerin istatistiksel olarak anlamlı olmaması, belirsizlikteki kısa vadeli dalgalanmaların piyasa risk alma davranışı üzerinde doğrudan ve belirgin bir etki yaratmadığını göstermektedir. Buna karşılık, pozitif enflasyon sürprizi bileşeninin ($ISURP^+$) istatistiksel olarak anlamlı ve pozitif katsayıya sahip olması ($\beta = 1.287$; $p = 0.023$), beklenmeyen pozitif enflasyon gelişmelerinin kısa dönemde hisse senedi piyasasında risk alma yönlü hareketleri desteklediğini ortaya koymaktadır. Bu bulgu, yüksek enflasyon ortamında yatırımcıların reel değer kaybeden nominal varlıklardan çıkarak hisse senedi piyasasına yönelmiş olabileceğini düşündürmektedir. Dolayısıyla enflasyonist şokların, yalnızca makroekonomik baskı yaratmakla kalmayıp, aynı zamanda savunmacı portföy yeniden tahsis davranışlarını da tetikleyebildiği anlaşılmaktadır.

Panel C'de sunulan uzun dönem katsayıları, ekonomik belirsizliğin Türkiye hisse senedi piyasasındaki risk alma koşulları üzerinde negatif yönlü bir etki yarattığını göstermektedir. Hem pozitif hem de negatif ECSU bileşenlerine ilişkin katsayıların negatif olması, ekonomik belirsizlik düzeyindeki artışların yatırımcıların riskli varlıklara yönelme eğilimini zayıflattığını göstermektedir. Bu sonuç, ekonomik belirsizlik literatüründeki teorik beklentilerle uyumludur. Buna karşılık enflasyon sürprizlerine ilişkin uzun dönem katsayılarının oldukça sınırlı olması, bu değişkenin etkisinin esas olarak kısa dönemli piyasa davranışları üzerinden ortaya çıktığını düşündürmektedir.

Panel D'de yer alan eşbütünleşme ve simetri testleri, modelin teorik yapısına ilişkin önemli bulgular sunmaktadır. Gecikmeli seviye değişkenlerinin ortak anlamlılığına ilişkin F-istatistiğinin oldukça yüksek bulunması ($F = 21.920$; $p < 0.001$), ekonomik belirsizlik, beklenmeyen enflasyon gelişmeleri ve piyasa tarafından ima edilen risk alma koşulları arasında güçlü ve istikrarlı bir uzun dönem ilişkinin bulunduğunu göstermektedir. Bununla birlikte Wald simetri testleri, ekonomik belirsizlik ve enflasyon sürprizlerindeki pozitif ve negatif bileşenlerin istatistiksel olarak farklı etkiler yarattığını göstermemektedir. Bu sonuç, teorik olarak doğrusal olmayan bir model çerçevesi benimsenmiş olsa da, ampirik olarak asimetrik etkilerin doğrulanmadığını ortaya koymaktadır. Başka bir ifadeyle, pozitif ve negatif şokların farklı davranışsal sonuçlar üretmesi yönündeki teorik beklenti, incelenen örneklem döneminde istatistiksel olarak desteklenmemektedir.

Panel E'de sunulan tanısal test sonuçları, modelin ekonometrik güvenilirliğini güçlü biçimde desteklemektedir. Seri korelasyon, ARCH etkisi, normallik sapması ve model kurulum hatasına ilişkin test sonuçları, model spesifikasyonunun istatistiksel açıdan tutarlı olduğunu göstermektedir. Breusch-Pagan testinin sınır değerlere yakın olmasına rağmen %5 anlamlılık düzeyinde heteroskedastisite sorununa işaret etmemesi ve buna rağmen HAC standart hataların kullanılmış olması, model tahminlerinin sağlamlığını artıran metodolojik bir tercih olarak değerlendirilebilir. Durbin-Watson istatistiğinin 2'ye oldukça yakın olması da modelde ciddi bir otokorelasyon sorunu bulunmadığını desteklemektedir.

Son olarak Panel F'de yer alan sağlamlık analizleri, elde edilen temel bulguların alternatif örneklem dönemleri ve model spesifikasyonları altında da büyük ölçüde korunduğunu göstermektedir. COVID-19 döneminin dışlandığı örneklemde, yüksek enflasyon dönemine odaklanan alt örneklemde ve doğrusal ARDL modeli kullanıldığında hata düzeltme katsayısının negatif ve güçlü biçimde anlamlı kalmaya devam etmesi, modelde tespit edilen hızlı uyum mekanizmasının yapısal olarak istikrarlı olduğunu göstermektedir. Bununla birlikte, bu alternatif modellemeler de asimetrik etkiler lehine yeni bir bulgu üretmemektedir.

Genel olarak değerlendirildiğinde Tablo 3, Türkiye hisse senedi piyasasının ekonomik belirsizlik ve beklenmeyen enflasyon gelişmelerine duyarlı olduğunu; ancak bu ilişkinin doğrusal olmayan asimetrik şok tepkilerinden ziyade güçlü bir dengeye dönüş mekanizması ve kısa dönemli portföy yeniden tahsis davranışları çerçevesinde şekillendiğini ortaya koymaktadır.

5. SONUÇ

Bu çalışmada elde edilen bulgular, Türkiye hisse senedi piyasasındaki piyasa tarafından ima edilen risk alma koşullarının aylık frekansta güçlü bir ortalamaya dönüş (*mean-reverting*) eğilimi sergilediğini ortaya koymaktadır. Bu durum, makroekonomik ve finansal bilgilerin piyasa tarafından hızlı biçimde fiyatlandığı dinamik piyasa yapısıyla uyumlu görünmektedir. Nitekim hata düzeltme mekanizmasının güçlü ve istatistiksel olarak anlamlı olması, kısa dönem dengesizliklerin oldukça hızlı biçimde giderildiğini ve piyasanın uzun dönem dengeye güçlü bir yakınsama sergilediğini göstermektedir. Bu çerçevede çalışmanın en belirgin ampirik bulgusunun, ekonomik belirsizlik değişkeninin tek başına etkisinden ziyade, piyasanın şoklara karşı sergilediği hızlı uyum kapasitesi olduğu değerlendirilmektedir.

Uzun dönem katsayılarının ekonomik belirsizlik açısından negatif işaret üretmesi, belirsizlikten kaçınma yaklaşımıyla teorik olarak uyumludur. Buna göre ekonomik politika belirsizliğindeki artışlar, yatırımcıların riskli varlıklara yönelme isteğini zayıflatmakta ve hisse senedi piyasasındaki risk alma koşullarını baskılamaktadır. Bununla birlikte ilgili katsayıların bireysel düzeyde güçlü istatistiksel anlamlılık sergilememesi, bu ilişkinin ihtiyatlı biçimde yorumlanmasını gerekli kılmaktadır. Dolayısıyla çalışma, ekonomik belirsizliğin doğrusal ve doğrudan etkisinden ziyade, genel piyasa uyum dinamikleri üzerinden daha güçlü sonuçlar sunmaktadır.

Çalışmanın dikkat çekici bulgularından biri, kısa dönemde pozitif enflasyon sürprizlerinin hisse senedi piyasasındaki risk alma eğilimini artırmasıdır. Bu bulgu, yüksek enflasyon ortamlarında beklenmeyen enflasyon artışlarının yatırımcıları savunmacı portföy yeniden tahsis davranışına yöneltebileceğini göstermektedir. Başka bir ifadeyle, nakit ve diğer nominal varlıkların reel değer kaybına uğradığı dönemlerde yatırımcılar, hisse senetlerini göreli olarak daha cazip bir alternatif olarak değerlendirebilmektedir. Bununla birlikte bu durumun yatırımcı iyimserliği ya da hisse senetlerinin risksiz bir enflasyondan korunma aracı olduğu şeklinde yorumlanmaması gerekmektedir. Daha doğru yorum, enflasyonist baskıların arttığı dönemlerde yatırımcıların reel değer koruma amacıyla portföy tercihlerinde yeniden dengeleme davranışı sergileyebildiğidir.

Çalışmanın bir diğer önemli bulgusu ise doğrusal olmayan asimetrik etkilerin istatistiksel olarak doğrulanmamış olmasıdır. NARDL yaklaşımı, pozitif ve negatif şokların farklı etkiler üretip üretmediğini test etmeye olanak tanımaktadır; ancak elde edilen bulgular incelenen örneklem döneminde bu farklılaşmayı desteklememektedir. Bu durum metodolojik bir başarısızlık olarak değil, başlı başına anlamlı bir ampirik sonuç olarak değerlendirilmelidir. Çünkü söz konusu bulgu, ekonomik belirsizlik ve enflasyon sürprizlerinin yatırımcı davranışları üzerindeki etkilerinin örneklem dönemi boyunca sistematik biçimde asimetrik bir yapıda gerçekleşmediğini göstermektedir. Bu bağlamda doğrusal olmayan modelin katkısı, asimetrik etkileri doğrulamaktan ziyade, uyum dinamikleri ile simetri özelliklerinin daha açık biçimde analiz edilmesine imkan tanımasıdır.

Genel olarak değerlendirildiğinde bu çalışma, Türkiye'ye özgü ekonomik belirsizlik, modele dayalı beklenmeyen enflasyon gelişmeleri ve Türkiye hisse senedi piyasasındaki piyasa tarafından ima edilen risk alma koşulları arasındaki ilişkiyi NARDL yaklaşımı çerçevesinde incelemiştir. Analizde 2013M03–2024M12 dönemine ait aylık veriler kullanılmış; bağımlı değişken yatırımcı psikolojisini doğrudan temsil eden davranışsal bir gösterge yerine, piyasa tarafından ima edilen risk alma koşulları olarak kavramsallaştırılmıştır. Bu yaklaşım, mevcut veri yapısıyla araştırma sorusu arasında metodolojik tutarlılık sağlamanın yanı sıra, hisse senedi fiyat hareketlerinin davranışsal yorumlarının aşırı genişletilmesini de önlemektedir.

Ampirik bulgular, güçlü bir hata düzeltme mekanizması ve değişkenler arasında anlamlı bir uzun dönem ilişkisinin varlığını ortaya koymaktadır. Ekonomik belirsizlik değişkenleri uzun dönemde negatif yönlü ilişki sergilerken, kısa dönemde pozitif enflasyon sürprizlerinin istatistiksel olarak anlamlı ve pozitif etkisi tespit edilmiştir. Buna karşılık Wald testleri, kısa ve uzun dönemde simetri varsayımını reddetmemiştir. Bu çerçevede çalışmanın temel katkısı, Türkiye'ye özgü ekonomik belirsizlik ile beklenmeyen enflasyon gelişmelerinin hisse senedi piyasasındaki risk alma koşullarıyla dinamik biçimde ilişkili olduğunu göstermesi; ancak mevcut veri setinin doğrusal olmayan asimetrik etkileri destekleyen güçlü ampirik kanıt sunmamasıdır.

Çalışmanın özellikle uygulamalı makro-finans ve gelişmekte olan piyasalar literatürüne katkı sunduğu değerlendirilmektedir. Bununla birlikte gelecekte yapılacak araştırmalarda, piyasa tarafından ima edilen risk alma göstergesi yerine Borsa İstanbul işlem hacmi oranları, Merkezi Kayıt Kuruluşu yatırımcı katılım verileri veya hisse senedi fon akımları gibi yatırımcı davranışını daha doğrudan temsil eden göstergelerin kullanılması, davranışsal yorumların ampirik gücünü daha da artırabilecektir.

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CONSUMER TRUST DURING BRAND CRISES: INFLUENCER VS. BRAND SPOKESPERSON

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ABSTRACT

Purpose- This research aims to investigate the sourcing of the message and the responsibility for the brand crisis that affects consumer trust in the brand in brand crisis scenarios. The study examines the impact of the different message sources (brand spokesperson vs. influencer) and different levels of crisis responsibility (low vs. high) on consumer perceptions of brand trust, brand attitude, purchase intention, and source credibility.

Methodology- The research design used was experimental with a quantitative approach. 115 participants were recruited and split into a 2 × 2 between-subject factorial design. The message sourcing (brand spokesperson versus influencer) and the crisis responsibility (low versus high) factors were manipulated in the experiment across four fictional skincare brand crisis scenarios. Following exposure to the scenarios, participants filled out a structured questionnaire that assessed brand trust, brand attitude, purchase intention, and source credibility. Data analysis was performed by SPSS, descriptive statistics, Cronbach's alpha reliability test, chi-square test, and two-way ANOVA.

Findings- The results showed a high internal consistency for all the constructs measured, such as brand trust (α = .918), brand attitude (α = .928), purchase intention (α = .920) and source credibility (α = .937). There was a statistically significant effect on all of the dependent measures of crisis responsibility (all $p < .001$), with the low responsibility condition having higher means than the high responsibility condition. When looking at the source of the message, there was a significant effect on brand attitude ($p = .010$) and purchase intention ($p = .027$), there was no significant effect on brand trust ($p = .092$). Furthermore, no significant interaction effects were found between message source and crisis responsibility.

Conclusion- From the analysis, it can be concluded that during a crisis, more than the source of the message, the responsibility of the crisis is more influential in shaping the consumer's trust and related perceptions of the brand. While the message source has some influence on attitude and purchase intention, its impact on trust is limited. The results indicate that the perception of responsibility in times of crisis must be taken care of to maintain consumer trust and brand evaluation as the main focus of effective communication strategies.

Keywords: Brand crisis, consumer trust, crisis responsibility, influencer marketing, brand spokesperson, crisis communication, source credibility, purchase intention, brand attitude, social media.
JEL Codes: M31, M37, D12

1. INTRODUCTION

In today's digital landscape, filled with instant information through online media and social networks, brand crises have become a frequent occurrence. Brand crisis is an event that occurs unexpectedly and puts an organization's reputation, credibility and relationships with stakeholders at risk. (Ishrat et al., 2023) In those moments, the trust of the customer is one of the most important but easily lost assets for companies. Trust can be built through performance, transparency, and positive customer experience, but can be lost quickly if a company does not respond appropriately during a crisis.(Chandrasekar & Rehman, 2024) With digital media becoming so popular, it has escalated the pressure on the public to scrutinise the actions of businesses, so effective communication during a crisis is crucial to maintaining consumer trust and protecting the brand's reputation.(Jankovska, 2023)

The development of social media has completely revolutionized the way social crises are communicated, allowing for more than just one-way messaging from companies, but rather for interactive, real-time communication. Today, organisations are required to be responsive, open and consistent as consumers contribute to the development and sharing of brand information via platforms like Instagram, Facebook and X (Twitter).(Ajegbomogun, 2021; Prasetio, 2025). Social media has taken the place of the official corporate communicator with the addition of influential third-party communicators that impact public opinion and consumer perceptions during a crisis. As a result, organisations are increasingly using digital communication strategies to respond to the growing online influence.(Lıu, 2023)

Of these communication channels, social media influencers and traditional brand spokespersons are two standout sources of crisis communication. By being authentic and relatable and using non-rigid communication, influencers may cultivate a relationship with their audience that allows them to shape consumer attitudes and behavioural intentions.(Helme, 2023; Vrontis et al., 2021) If they are perceived as credible, their message acceptance and trust-building may improve if their values are congruent with the brand's values.(Claeys & De Waele, 2022). On the other hand, brand spokespeople - executive and public relations - are seen as more powerful, professional, and responsible when they communicate, which can help to bring some comfort to consumers, as they see that the organization is taking responsibility for the crisis. But they might come across as less easy to relate to in formal communication, especially when it comes to digital consumers.(Coleman, 2023; Goodwin, 2025)

The concept of source credibility has been shown to have a significant impact on consumer reactions in times of brand crisis. Whether the source is an influencer or an official spokesperson, consumers are more likely to take crisis messages as true when the source is seen as knowledgeable, credible and trustworthy.(Van Zoonen & Van Der Meer, 2015) In addition, timely, transparent, and consistent communication has been proven to lower negative perceptions, aid in trust rebuilding, and enhance brand recovery. Although influencers have increasingly been used in crisis communication, there is little empirical research that directly compares the effectiveness of influencer-led communication to traditional spokesperson-led communication with regard to rebuilding consumer trust.(Mgbe-Ordinma & Aríjeníwà, 2024)

Hence, this study attempts to examine the effectiveness of social media influencers and traditional brand spokespersons in dealing with brand crises and consumer trust. Specifically, it reviews consumer perceptions of these communication sources, explores their impact on consumer behavioral reactions and trust, and pinpoints factors that affect the credibility of communication during a crisis. The results will be useful for organizations to look at when deciding which crisis communication strategies will be successful in building trust between the organization and its consumers and safeguarding long-term brand reputation**.**

2. LITERATURE REVIEW

Based on the Situational Crisis Communication Theory (SCCT), the present study theorized that the degree of organizational responsibility affects how stakeholders view the situation and the resulting effectiveness of the organization's crisis response strategies. Organizations should tailor communication strategies to the nature of the crisis to mitigate damage to their reputation and re-capture the trust of stakeholders, SCCT said. Recent studies have shown that the source delivering the crisis message is as important as the message itself and can significantly influence the consumer's perception of the crisis. For instance, Mishra and Maheshwari (2025) suggested that the selection of a communication source is highly effective for both the context and the recovery outcomes of the crisis.

It is well known that trust of the consumers is one of the major factors influencing successful crisis recovery. It has been proven in numerous studies that transparency, authenticity and regular, honest communication build consumer trust and brand loyalty. According to (Kanjer & Doshi, 2026), genuine digital communication, which depicts messages in an honest and transparent way with storytelling, increases trust and emotional connection with consumers, while overly promotional messages make customers less credible. Likewise, (Korpilaakso, 2025)stated that open communication and honest remedial efforts are crucial during the process of regaining trust after a high-stakes product-harm crisis. Researches also show that in crisis, the positive impact of CSR measures and open communication within an organization on the corporate image and confidence of customers (Chen et al., 2021; Yang & Battocchio, 2021)

Social media has also revolutionized crisis communication with the emergence of influencers as key communication intermediaries. Influencers tend to relate more personally and relationally, which helps them to impact consumer attitudes and behavioral intentions. (Abu-Alhaija & Elsawy, 2026) showed that the role of brand trust is a mediator between the influencer's authenticity and communication skills and brand loyalty. Similarly, (OUADDI, 2025) argued that the use of an influencer messenger of an apology leads to higher levels of consumer forgiveness, higher levels of trust, and higher levels of purchase intentions post-crisis than a traditional brand apology due to its authenticity and credibility. Still, the effectiveness of an influencer relies on qualities like their knowledge, beauty, credibility, and congruence with the brand they are promoting (Fernandes Crespo & Tille, 2024). On the other hand, the low credibility effect of highlighting the artificial aspect of virtual influencers has been studied as a negative factor on both the influencer's credibility and consumers' trust in the brand (Muniz et al., 2024)

The traditional brand representative is an integral part of a crisis communication team as they are responsible for providing the organization's authoritative, professional and accountable response. According to the findings, the right approach to crisis response, such as the appropriate apology type and responsibility communication, can have a significant impact on consumer trust and reconciliation (Sandstig & Eriksson, 2024). Additionally, emotional and promise-based corporate reactions have been found to be more effective in creating positive electronic word-of-mouth and in rebuilding consumer confidence in the company during crisis situations (Wang et al., 2021).

While there have been a variety of studies that explore different aspects of crisis communication, influencer marketing, and consumer trust, the majority of research has been conducted on influencer communication in isolation and brand communication in isolation. Very limited research has directly compared the effectiveness of an influencer and a spokesperson in a crisis communication campaign and also taken into account the crisis responsibility of both and how they impact brand trust, brand attitude, purchase intention and source credibility all at the same time. This study aims to fill this gap by conducting an experimental study to compare these communication sources with varying amounts of crisis responsibility and provide a more comprehensive understanding of consumer responses during brand crises.

3. DATA AND METHODOLOGY

The research design in this study was quantitative with an experimental method using a 2x2 between-subjects factorial design to investigate the effect of message source (brand spokesperson and social media influencer) and the level of responsibility (low and high) of the crisis on consumer perceptions during a brand crisis. The four fictional skincare brand crisis scenarios were created, and participants were randomly allocated to one of four experimental groups: Brand + Low Responsibility, Brand + High Responsibility, Influencer + Low Responsibility, and Influencer + High Responsibility.

The number of participants was 115 (convenience sampling), and they finished an online self-administered questionnaire. The survey was composed of demographic questions followed by validated measurement scales adapted from previous studies for measuring brand trust (3 items), brand attitude (3 items), purchase intention (3 items) and source credibility (4 items). The responses were measured on a seven-point Likert scale from 1-not at all to 7-extremely.

The IBM SPSS Statistics (Version 27) software was used for analyzing data. Participant characteristics and study variables were summarized using descriptive statistics, and internal consistency of the measurement scales was obtained using Cronbach's alpha. A two-way analysis of variance (ANOVA) was used to determine the main and interaction effects of message source and crisis responsibility on the dependent variables. The p-value less than 0.05 was considered statistically significant.

Table 1: Demographics

Variables	Categories	N	(%)	Variables	Catergories	N	(%)
Gender	Male	56	48.7	Social Media Use	Daily	50	43.5
	Female	59	51.3		Weekly	18	15.7
					Rarely	21	18.3
					Never	26	22.6
Age	18–24	38	33.0	Follow Influencers	Yes	55	47.8
	25–29	31	27.0		No	60	52.2
	30–34	27	23.5				
	35–39	19	16.5				
Education Level	High School	22	19.1	Message Source	Brand	67	58.3
	Undergraduate	35	30.4		Influencer	48	41.7
	Postgraduate	30	26.1				
	Doctorate	28	24.3				
Crisis Responsibility	Low	70	60.9	Perceived Preventability	Not at all	7	6.1
	High	45	39.1		Very slightly	47	40.9
					Slightly	20	17.4
					Moderately	30	26.1
					Considerably	11	9.6
Experimental Condition	Brand + Low	47	40.9	Crisis Message Source	Brand Official Account	67	58.3
	Brand + High	20	17.4		Social Media Influencer	48	41.7
	Influencer + Low	23	20.0				
	Influencer + High	25	21.7				
Total		115	100	Total		115	100

Table 2: Reliability and Descriptive Statistics

Variable	Items	Cronbach's α	Mean	SD
Brand Trust	3	.918	3.55	0.91
Brand Attitude	3	.928	3.54	0.92
Purchase Intention	3	.920	3.48	0.91
Source Credibility	4	.937	3.45	0.87

Table 3: Experimental Condition Means and Two-Way ANOVA Results

Dependent Variable	Brand + Low	Brand + High	Influencer + Low	Influencer + High	Message (p)	Crisis (p)	Interaction (p)
Brand Trust	4.07 ± 0.68	3.00 ± 0.75	3.82 ± 0.71	2.76 ± 0.69	.092	<.001	.988
Brand Attitude	4.07 ± 0.70	3.10 ± 0.77	3.68 ± 0.73	2.73 ± 0.72	.010*	<.001*	.920
Purchase Intention	3.97 ± 0.72	3.06 ± 0.74	3.68 ± 0.70	2.69 ± 0.70	.027*	<.001*	.802
Source Credibility	3.84 ± 0.65	3.16 ± 0.71	3.80 ± 0.66	2.64 ± 0.68	.052	<.001*	.090

4. FINDINGS

Demographic characteristics of the participants and the distribution of the samples across the experimental conditions are presented in table 1. The participants included 115 respondents with a roughly equal distribution evenly split by gender, age, education level, social media usage, message source, and crisis responsibility conditions.

Table 2 indicates that the internal consistencies of all the measurement scales were good, with Cronbach's alpha ranging from .918 to .937, which is higher than the recommended .70. The descriptive statistics further indicate moderate mean scores for brand trust (M = 3.55, SD = 0.91), brand attitude (M = 3.54, SD = 0.92), purchase intention (M = 3.48, SD = 0.91), and source credibility (M = 3.45, SD = 0.87).

The mean scores for the four experimental conditions are shown in table 3 with the results of the two-way ANOVA. The Brand + Low Responsibility condition had the highest scores on all dependent variables, and the Influencer + High Responsibility condition had the lowest scores on all dependent variables. The crisis responsibility had a significant impact on brand trust, brand attitude, purchase intention (all $p < .001$) and source credibility ($p < .01$). Brand attitude was significantly affected by the message source ($p = .010$) as was purchase intent ($p = .027$) but not source credibility ($p = .052$) or brand trust ($p = .092$). Furthermore, no differences were found between interaction effects of message source and crisis responsibility, suggesting that perceived crisis responsibility was the most important factor affecting consumers' responses in a brand crisis.

5. CONCLUSION

The current study assessed the influence of the message's source and the level of crisis responsibility on consumer trust in the brand in the context of a brand crisis. The results showed that crisis responsibility was found to have the most significant influence on brand trust, brand attitude, purchase intention, and source credibility, followed by the influence of the crisis type (low responsibility crises had significantly more positive consumer responses). The results showed that while brand attitude and brand purchase intention were significantly influenced by the message source, the same was not true for the perceptions of brand trust and source credibility. The findings that were found in this study support the Situational Crisis Communication Theory (SCCT) that suggests that during a crisis situation, transparency, accountability and speed of communication are important factors for organizations to consider. Influencers can help with crisis communication, but it is important to have an official brand spokesperson to provide credible organizational response. To further validate the findings, more participants, a wider range of participants, and a more naturalistic crisis scenario should be employed, as should other factors including brand loyalty, emotions and perceived risk.

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EMERGING FACTORS AFFECTING MARKETING: CONTEMPORARY TRENDS AND CHALLENGES

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ABSTRACT

Purpose- This study examines the emerging factors that are transforming the marketing landscape and analyzes the contemporary trends and challenges that influence strategic decision-making and organizational performance. It aims to identify the key drivers shaping modern marketing practices and evaluate their implications for businesses operating in dynamic and competitive markets.
Methodology- The study adopts a comprehensive literature-based approach by synthesizing insights from recent scholarly publications on marketing. It focuses on major themes including digital transformation, consumer behavior, sustainability, and data governance. To systematically assess the impact of identified trends, a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was conducted, enabling the evaluation of both opportunities and challenges associated with emerging marketing factors.
Findings- The study identifies five major categories of emerging factors influencing contemporary marketing practices:1. Technological advancements such as artificial intelligence (AI), big data analytics, machine learning, automation, chatbots, and omnichannel digital marketing are transforming customer engagement and strategic decision-making. 2. Social media and influencer marketing are enhancing customer engagement, brand awareness, user-generated content, and consumer loyalty. 3. The expansion of e-commerce and digital platforms, supported by online marketplaces, digital payment systems, and advanced logistics networks, is reshaping the customer journey. 4. Evolving consumer preferences increasingly emphasize personalization, convenience, value, ethical consumption, and sustainability.5. Data privacy, cybersecurity, and consumer trust concerns continue to present significant challenges for marketers.The study reveals that technological innovation and digital connectivity create substantial opportunities for customer engagement, operational efficiency, and competitive advantage. However, challenges related to ethical concerns, privacy risks, regulatory compliance, sustainability expectations, and market competition remain significant.
Conclusion- The study concludes that emerging technologies and digital innovations offer considerable potential for improving marketing effectiveness and business performance. However, organizations must balance technological advancement with customer-centric, ethical, and sustainable marketing practices. Long-term marketing success will depend on strategic flexibility, strong digital capabilities, responsible data management, sustainability integration, and the ability to respond proactively to changing consumer expectations and market conditions. The study contributes to the understanding of contemporary marketing dynamics and provides practical insights for academics, marketers, and policymakers.

Keywords: Emerging marketing trends, digital transformation, artificial intelligence (AI), social media marketing, e-commerce
JEL Codes: M31, M15, O33, D12, L81, Q56

1. INTRODUCTION

The evolution of marketing management reflects a progressive shift from accumulative marketing in the early 1900s, through differential and reactive approaches, toward proactive and digital marketing in the contemporary era. The historical progression demonstrates the gradual structuring of marketing functions that reflect increasing organizational sophistication and growing customer awareness. The digital marketing era from 2010 onwards underscores technology-driven transformation and real-time engagement strategies shaping modern competitive environments worldwide, requiring continuous adaptation, data-driven decision-making, and integrated strategic approaches to meet evolving consumer expectations effectively in today's worldwide contexts (Sak et al., 2025). Rapid technological advancement has accelerated marketing innovation through AI-powered machine learning (ML), chatbots, and voice assistants, which enhance customer segmentation, real-time targeting, campaign optimization, and personalized interactions across digital channels. These technologies improve customer satisfaction, purchasing decisions, and post-sale engagement. Together, sustainability and AI-driven innovation are redefining contemporary marketing strategies, creating both opportunities and challenges for organizations worldwide (Haleem et al., 2022).

Overall, the marketing landscape is rapidly evolving due to technological advancements, globalization, and changing consumer expectations. Traditional marketing methods, including print media, television, and direct sales, have gradually shifted toward digital, customer-centric strategies that emphasize personalized experiences and meaningful engagement. Emerging technologies such as AI, social media, mobile platforms, and data analytics have transformed communication, targeting, automation, and decision-making processes. Digital transformation has also redefined how consumers interact with brands, creating both opportunities and challenges for organizations. Understanding these emerging trends and their implications is essential for developing competitive marketing strategies. This study examines contemporary factors, challenges, and strategic responses shaping modern marketing practices.

2. METHODOLOGY

This study adopted a structured methodological framework to synthesize evidence on key drivers shaping modern marketing transformation. A protocol was developed in advance, outlining inclusion and exclusion criteria, data sources, search strategy, and analytical procedures to ensure transparency, reproducibility, and methodological rigor. A comprehensive literature search was conducted across Google Scholar, Scopus, Springer, Taylor & Francis, Wiley, MDPI, and ScienceDirect using keywords such as emerging marketing trends, digital transformation, artificial intelligence, social media marketing, and e-commerce. After removing duplicates, titles and abstracts were screened, followed by full-text eligibility assessment. Data extraction was performed on the selected studies, which were then thematically analyzed and synthesized into a coherent study presenting current trends, challenges, and future perspectives.

3. LITERATURE REVIEW

The literature review section covers key topics, including recent developments in marketing, social media and influencer marketing, e-commerce and digital platforms, and green marketing. It also addresses digitalization's influence on consumer behavior and ethical marketing systems, offering a comprehensive overview of emerging marketing dynamics.

3.1. Recent Developments and Contemporary Drivers in Marketing

Modern developments and influential marketing include data-driven customer-centric technologies, technological advancements, marketing performance, AI, big data-driven digital marketing, and omnichannel transformation in digital ecosystems.

3.1.1. Data-Driven Customer-Centric Technologies

Contemporary marketing is increasingly driven by product innovation, dynamic pricing, diversified targeting, and technological adaptation to enhance competitiveness and customer responsiveness. Marketing has evolved from traditional, product-centered approaches toward digital, customer-centric strategies emphasizing personalized experiences and long-term engagement. Customer-centric technologies enhance engagement, communication, and relationship management, improving customer-based profitability, supporting new product development, and strengthening trust through relationship-based marketing that empowers consumers and fosters long-term organizational performance and competitive advantage. Consumer behavior remains influenced by price, quality, and necessity, while sustainability, social influence, and digital technologies are emerging determinants of purchasing decisions. Technologies such as AI, big data analytics, and the Internet of Things (IoT) enable personalization, operational efficiency, and customer journey optimization, supporting relationship-based and value-driven marketing. These developments highlight the strategic importance of data-driven technologies and real-time analytics in achieving competitive advantage within rapidly digitalizing markets (Zulfikar et al., 2025).

3.1.2. Technological Advancements and Marketing Performance

Digital platforms continue to expand, enabling businesses to engage consumers through diverse channels while automation enhances productivity, responsiveness, and campaign efficiency. Advanced analytics, AI, the IoT, and customer experience management improve customer insights, operational resilience, and data-driven decision-making, supporting sustainable business performance. Online reviews and digital platforms increasingly shape brand reputation and consumer trust, making strategic integration, leadership commitment, and technological literacy essential. Furthermore, e-commerce firms demonstrate greater effectiveness in leveraging personalization, social media, and analytics than traditional businesses, highlighting the importance of digital adaptability for achieving competitive advantage and stronger customer engagement (Ahmad, 2025).

3.1.3. Digital Marketing Through AI and Big Data

Technological innovation has become a defining force in contemporary marketing, transforming consumer engagement, value creation, and competitive strategies. Kumar et al. (2024) emphasized that advances in information and communication technologies require organizations to adopt digital fluency, data-driven personalization, AI, and social media integration while safeguarding consumer privacy to strengthen trust and loyalty. The transition from traditional marketing to technology-enabled, behavior-driven approaches also demands continuous investment in workforce training and analytical capabilities. AI is transforming contemporary marketing by enabling personalized recommendations, predictive analytics, and intelligent automation that enhance customer experiences and organizational performance. Technologies such as ML, natural language processing, chatbots, and virtual assistants improve customer segmentation, real-time engagement, campaign optimization, and service responsiveness while supporting data-driven decision-making. These capabilities increase efficiency, scalability, return on investment, and customer satisfaction through targeted content delivery. Big data enables data-driven decision-making by uncovering consumer insights, identifying market trends, optimizing real-time targeting, enhancing campaign effectiveness, and improving strategic responsiveness to evolving market conditions. Organizations must prioritize transparency, fairness, and accountability to maintain consumer trust while leveraging AI for sustainable competitive advantage and customer-centric marketing innovation (Islam et al., 2024). An effective AI integration roadmap begins with an initial assessment of organizational readiness, followed by data preparation and appropriate technology selection. Pilot implementation enables performance evaluation before full-scale integration across marketing functions. Continuous optimization through monitoring, feedback, and model refinement ensures sustained efficiency, improved decision-making, enhanced customer experiences, and long-term competitive advantage in dynamic marketing environments (Islam et al., 2024).

3.1.4. Omnichannel Marketing Transformation in Digital Ecosystems

Omnichannel marketing integrates online and offline touchpoints to create seamless, consistent, and personalized customer experiences that enhance satisfaction and brand loyalty. Technologies such as customer data platforms, customer relationship management systems, marketing automation, AI, and ML enable real-time data integration, behavioral tracking, predictive analytics, and adaptive engagement across channels. However, successful implementation requires robust data governance, interoperable technologies, unified customer profiles, advanced attribution models, and ethical data practices to strengthen trust, optimize marketing performance, and sustain competitive advantage in digital markets (Darvidou, 2024).

3.2. Social Media & Influencer Marketing

Online influencer marketing has become a powerful driver of digital brand growth by strengthening consumer engagement, electronic word-of-mouth, and brand loyalty. Digital content marketing, supported by influencer-generated content, enhances brand credibility, emotional connections, and customer trust while expanding market reach. Effective commission structures and incentive alignment improve platform–influencer collaboration and profitability. For small and medium enterprises (SME), the strategic integration of digital marketing, social media, and influencer partnerships significantly increases brand awareness and competitiveness, explaining a substantial proportion of brand visibility. These findings underscore the importance of coordinated digital engagement strategies for achieving sustainable marketing performance and long-term customer relationships (Ramdani and Fietroh, 2025). Increasing smartphone penetration enhances constant connectivity, enabling mobile apps, push notifications, and location-based marketing to deliver personalized, real-time consumer engagement and improved marketing effectiveness.

3.3. E-commerce & Digital Platforms

Digital marketing plays a crucial role in shaping consumer trust, purchase intention, and engagement across e-commerce platforms, while hybrid digital-traditional strategies enhance consistency, personalization, and overall customer experience. Cross-border e-commerce networks further improve firm performance through strategic positioning, knowledge transfer, and global market access. Integrated marketing and logistics systems increase operational efficiency and strengthen adaptive competitiveness within dynamic digital ecosystems. In addition, SME adoption of e-commerce platforms drives distribution transformation, expands global reach, and improves ecosystem-based performance. Collectively, these developments highlight the importance of combining technological innovation, strategic integration, and customer-centric approaches to achieve sustainable growth and competitiveness in evolving digital markets (Ibrahim and Zeebaree, 2025).

3.4. Sustainability and Digital Green Marketing

Recent trend analysis demonstrates a substantial transformation in marketing research themes over time. Following 2010, there has been a marked exponential rise in research on green marketing, circular economy, sustainable innovation, and ethics-driven consumption, reflecting increasing environmental awareness and regulatory influence. Among these themes, green marketing and circular economy show the strongest growth, underscoring their central role in current academic discourse. This progression highlights a clear shift from conventional marketing approaches toward sustainability-integrated frameworks that prioritize responsible consumption, corporate accountability, and innovation-led environmental solutions. Overall, these patterns indicate rapidly accelerating interest in sustainability-driven transformations within contemporary marketing research worldwide (White et al., 2025). AI is increasingly reshaping global marketing through advanced tools such as ML and predictive analytics, enabling firms to enhance sustainability and competitiveness. Baruno and Indrasari (2025) proposed that AI-driven green marketing improves supply chain efficiency, minimizes resource wastage, and supports personalized eco-marketing strategies that strengthen consumer engagement and loyalty.

3.5. Influence of Digitalization on Consumer Behavior

Consumers are increasingly empowered through easy access to digital information, making them more informed and selective in their purchasing decisions. Growing demand for convenience has elevated expectations for seamless, fast, and accessible brand experiences across platforms. Data-driven strategies supported by analytics, social media, and influencer ecosystems enhance customer retention, loyalty, and long-term satisfaction through personalization and engagement. However, continuous improvement and feedback integration remain essential to sustain competitiveness. Brand loyalty is strengthened through trust, ethical transparency, and meaningful engagement, although authenticity is critical in influencer-driven communication. Overall, digital transformation reshapes consumer behavior, requiring brands to adopt adaptive, customer-centric, and ethically grounded marketing strategies (Haris, 2025).

3.6. Transparency, Trust, and Ethical Marketing Systems

Consumer trust levels vary significantly across regions, with North America exhibiting the highest trust (74%), followed by Europe (67%) and Asia-Pacific (58%), reflecting increasing uncertainty and declining trust in global digital markets. These regional disparities highlight key challenges in contemporary marketing, including privacy concerns, credibility gaps, inconsistent regulatory frameworks, and rising consumer skepticism toward digital platforms. Ali et al. (2025) emphasized that transparency, accountability, and ethical marketing practices significantly enhance brand credibility, engagement, and long-term customer loyalty. Their findings further indicate that cultural and regional differences strongly influence trust formation, necessitating localized ethical strategies, strengthening cybersecurity frameworks, and adaptive governance frameworks. Overall, sustainable success in digital marketing depends on integrating ethical governance, robust data protection, and transparent communication to build enduring consumer trust in increasingly competitive and interconnected global markets.

4. SWOT ANALYSIS

A SWOT analysis was conducted to systematically evaluate strengths, weaknesses, opportunities, and threats associated with emerging marketing trends, enabling a structured assessment of their strategic impact and market implications.

Study & Year	Major Findings	Strength	Weakness	Threats	Opportunities
Kiani & Nazari, 2026	Integration of marketing strategies with emerging technologies improves customer acquisition, engagement, and retention	Enhance satisfaction, engagement, and loyalty; personalized communication strengthens customer relationships	Technology-specific effects need additional insights	Rapid tech obsolescence or privacy concerns may reduce satisfaction	Use AI, immersive tech, and personalization to improve customer experience and retention
Ahmed et al., 2025	AI-driven personalization improves relevance, timeliness, and individualization of consumer interactions, enhancing engagement and loyalty	Demonstrates a strong link between AI personalization and consumer satisfaction; boosts experiential value	Limited cross-cultural evidence; potential privacy and trust concerns	Algorithmic failures or unethical AI practices can reduce satisfaction	Implement ethical, explainable AI and personalization to elevate consumer experience and satisfaction
White et al., 2025	Sustainability marketing promotes responsible consumption	Can enhance satisfaction via eco-friendly practices	Limited evidence on measurable consumer outcomes	Failure can lead to disengagement or skepticism	Use systemic and consumer-oriented sustainability strategies

5. FINDINGS

The findings critically evaluate implications, identify barriers, and explore the future outlook of emerging factors affecting marketing.

5.1. Implications

The implications of contemporary marketing transformation are extensive for organizations, policymakers, and broader digital ecosystems, requiring strategic alignment of innovation, AI, data analytics, and ethical governance to enhance competitiveness, customer engagement, and sustainable value creation. Organizations must embed digital transformation across all functions by integrating AI, big data, omnichannel systems, influencer marketing, e-commerce platforms, and sustainability initiatives to deliver seamless, personalized, and customer-centric experiences. Policymakers must establish robust regulatory frameworks that promote transparency, digital infrastructure development, data protection, and responsible innovation across global markets. Firms also need to address regional disparities in consumer trust by adopting culturally and behaviorally adaptive strategies aligned with diverse regulatory environments. Small and medium enterprises can leverage scalable digital tools, mobile technologies, and global platform access to enhance competitiveness in rapidly digitalizing markets. Moreover, integrating green marketing and sustainability practices requires organizations to balance profitability with environmental responsibility. Collectively, these implications emphasize the necessity of a coordinated, ethical, and innovation-driven framework to ensure long-term competitiveness, consumer trust, and sustainable growth in evolving global marketing ecosystems.

5.2. Identified Research Gap and Key Challenges

Contemporary global marketing faces multifaceted challenges stemming from cultural, economic, technological, and regulatory complexities. International expansion requires a deep understanding of diverse consumer behaviors, languages, values, and purchasing patterns. Economic instability, inflation, and market saturation intensify pricing pressures and limit differentiation, while global competition demands continuous innovation and stronger value propositions. Rapid technological change, information overload, and fragmented digital ecosystems hinder attention capture and accurate performance measurement. Additionally, evolving regulations require constant compliance, transparency, and ethical communication, with consumer trust increasingly dependent on accountability and consistency. Limited studies examine ethical AI deployment, omnichannel interoperability, and long-term consumer behavioral shifts across cultures. Gaps also persist in understanding influencer credibility, circular economy scalability, and measurable outcomes of sustainability initiatives. Longitudinal and cross-cultural studies remain insufficient, particularly in linking trust, privacy, and loyalty formation under AI-driven ecosystems.

5.3. Future Outlook

The prospects of marketing indicate a profound transformation toward intelligent, automated, and sustainability-driven ecosystems. AI-powered marketing systems will increasingly integrate data, automation, and personalization to enable real-time, predictive, and context-aware decision-making at a global scale. Enhanced automation will streamline campaign execution, reduce operational costs, and improve efficiency across complex marketing workflows. Customer experiences will evolve toward seamless, interactive, and immersive engagement, supported by real-time analytics and omnichannel integration that strengthens brand relationships and loyalty. Emerging technologies such as Augmented Reality, Virtual Reality, IoT, and blockchain will redefine engagement by enabling immersive, secure, and highly personalized consumer interactions, while improving transparency and transactional trust. At the same time, green and sustainable marketing will gain strategic importance, driven by rising environmental awareness, regulatory pressure, and ethical consumption patterns. Future marketing systems will also prioritize ethical AI, privacy-preserving analytics, and explainable algorithms to strengthen consumer trust and regulatory compliance. Integration of influencer ecosystems, mobile connectivity, and global e-commerce platforms will further expand market reach and enable hyper-personalized, location-based engagement. Collectively, these developments point toward adaptive, resilient, and ethically grounded marketing models that balance technological innovation with long-term societal and environmental responsibility.

6. CONCLUSION

Contemporary marketing is undergoing a fundamental transformation driven by technological innovation, data-driven intelligence, and evolving consumer expectations. The shift from traditional approaches toward digital, personalized, and customer-centric strategies highlights the growing importance of delivering meaningful, convenient, and value-oriented brand experiences. This study explored the advanced technologies, such as AI, analytics, and omnichannel systems, which have significantly enhanced marketing efficiency, engagement, and global reach, while also enabling more precise decision-making and adaptive strategy development. However, this transformation also introduces critical challenges related to data privacy, ethical governance, system complexity, and consumer trust, which must be carefully managed to ensure sustainable progress. In response, organizations are increasingly required to adopt agile, innovative, and ethically grounded approaches that integrate continuous learning and strategic adaptation. Furthermore, sustainability and responsible marketing practices are becoming central to long-term competitiveness, reinforcing the need to balance innovation with accountability. Overall, the future of marketing lies in harmonizing technology, ethics, and customer-centricity to build resilient, transparent, and sustainable digital ecosystems that align with rapidly changing global market dynamics and consumer expectations.

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A DESCRIPTIVE QUANTITATIVE ANALYSIS OF COMMERCIAL SPACE AND THE SPACE ECONOMY

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ABSTRACT

Purpose- The reason of conducting this study is to provide an overview of the quantitative aspects of research on the rising space economy and commercial space exploration in recent years. With the 77th International Space Congress to be held for the first time in Türkiye, in Antalya, in October 2026, the study is targeting to monitor the current numerical status of academic works in this field.
Methodology - This study uses a descriptive quantitative research approach and descriptive analysis for its aim. The numerical results were obtained as of June 7, 2026, from the most commonly used academic databases such as Web of Science and Scopus, and from academic search engines such as Dergipark and Google Scholar, using relevant keywords.
Findings - The fact that the number of Turkish studies obtained from Google Scholar using the relevant keywords is close to the number of papers submitted from Türkiye to the 77th International Space Congress held in Antalya (with the accepted number being about one-third) is a significant finding indicating that studies on space economy and commercial space, particularly in Türkiye, are at an insufficient level. Indeed, the figures received from Dergipark strongly support this. In foreign publications, the similar levels of Scopus, WoS, and Google Scholar figures suggest that the studies received from all these indexes and search engines may be overlapping studies, and again, despite the importance of the subject, the number of studies on a global scale is low.
Conclusion - As expected, searches on the most widely used academic search engines and index databases using keywords related to space economy and commercial space did not yield many results, particularly for Turkish studies. The fact that the number of Turkish studies was close to the total number of papers submitted from Türkiye to and accepted at the 77th International Space Congress is seen as both a deficiency and an opportunity for the development of this subject in Türkiye (International Astronautical Federation, n.d.). Although engineering, astrophysics, astronomy, and aviation come to mind first when space is mentioned, the subject is now of greater importance in terms of business, finance, accounting, and economics. With the interest and entry of the private sector into this field, an era has begun in the social sciences where many books need to be rewritten and theories and rules need to be reviewed. The simplest example is that concepts such as specific gravity and interest rate will call into question all financial and economic theories with relativity. In JEL codes, it is necessary to create codes and sub-codes for space economics and astroeconomics. In Türkiye, The Council of Higher Education (YÖK) should facilitate the opening of new departments in this field, just as it has done in artificial intelligence. Therefore, Astroeconomics and Space Economy (Space Economics), primarily in finance and economics, will become a new major discipline in the social sciences.

Keywords: Space economy, commercial space, space accounting, new space, space industry, astroeconomics
JEL Codes: B59, O30, R42

1. INTRODUCTION

Space has fascinated humanity throughout history. Following the first human flight by Hezarfen Ahmed Çelebi and the subsequent developments with the Wright Brothers, the journey into space by the Russians first cosmonaut and then the US landing on the Moon during the Cold War marked the beginning of the space economy. Studies in astronomy, astrophysics, and astrobiology now necessitate a re-examination of space within the social sciences, primarily economics and finance.

The space economy (space economics and Astroeconomics), encompassing economic and commercial activities under headings such as commercial space and new space, continues to be discussed under subheadings like space mining, space tourism, sustainability in space, and space debris. Currently, with the human-made Voyager 1 and Voyager 2 missions having already ventured outside the Solar System, space economy research remains primarily focused on the International Space Station, the Moon, and Mars, as well as areas around and near the Karman Line within the Solar System.

While space economy primarily addresses technical and engineering aspects such as rockets, GPS, launches, and orbits, it has gained importance in terms of its economic and financial dimensions, particularly after 2008, with the addition of commercial companies that accelerated their growth following the contraction of public budgets. In subsequent stages, with the possibility of venturing beyond the Solar

System, the beginning of space colonization, and space tourism and mining gaining a galactic dimension, the subject will no longer be limited to Earth, necessitating a new definition and title. This is where "Astroeconomics" will come into play, a more comprehensive and broader term like Astrophysics and Astrobiology. Studies conducted and to be conducted in the social sciences regarding these new phenomena and events will contribute to the formation and concretization of new concepts, as well as help resolve potential conceptual confusion.

Considering that SpaceX, the most popular commercial space company during the period of this study, made history with its $75 billion IPO, the biggest and most fundamental question is how to apply existing financial and economic theories and formulas to space beyond the atmosphere. Is the current valuation of SpaceX, based on this $75 billion IPO, at $1.75 trillion a valuation error? There is no need to discover a new formula for company valuation, but it is necessary to consider the appropriate one from the existing ones. Among the initial discussions, it is possible to determine the value of space companies by discounting dividend payments and valuing orbital activities through free cash flows (Haaker, 2026).

A study examining whether this valuation of $1.75 trillion is realistic, considering discounted cash flow, comparable companies, and cost of capital, states that it is not feasible because many space companies comparable to SpaceX are not publicly traded, and that operational activities have been overly optimisticly assessed. In this context, it is suggested that such a high valuation could be realized through ETF impact, inclusion in indices, and portfolio diversification (Wagner, 2026). In here, it should be reminded that the valuation of SpaceX in 2026 is almost equal to the market volume expected in 2035 by some space related reports.

Dirican (2018) wrote that interest calculations in space should be considered differently due to the rotation speed of planets around their own axes and relativity, that the situation would change with reaching the speed of light, and that commodity pricing, especially in futures markets, should be considered differently due to gravity and weights.

Indeed, Krugman (2010) discussed same concepts such as the speed of light and the Gemini Paradox, as well as which interest rate should be calculated in financing interstellar trade, in a humorous article (He wrote his article in 1978 while he was an assistant professor, but the original peer-reviewed publication was in 2010).

This study tries to discover the current state of academic literature on the so-called "new space", “space economy" and “commercial space” exploration. The goal is to identify the number of national and international publications in selected indexes and databases using the most frequently encountered keywords, and to create an archival record in space-time. The findings highlight that academic research lags behind the pace of commercial development.

2. LITERATURE REVIEW

Accordingly, some important definitions regarding the basic headings related to the subject are as follows. The aim of this study is to show the current environment of the literature as of the date of the study, based on these general definitions and concepts.

The space economy brought together all activities and utilization of the resources that can provide added value and beneficial outcomes for humanity in the process of exploring the space, understanding and managing it, and exploiting from its potential. It includes all space-related outputs such as products and services, from innovation and R&D activities in the public and private sectors to manufacturing, ground stations, launches, satellites, meteorology, and satellite phone applications (OECD, 2022).

Commercial space is a concept generally subject to debate regarding the definition and scope of the word "commercial." Nevertheless, it can be defined as follows: "*Private equity is the primary risk-taker among products and services for space, customers other than states are involved in the activity and trade, the entirety of commercial activities determines the dynamics of the overall market, and the leadership and determinants of these activities are held by private sector companies*" (Davidian, 2020).

Space mining is the commercial operation encompassing the search for, extraction, launching, and processing (in situ, en route, or on Earth) of minerals or elements that are found or detected in limited quantities on Earth, located on celestial bodies, different planets, the Moon, and other stars. These activities are undertaken with the aim of establishing and sustaining colonization in space and further exploring the universe (Modell, 2025).

Space accounting is a subfield of accounting that examines the role of the corporate dimension of activities conducted in outer space within the accounting field. Following definitions related to the space economy, Alewine explored the challenging effects of space-specific conditions such as gravity and distances from a financial or management accounting, tax, and audit perspective (Alewine, 2020). The world's first congress on space accounting took place in Gaziantep, Türkiye on December 5-7, 2025 (Dirican, 2025; uzaymuhasebesi.com, 2025).

Space tourism is when people fly into space, either at their own expense or on behalf of other companies, for recreational or commercial purposes, over the Karman Line (Von der Dunk, 2011). Understanding the psychology of the space tourist (tourism) will also help to understand the market and its developments (Mehran, Olya, & Han, 2023).

New Space refers to space programs that accelerated during the Cold War and were primarily conducted by state space agencies, but are now carried out through innovative R&D efforts and with broader commercial participation by private companies and public-private partnerships (Ferrara, Cicconi, Minotti, Trovato, & Caputo, 2025).

In summary, the numerical data on the space economy in 2024 was €122 billion in the public sector and €7 billion in the private sector worldwide. The EU's share in the public sector is around 10% globally, while the private sector is around 20%. The ratio of the public space budget to the economy is still at the level of one-tenth of a percent, with the US leading the way, followed by Russia, Luxembourg, Japan, France, and China (ESA, 2025). According to a World Economic Forum report (prepared jointly with McKinsey), the size of the space economy will reach $1.8 trillion in 2035, and the sector, which will grow at a rate exceeding the global growth rate, will have a significant share and revenue weighted by the private sector (WEF, 2024).

3. DATA AND METHODOLOGY

The study's methodology is descriptive (cross-sectional) quantitative research; frequency and numerical data were examined using descriptive analysis methods.

In qualitative descriptive research, quantitative data can be included in the study if they help explain a phenomenon (Colorafi & Evans, 2016).

Conducting descriptive studies are done to understand and to see the distribution of one or many variables without considering any causality or hypothesis. Types include case reports as well case series, the other two forms are cross-sectional and ecological studies. Cross-sectional studies aim to gather information about the presence, level, or outcome of one or more variables; when conducted to determine their distribution, they are considered descriptive (Aggarwal & Ranganathan, 2019).

The data was obtained from queries made to relevant academic databases as of June 7, 2026. Queries were conducted using the following keywords in Scopus, Web of Science indexes, Google Scholar, and Dergipark search engines. These indexes and databases were chosen because they are among the most frequently used in academic research, in Türkiye's as well.

The number of relevant keywords should be considered as a limitation of the research; naturally, more keywords will yield more results. Similarly, even when queries are made with the same keywords at different times, different numerical results will be obtained. Numerical data are presented as frequencies and generally as the top 3 entries in the relevant descriptive headings. Due to time constraints, different research methods such as bibliometric analysis and text mining were not used in this study. Therefore, it is natural to obtain different results. Similarly, it is possible to obtain different results in the YÖK National Thesis Monitoring Center or other databases and indexes.

4. FINDINGS

The following keywords were used in this study. These keywords were selected by the author from the most commonly used terminology in current space activities. The author also drew ideas from his newspaper articles and his previous academic work on this subject. The author is currently the owner of the "Astroekonomist" trademark in Türkiye.

The keywords "space economy", "commercial space", "space accounting", "astroeconomics", "space mining", "space tourism", "space ecosystem", "space entrepreneurship", "space industry", and "new space" have been used in relevant indexes and search engine for getting the current figures.

In Google Scholar's advanced search section, under the "containing any of the keyword patterns" option, 1,130 results were obtained for Turkish studies where these keywords appeared anywhere in the articles; 997 of these were from after 2000, and 27 of those that appeared in the article title were predominantly related to space tourism. For foreign publications, 17,200 results were returned based on text and 6,850 based on article title.

Scopus's advanced search yielded 19,350 returns under the heading "title, abstract, and keywords."

Dergipark's advanced search yielded 43 article returns under the heading "abstract." Due to the low number, there was no need to perform separate searches between article titles and keywords.

Advanced searches on the Web of Science search engine yielded 12,116 returns (1,022 of which were in the business and economics field) under the "subject" heading and 2,136 returns (285 of which were in the business and economics field) under the "heading" tab, primarily from institutions such as the USA, China, and the UK, as well as NASA and ESA.

The results show that there is a lack of research in both national and international literature. Naturally, this number will increase day by day. Especially after SpaceX's IPO, there will be more research specifically on financial markets, and it will be possible to increase studies on multi-criteria decision-making methods, panel data, and time series analysis, etc. among space companies, and to compare them with other (stock) indices and other sectors and companies.

In this way, as national statistics on the space economy increase, similar to private sector data, more integrated and cross-referenced analytical and econometric studies will become possible. Establishing statistical infrastructure in Türkiye, primarily in the Istanbul Stock Exchange and other databases related to the Turkish Statistical Institute (TÜİK), will be a significant gain for national academic literature and research (Dirican, 2022).

5. CONCLUSION

In foreign publications, the fact that the results for the title, abstract, and keywords of the study are very similar across three different platforms indicates that there is still a long way to go in terms of foreign publications. This finding is supported by the fact that the number of titles alone in these foreign studies is still around 2,000, that the publications mainly originate from leading space agencies rather than universities, and that the number of entries in business/economics topics remains low. For Turkish findings as well, the number of works is comparatively low and needs to be boosted by encouraging space-related social science research.

The limited number of space-related institutes in the world (usually graduate-level) need to be supported by opening undergraduate programs. The recent actions taken by the Council of Higher Education (YÖK) regarding artificial intelligence should also be rapidly reflected in space-related programs especially in social sciences. On the other hand, there are currently no equivalents in AEA JEL codes for the main headings of space economy, astro-economics, space mining and space tourism, and commercial space, as well as their numerous sub-disciplines in business, finance, public sector, private sector, accounting, labor market, etc.

While there is still no complete consensus in the literature regarding definitions and scope of the space economy and its sub-categories, studies in this area will serve to clarify the framework for space and help achieve agreement on definitions. Increased research in this area will facilitate the measurement of the space economy, particularly its size. In later stages, this will provide a foundation for research enabling the calculation of interest rates (return on investment, futures contracts, depreciation, aging, rediscounting, etc.), national statistics, accounting, and taxation not only on Earth but also in outer space.

In outer space, within the realm of relativity, the different orbital motions of different planets, considering variables such as the speed of light, the weight of matter, and gravity, present a fundamental difference in how financial transactions are handled and accounted for, and how they are evaluated in light of concepts such as information asymmetry and the (accounting) periodicity principle. It is evident that the fundamental assumptions in economics, such as the optimal use of limited resources and inflation, necessitate a new economic understanding in the face of the uncertainties within the ever-expanding infinity of the universe. Therefore, it is possible to foresee that the space economy, currently shaped by activities below the atmosphere, will evolve into the science of Astroeconomics in the future, taking its place among concepts such as Astrophysics and Astrobiology.

In light of all this summary information, it has become clear that encouraging research in the social sciences, and especially in business, economics, finance, and accounting, on space economy and commercial space is both an opportunity and a necessity for the development of the business dimension of the ecosystem, as well as its technical dimension together with its (space) policies and securities.

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This study draws upon the author's own news reports and columns—published at various times in the “Dünya” and “Şalom” newspapers—as well as their academic work on similar topics, utilizing the general ideas found therein. During the translation and literature search phases, support was obtained from Google Translate and Google AI tools; however, the design and writing of the study rely entirely on the author's original interpretations and phrasing, with the author maintaining oversight regarding the authenticity of sources and the originality of the text. This study does not require ethics committee approval.

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DO OPEC OIL PRICES SHOCKS MATTER FOR THE TURKISH STOCK MARKET? EVIDENCE FROM THE BIST 100 INDEX (2010-2026)

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ABSTRACT

Purpose - The aim of this study is to analyze the impact of the OPEC oil price shock on the performance of the BIST 100 index, which is regarded as a major indicator of the Turkish stock market. With regard to the energy dependence of Türkiye and the role of oil in economic activities, any changes in oil prices can greatly affect the performance of the Turkish stock market index. Therefore, this research attempts to investigate whether positive and negative OPEC oil price shocks have an asymmetric impact on the performance of the BIST 100 index.
Methodology - The NARDL model is utilized for analyzing the asymmetric impact of OPEC oil price shocks on the BIST 100 index in the short- and long-term periods. In particular, monthly time series data from January 2010 to March 2026 is used for the investigation. Besides oil price changes, the following variables are taken into consideration: USD/TRY exchange rates, Türkiye's 5-year sovereign credit default swap premium, and the U.S. Effective Federal Funds Rate (EFFR).
Findings - The results reveal an asymmetric relationship between OPEC oil price shocks and the BIST 100 index. In the long run, only negative oil price shocks significantly and positively influence the BIST 100 index. The positive oil price shocks have a weak positive lagged effect in the short run, while the negative oil price shocks have a significant negative lagged effect in the short run, confirming asymmetric responses of the BIST 100 market.
Conclusion - The findings confirm that the Turkish stock market responds asymmetrically to OPEC oil price shocks in both the long and short run. According to the research results, implementation of non-linear methods for such econometric relationships is required.

Keywords: OPEC oil price shocks, BIST 100 Index, Turkish Stock Market, NARDL model, asymmetric effects
JEL Codes: C22, G14, Q43

1. INTRODUCTION

As a net energy-importing economy, Türkiye is highly exposed to fluctuations in global oil prices, which are transmitted through inflation, exchange rates, and stock market performance through several channels. While arbitrage pricing theory, cash-flow theory, and behavioral finance all suggest that positive and negative oil price changes may affect firm valuations and investor behavior differently, most early empirical studies imposed a linear, symmetric relationship between oil prices and stock returns.

This study is motivated by Türkiye's heavy dependence on imported energy, which makes its financial markets particularly sensitive to OPEC oil price movements through exchange rate, inflation, and cost channels. Since prior research on the oil price–stock market relationship remains mixed—partly because linear models may obscure differing investor and firm responses to oil price increases versus decreases—this study examines whether positive and negative OPEC oil price shocks affect the BIST 100 Index asymmetrically, an issue of direct relevance to investors managing oil-related risk and to policymakers concerned with financial stability.

However, despite this growing body of evidence, the precise short-run versus long-run dynamics of this asymmetry for the Turkish stock market remain insufficiently explored, particularly once exchange rate, sovereign risk, and U.S. monetary policy conditions are taken into account. This research aims to fill this gap by analyzing whether positive and negative OPEC oil price shocks exert asymmetric short- and long-run effects on the BIST 100 Index over the period January 2010–March 2026, using the NARDL approach.

2. LITERATURE REVIEW

Degiannakis, Filis, and Arora (2018) show that the relationship between oil and stock markets depends on the level of data aggregation, whether a country is an oil importer or exporter, and whether oil price changes are modeled symmetrically or asymmetrically. They further conclude that oil price volatility generally spills over into stock markets. Attílio (2023) shows that positive oil shocks provoke stock market declines across six emerging economies—Brazil, Chile, Mexico, India, South Africa, and Türkiye—alongside currency devaluations in four of them. Bouslama (2023) documents fractional cointegration and significant bidirectional causality between oil and BRICS equity markets. By contrast, Chancharat and Sinlapates (2023) find only a low, statistically insignificant association between oil and ASEAN+6 stock markets; Guru, Pradhan, and Bandaru (2023) find no significant transmission between oil and stock markets across the G7 countries plus India and China for the full sample—though substantial bidirectional spillovers emerge during the COVID-19 sub-period; and Khan (2024) similarly finds a relatively limited role for oil as a shock source for equity markets in China, India, and Pakistan.

Another stream of literature has studied volatility transmission and connectedness mechanisms. Pan and Sun (2023) show that the conflict between Russia and Ukraine dramatically changed the leverage effect in the futures market for WTI, Brent, and Oman crude oil. Tiwari, Dam, Altıntaş, and Bekun (2025) decompose oil shocks into components and find that net transmitters of spillovers to emerging market returns are demand shocks and net receivers are supply and risk shocks.

The literature most relevant to the present study is two NARDL-based studies on Türkiye. Eissa, Al Refai, and Chortareas (2025) use NARDL and find that in Türkiye, both positive and negative oil price changes exert a significant positive effect on the stock market in the long run. İmamoğlu (2026) uses NARDL directly for Türkiye and Kazakhstan and finds that oil price increases have a significant negative impact on the BIST 100 Index.

Taken together, this literature confirms that the oil-stock market relationship is seldom linear, that asymmetric responses are well documented for Türkiye in particular, and that exchange rate and geopolitical risk channels need to be explicitly modeled in conjunction with oil price shocks, providing motivation for the present study's NARDL approach that incorporates these control variables.

3. DATA AND METHODOLOGY

The data used in this research work is the monthly time series data from January 2010 to March 2026. The BIST 100 Index (BIST100) was used as the dependent variable in the study. Investing.com is the source of the data. The independent variable of major interest in this case is the OPEC oil price (OIL). This is retrieved from the OPEC website. Then the data is split into positive and negative partial sums. To account for other financial variables that may influence the Turkish stock market, the other independent variables of interest are the exchange rate of USD/TRY (obtained from the St. Louis Federal Reserve Bank), Türkiye's five-year sovereign CDS premium (obtained from Investing.com), and the Effective Federal Funds Rate (EFFR, obtained from the St. Louis Federal Reserve Bank) as proxies for currency risk, sovereign credit risk, and U.S. monetary policy stance, respectively. All series are observed at a monthly frequency. These variables were chosen since these variables cover most of the macro-financial determinants for the Turkish stock market, which include energy price, exchange rate risk, sovereign risk, and global monetary condition.

To take into account any possible asymmetric impact of oil prices, the time series of OPEC oil prices is first separated into partial sums of positive and negative changes of OPEC oil prices according to the traditional NARDL decomposition technique:

$OIL_t = OIL_t^+ + OIL_t^-$

Where OIL_t^+ and OIL_t^- are the positive and negative partial sums of changes of the OPEC oil price, respectively. The model can be written as:

$BIST100_t = \alpha_0 + \alpha_1 OIL_t^+ + \alpha_2 OIL_t^- + \alpha_3 USDTRY_t + \alpha_4 CDS_t + \alpha_5 EFFR_t + \varepsilon_t$

To estimate the relationship, the Nonlinear Autoregressive Distributed Lag (NARDL) approach will be used. The NARDL model enables estimating the short-run and long-run impacts of positive and negative changes of the oil price on the BIST 100 Index separately, an asymmetric effect that cannot be captured by linear models. Stationarity properties of all the series will be analyzed, implementing the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests for unit roots. It is necessary to prove that none of the variables are integrated of order two, I(2), since the NARDL/bounds testing procedure cannot be applied when variables are integrated of order two (I(2)). The optimum lag structure for the NARDL model will be chosen using the Akaike Information Criterion (AIC). The long-run cointegration relation between series will be checked using the bounds F-test. Moreover, the Wald test for asymmetry in the short run and long run, the CUSUM test for parameter stability, and diagnostic tests for autocorrelation and heteroskedasticity will be performed. Before the implementation of the analysis, unit root tests (ADF and PP) were performed. The ADF and PP tests were implemented since they are the most widely used complementary unit root tests in the literature and provide robust evidence on the stationarity properties of the variables. The use of these tests is standard practice before implementing the NARDL analysis.

Table 1: ADF and PP Unit Root Test Results

Variable	ADF Level t-stat. (p)	ADF 1st Diff. t-stat. (p)	PP Level t-stat. (p)	PP 1st Diff. t-stat. (p)	Order of Integration
LBIST100	2.4869 (1.0000)	-9.2847 (0.0000)***	-0.6988 (0.8434)	-37.6033 (0.0001)***	I(1)
LCDS	-2.3745 (0.1504)	-13.9219 (0.0000)***	-2.3280 (0.1642)	-14.0926 (0.0000)***	I(1)
FED	-1.6239 (0.4684)	-3.7996 (0.0035)***	-1.0892 (0.7200)	-6.0252 (0.0000)***	I(1)
LOPEC	-2.7690 (0.0647)*	-9.8651 (0.0000)***	-2.2533 (0.1884)	-9.0076 (0.0000)***	I(1)
LUSD_TL	1.4448 (0.9991)	-9.6232 (0.0000)***	1.6027 (0.9995)	-8.8995 (0.0000)***	I(1)

Note. The ADF is the Augmented Dickey–Fuller test, and the PP the Phillips–Perron test. All tests have a constant term . *** and * denote statistical significance at the 1% and 10% levels, respectively. All variables are integrated of order one, I(1).

From the unit root test result presented in Table 1, it can be observed that there is no variable that is I(2), and this condition fulfills the necessary prerequisite for the application of the NARDL modeling framework.

4. RESULTS

The results of the NARDL Wald tests are given in Table 2 below. It is evident from the above results that the hypothesis of symmetry has been rejected both in the long run and short run at a significance level of 10 percent and 1 percent, respectively. Moreover, the joint symmetry test has been rejected at a significance level of 1 percent, which implies that there exists joint asymmetry. This clearly indicates that OPEC oil price shock has asymmetric impacts on the BIST 100 index.

Table 2: NARDL Wald Test Results for Asymmetry

Hypothesis	F-statistic	p-value
Long-run Symmetry	3.2786	0.0719*
Short-run Symmetry	6.8502	0.0096***
Joint Symmetry	5.6847	0.0041***

Note. The null hypothesis is symmetry. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Given the findings above, the NARDL(1, 0, 0, 3, 2) equation, chosen due to its lowest Akaike Information Criterion (AIC) value out of 2500 models, will be estimated to derive the long-run and short-run estimates shown in Table 3.

Table 3: NARDL Estimation Results

Model	Variable	Coefficient	Std. Error	t-Statistic	p-value
Long-run	LCDS	-0.588484	0.082024	-7.174539	0.0000***
Long-run	LUSD_TL	1.139597	0.178475	6.385190	0.0000***
Long-run	FED(-1)	-0.008803	0.027259	-0.322936	0.7471
Long-run	LOPEC_POS	0.120536	0.102984	1.170438	0.2434
Long-run	LOPEC_NEG	0.241596	0.069606	3.470904	0.0007***
Long-run	Constant	8.242977	0.727776	11.326250	0.0000***
Short-run	D(FED)	0.048418	0.181256	0.267126	0.7897
Short-run	D(FED(-1))	0.189502	0.218059	0.869040	0.3860
Short-run	D(FED(-2))	0.081603	0.231038	0.353202	0.7244
Short-run	D(FED(-3))	0.534718	0.211979	2.522501	0.0125**
Short-run	D(LOPEC_POS)	0.309690	0.332637	0.931014	0.3531
Short-run	D(LOPEC_NEG)	-0.155274	0.314465	-0.493772	0.6221
Short-run	D(LOPEC_POS(-1))	0.592641	0.357403	1.658188	0.0991*
Short-run	D(LOPEC_NEG(-1))	-0.363914	0.337404	-1.078571	0.2823
Short-run	D(LOPEC_POS(-2))	0.102857	0.357916	0.287377	0.7742
Short-run	D(LOPEC_NEG(-2))	-0.687630	0.339105	-2.027780	0.0441**

Note. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

In the long term, only negative OPEC oil price shocks have a crucial influence on the BIST 100 index; positive OPEC oil price shocks do not show any statistical significance. In the short term, it is found that the results show asymmetric impacts; lagged positive and negative OPEC oil price shocks have a positive (weakly significant) and negative significant impact on the BIST 100 Index, respectively.

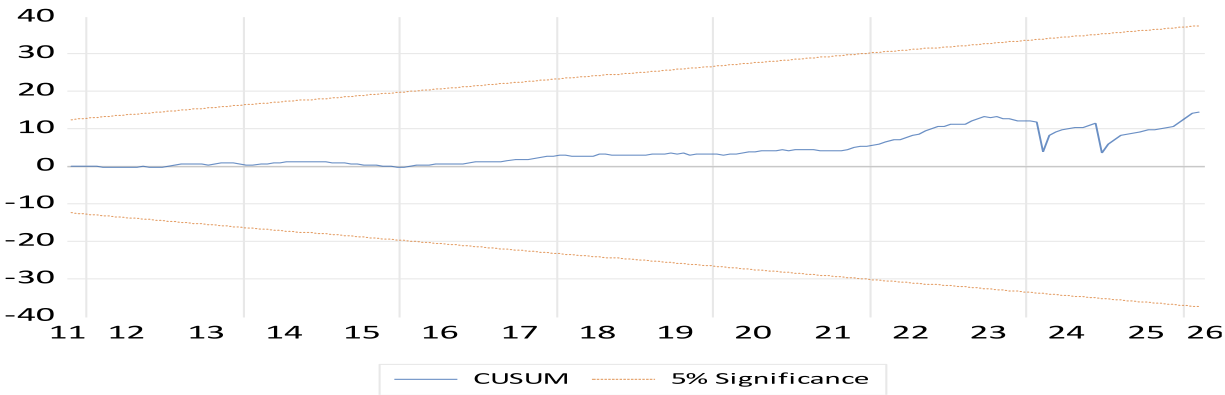
Table 4: Cointegration and Diagnostic Test Results

Category	Test	Result	Conclusion
Cointegration	Bounds F-test	22.56622***	Cointegration confirmed
	ECM(-1)	-0.903522***	Stable long-run adjustment
Diagnostics	Serial Correlation LM	p = 0.3843	No serial correlation
	Heteroskedasticity Test	p = 0.3978	No heteroskedasticity

Note. *** indicates significance at the 1%.

The Bounds F-test (22.56622) proves the existence of long-run cointegration, and the negative and statistically significant coefficient of ECM (-0.903522) denotes stable adjustments to the equilibrium state after short-run shocks. It is found that there is no serial correlation (p = 0.3843) and heteroskedasticity (p = 0.3978) in the data (Table 4).

Figure 1: CUSUM TEST



The CUSUM test (Figure 1) provides evidence for the stability of the coefficients. According to the diagnostic test results, the robustness of the NARDL model is confirmed.

5. CONCLUSION

In this research work, it was explored whether positive and negative shocks in the OPEC oil prices have asymmetric effects on the BIST 100 Index from January 2010 to March 2026 through the use of the NARDL model. The findings show that OPEC oil price shocks have asymmetric impacts on the Turkish stock market in both the short run and the long run. In the long run, only adverse oil price shocks have a significant influence on the BIST 100 Index, whereas positive oil price shocks are statistically non-significant. In the short run, positive and negative oil price shocks exert asymmetric effects, with lagged positive oil price shocks weakly increasing the value of the index and lagged negative oil price shocks reducing the index significantly.

The results reveal that the effects of OPEC oil prices have an asymmetric impact on the BIST 100 index over the time horizon. In the long run, negative price movements are important while positive ones are not, which is supported by the fact that Türkiye is a net oil-importing country, and therefore the negative oil price changes are expected to bring an important change in the cost side of the country's current account balance, whereas positive price movements are seen as temporary and are fully absorbed. Part of this long-run asymmetry is consistent with Eissa, Al Refai, and Chortareas (2025), who also find significant long-run oil price effects on the Turkish stock market.

In view of the high sensitivity of BIST 100 to both positive and negative oil price changes in the short run, investors are advised to hedge their portfolios against such risks through the use of oil futures and options. Portfolio managers can also spread their holdings across sectors that are less sensitive to oil price movements to diminish financial risk. As negative shocks affect stock returns only in the long run, investors should pay particular attention to sustained oil price declines when making long-term allocation decisions. In addition, building on the existing Volatility-Based Precaution System, Borsa Istanbul, in coordination with the Capital Markets Board (SPK), the Central Bank of the Republic of Türkiye (CBRT), and the Banking Regulation and Supervision Agency (BDDK), could explore developing a market-wide early warning mechanism for BIST 100 that combines asymmetric GARCH-type models, capturing the differential volatility impact of positive and negative oil shocks, with a Kaminsky-Lizondo-Reinhart-style composite signal index built on oil prices, the exchange rate, the CDS premium, and the Federal Funds Rate in order to better anticipate periods of systemic market stress.

In the end, another possible venue for future research is to extend the model of short-term asymmetry to a sector-based or firm-based perspective to find which companies among the BIST 100 (for example, energy-consuming manufacturing vs. finance sectors) react more intensely to the oil shocks.

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PSYCHOLOGICAL SAFETY EXPERIENCES OF HR LEADERS IN THE BURSA AUTOMOTIVE CLUSTER: A QUALITATIVE INQUIRY ON MOBBING, EXCLUSION, AND PARTICIPATION

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ABSTRACT
Purpose- While psychological safety is widely recognized as a foundational driver of team learning, open voice, and sustainable organizational performance, its distinct operational realities within high-pressure, manufacturing-intensive corporate sectors remain underdeveloped in qualitative literature. This study explicitly aims to investigate how interpersonal risk-taking, safe communication, and systemic workplace trust are dynamically experienced, constructed, and negotiated by human resource leaders operating within the complex automotive manufacturing ecosystem of Bursa, Türkiye.
Methodology- Adopting a rigorous qualitative, interpretive, and descriptive inquiry paradigm, this empirical research explores the lived experiences of 15 HR leaders across various organizational seniority levels and managerial roles within the Bursa automotive supply chain. Data were gathered through semi-structured, in-depth interviews and subjected to thematic analysis (Braun & Clarke, 2006). The approach prioritizes rich, contextualized descriptions over statistical generalizations, capturing socio-structural nuances of a high-stakes manufacturing environment. Trustworthiness was ensured via Lincoln and Guba’s (1985) criteria and the COREQ checklist.
Findings- Narratives demonstrate that psychological safety is a structurally conditioned phenomenon heavily constrained by autocratic governance, family-business politics, and institutional power dynamics. HR leaders navigate a persistent paradox between strategic partnership expectations and administrative compliance, inducing strategic self-censorship. Punitive error cultures trigger defensiveness, while learning-oriented climates foster accountability. Team solidarity serves as a buffer but remains vulnerable to political manipulation and toxicity. Systematic marginalization, organizational bypassing, and information withholding persist across all echelons, indicating that seniority provides insufficient protection against exclusion.
Conclusion- Cultivating psychological safety for HR leaders requires systemic interventions beyond individual interactions. Organizations must dismantle punitive feedback loops, formalize safeguards against bypassing, and institutionalize participative leadership to preserve managerial autonomy and professional legitimacy. The study is limited to a single industrial cluster and cross-sectional design.

Keywords: Psychological safety, Bursa automotive cluster, HR leadership, workplace exclusion, error management culture
JEL Codes: M12, M54, L62

1. INTRODUCTION

Psychological safety, defined as a shared belief that a team is safe for interpersonal risk-taking (Edmondson, 1999), has emerged as a critical enabler of organizational learning, innovation, and performance. In high-pressure manufacturing environments such as the automotive industry, where rapid problem-solving, error reporting, and cross-functional collaboration are essential, the absence of psychological safety can lead to hidden errors, defensive behaviors, and diminished competitiveness. Türkiye’s automotive sector, with Bursa as its historical and industrial heartland, exemplifies these dynamics through intense global competition, just-in-time production pressures, and a prevalence of family-owned supplier firms characterized by hierarchical and sometimes autocratic leadership cultures.

Human resource (HR) leaders occupy a particularly paradoxical position in such settings. They are simultaneously expected to serve as strategic business partners who challenge top management decisions and as administrative enforcers of organizational policies. This dual role creates unique vulnerabilities regarding voice, upward feedback, and professional legitimacy. While extensive quantitative research has examined psychological safety at the team and organizational levels, qualitative investigations focusing specifically on how HR professionals in manufacturing clusters experience and navigate psychological safety — particularly in relation to mobbing, exclusion, and decision participation — remain limited.

This study addresses this gap by exploring the lived experiences of 15 HR leaders working in the Bursa automotive ecosystem. Drawing on in-depth interviews and thematic analysis, it examines how autocratic leadership, family business dynamics, error management cultures, and power relations shape psychological safety for those responsible for both employee advocacy and strategic alignment.

2. LITERATURE REVIEW

Psychological safety has been robustly linked to team learning behavior (Edmondson, 1999), reduced defensiveness, and improved organizational outcomes (Edmondson & Lei, 2014; Frazier et al., 2017). Recent reviews emphasize its context-dependent nature, particularly in high-stakes or culturally hierarchical environments (Dong et al., 2024; Edmondson & Bransby, 2023). Employee voice and silence are closely intertwined with psychological safety; when the climate feels unsafe, silence becomes a rational self-protection strategy (Morrison, 2023).

Workplace exclusion and mobbing further erode psychological safety. Bullying is embedded in power-laden relationships and is more likely to occur in permissive climates with power imbalances (Einarsen, 2000; Salin, 2003). In manufacturing settings with tight deadlines and interdependent workflows, these dynamics can be amplified. HR professionals are especially exposed because their role requires balancing employee well-being with management directives, often leading to role conflict and vulnerability to retaliation or marginalization (Bennett et al., 2024; Cayrat & Boxall, 2023).

Family business contexts common in Turkish industrial clusters add another layer of complexity. Decision-making is frequently centralized, and HR functions may be viewed primarily as administrative rather than strategic (Casprini et al., 2024). Punitive error cultures, where mistakes are remembered and used against individuals, suppress reporting and learning (van Dyck et al., 2005), whereas learning-oriented climates promote accountability. Trust in top management has been shown to be pivotal for psychological safety perceptions across cultures (Dheer et al., 2026). This study builds on these foundations by providing a grounded, qualitative account of how these forces interact specifically for HR leaders in one of Türkiye's most competitive industrial regions.

3. DATA AND METHODOLOGY

The study employed a qualitative, interpretive, and descriptive research design to capture the nuanced, context-embedded experiences of HR leaders. Bursa was purposively selected as a knowledge-rich setting due to its central role in Türkiye's automotive industry and its multilayered supplier network. Fifteen HR professionals holding leadership or managerial positions (HR Business Partners, HR Managers, HR Directors, and Group HR Managers) with 13 to 30 years of experience were recruited through criterion-based purposive sampling. Participants represented both multinational subsidiaries and large local family-owned suppliers.

Data were collected via voice-recorded, semi-structured in-depth interviews lasting approximately 45–70 minutes. Interview protocols explored perceptions of voice opportunities, error and feedback cultures, relationships with top management, intra-team dynamics, and experiences of exclusion or mobbing. All transcripts were anonymized and assigned codes K1–K15. Data were analyzed using Braun and Clarke's (2006) six-phase thematic analysis. Scientific rigor was maintained through Lincoln and Guba's (1985) trustworthiness criteria (credibility, transferability, dependability, confirmability), peer debriefing, thick description, audit trail, and researcher reflexivity. The study adhered to COREQ reporting standards, and ethical approval was obtained from the Bursa Uludağ University Scientific Research and Publication Ethics Committee (29 August 2025, Session No: 2025-07, Decision No: 10).

4. FINDINGS

Thematic analysis yielded five interconnected themes that illuminate how psychological safety is experienced and constrained for HR leaders in the Bursa automotive cluster.

Theme 1 – Open Expression of Ideas: Participants consistently reported that the freedom to voice concerns or ideas was heavily conditioned by organizational context rather than personal courage. Changes in top leadership often altered the space for expression, with increasing autocratization leading to greater self-censorship. Family business politics and HR's bridging role between employees and owners amplified caution. One participant summarized: "I can express about 60%; 40% I cannot."

Theme 2 – Error and Feedback Culture: The organization's response to mistakes emerged as a powerful indicator of psychological safety. In punitive climates, errors were remembered and weaponized, fostering defensiveness and blame avoidance. In contrast, learning-oriented environments normalized error reporting and framed mistakes as improvement opportunities. The critical distinction was not the occurrence of errors but whether they were personalized or treated as learning signals.

Theme 3 – Relations with Top Management and Decision Participation: This theme carried the highest evidential density. HR leaders described a structural paradox between the ideal of strategic partnership and the reality of administrative execution. In family-dominated firms, decision authority was often concentrated, and HR input was sometimes appropriated or sidelined. Conversely, in organizations with higher trust, HR leaders were involved early in strategic processes. Early and genuine participation in decision-making both signaled and reinforced psychological safety.

Theme 4 – Intra-team Safety: HR teams could function as islands of solidarity amid external pressures, with transparency and mutual support strengthening internal safety. However, this protection was fragile; gossip, toxic competition, and political maneuvering quickly eroded it. Professional boundaries and respect for expertise helped sustain team-level psychological safety.

Theme 5 – Mobbing and Exclusion: Exclusion manifested in both overt and subtle forms. Systematic criticism, bypassing in key decisions, information withholding, and being left out of restructuring processes created lasting psychological and even physical consequences (e.g., stress-related herniated discs). Notably, these experiences were reported even by director-level participants, indicating that seniority alone does not confer protection. Gender-based biases further compounded marginalization for some female HR leaders.

5. CONCLUSION

This study demonstrates that psychological safety among HR leaders in the Bursa automotive cluster is a multi-level, structurally conditioned phenomenon shaped by leadership style, decision participation opportunities, error management culture, team relations, and exclusionary practices. The persistent tension between strategic partner aspirations and administrative compliance roles creates chronic vulnerability to self-censorship and marginalization.

Practical implications are clear: organizations must move beyond individual-level interventions. They should institutionalize safeguards against organizational bypassing, replace punitive feedback cultures with structured learning reviews, and embed participative leadership practices. In family business contexts, formal mechanisms that protect HR's advisory independence are particularly important. The findings underscore that psychological safety for those who facilitate it for others cannot be assumed; it must be deliberately designed and defended at the systemic level.

Limitations include the single-region, single-sector focus and the cross-sectional, self-report nature of the data. Future research would benefit from longitudinal designs, paired interviews with top management and HR leaders, and the development of context-specific measurement scales for manufacturing environments.

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MANAGING INSURANCE AND GLOBAL SUPPLY CHAIN RISKS IN INTERNATIONAL TRADE THROUGH INTEGRATED MODELS

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ABSTRACT

Purpose- This study aims to examine how risks arising in international trade and global supply chain processes are evaluated from an insurance perspective and to reveal sector stakeholders' views on the risk coverage capacity of existing insurance practices. The scope focuses on traditional coverage structures, protection gaps, digital traceability, and trends toward integrated insurance models. The research questions seek to identify the risk areas in which stakeholder groups exhibit common tendencies and the items on which their assessments diverge. Thus, the relationship between insurance product design and supply chain management is examined on an empirical basis.
Methodology- The study employed a quantitative, cross-sectional, descriptive-comparative research design. The study group comprised 303 participants working in insurance companies, logistics and transportation firms, export and foreign trade enterprises, and insurance brokerage or intermediary services. Data were collected using an institutional and professional information form and a 16-item, five-point Likert-type questionnaire. The analyses included descriptive statistics, Cronbach's alpha, McDonald's omega, the Kruskal–Wallis test, Dunn's test with Bonferroni correction, and epsilon-squared effect-size calculations. The instrument's proposed subdimension structure was also tested, and its internal consistency was used as the primary basis for determining the analytical strategy. The findings were reported with due methodological caution.
Findings- Item means ranged from 2.78 to 4.60. High levels of agreement were particularly evident for Items M6, M10, M11, M15, and M16. As the internal consistency coefficients of the proposed subdimensions did not reach acceptable levels, the analyses were conducted at the item level. Significant differences by field of activity were found for Items M3, M4, M6, M9, and M10; by organizational position for Items M6, M12, and M15; by length of experience in the sector for Items M3, M4, M6, M8, M10, M13, M15, and M16; and by the organization's level of international activity for Items M5, M6, M11, and M12.
Conclusion- The findings indicate that traditional insurance practices remain limited in covering the financial and operational impacts of global supply chain risks. Data-driven monitoring, parametric payout mechanisms, contingent business interruption coverage, and alternative risk-transfer instruments emerge as key areas that could contribute to establishing a more integrated risk-management architecture in international trade.

Keywords: International trade, global supply chain, risk management, integrated insurance models, parametric insurance.
JEL Codes: F10, G22, M11

ULUSLARARASI TİCARETTE SİGORTA VE KÜRESEL TEDARİK ZİNCİRİ RİSKLERİNİN BÜTÜNLEŞİK MODELLERLE YÖNETİMİ

ÖZET

Amaç- Araştırmanın amacı, uluslararası ticaret ve küresel tedarik zinciri süreçlerinde ortaya çıkan risklerin sigorta perspektifinden değerlendirilme biçimini incelemek ve mevcut sigorta uygulamalarının risk karşılama kapasitesine ilişkin sektör paydaşlarının görüşlerini ortaya koymaktır. Kapsam, geleneksel teminat yapıları, teminat boşlukları, dijital izlenebilirlik ve bütünleşik sigorta modellerine yönelik eğilimler çevresinde oluşturulmuştur. Araştırma soruları, paydaş gruplarının hangi risk başlıklarında ortak eğilim geliştirdiğini ve hangi maddelerde ayrışan değerlendirme ürettiğini belirlemeye yöneliktir. Böylece sigorta ürün tasarımı ile tedarik zinciri yönetimi arasındaki ilişki ampirik bir zeminde ele alınmıştır.
Metodoloji- Araştırma nicel yöntemle, kesitsel ve betimsel-karşılaştırmalı tasarımla yürütülmüştür. Çalışma grubunu sigorta şirketleri, lojistik ve taşımacılık firmaları, ihracat ve dış ticaret işletmeleri ile sigorta brokerliği veya aracılık alanlarında görev yapan 303 katılımcı oluşturmuştur. Veriler kurumsal ve mesleki bilgi formu ile 16 maddelik beşli Likert tipi anket aracılığıyla toplanmıştır. Analizlerde tanımlayıcı istatistikler, Cronbach alfa, McDonald omega, Kruskal-Wallis testi, Bonferroni düzeltmeli Dunn testi ve epsilon kare etki büyüklüğü hesaplamaları

kullanılmıştır. Ölçme aracının planlanan alt boyut yapısı ayrıca test edilmiş; iç tutarlılık düzeyi analiz stratejisinin belirlenmesinde temel alınmıştır. Raporlama dili yöntemsel temkin esas alınarak kurulmuştur.
Bulgular- Madde ortalamaları 2,78 ile 4,60 arasında değişmiştir. M6, M10, M11, M15 ve M16 maddelerinde üst katılım düzeyleri belirginleşmiştir. Planlanan alt boyutların iç tutarlılık katsayıları kabul edilebilir düzeye ulaşmamış, analiz hattı madde düzeyinde kurulmuştur. Faaliyet alanı değişkeni M3, M4, M6, M9 ve M10 maddelerinde; kurumdaki pozisyon M6, M12 ve M15 maddelerinde; sektörde çalışma süresi M3, M4, M6, M8, M10, M13, M15 ve M16 maddelerinde; kurumun uluslararası faaliyet düzeyi M5, M6, M11 ve M12 maddelerinde anlamlı farklılaşma üretmiştir.
Sonuç-- Bulgular, geleneksel sigorta uygulamalarının küresel tedarik zinciri risklerinin finansal ve operasyonel etkilerini kapsamada sınırlı kaldığını göstermektedir. Veri temelli izleme, parametrik ödeme mekanizmaları, şarta bağlı iş durması teminatları ve alternatif risk transferi araçları, uluslararası ticarette daha bütünleşik bir risk yönetimi mimarisinin kurulmasına katkı sağlayabilecek başlıklar olarak öne çıkmaktadır.

Anahtar Kelimeler: Uluslararası ticaret, küresel tedarik zinciri, risk yönetimi, bütünleşik sigorta modelleri, parametrik sigorta
JEL Kodları: F10, G22, M11

1. GİRİŞ

Küresel ticaret ağları mal akışı, finansman, sözleşme yönetimi, sigorta ve veri paylaşımının aynı anda yürütüldüğü çok katmanlı yapılara dönüşmüştür. Üretim ve lojistik faaliyetlerinin farklı ülkelere yayılması, işletmelere maliyet ve pazar erişimi açısından hareket alanı sağlamaktadır. Aynı ağ yapısı, teslimat gecikmesi, belge hatası, ödeme sorunu, rota kesintisi ve tedarikçi kaynaklı aksaklıkların zincir boyunca yayılmasına elverişli bir zemin üretmektedir. Sigorta, dış ticaret işlemlerinde risk devrini düzenleyen temel araçlardan biri olarak yer almakta; kapsam, kloz, istisna ve tazminat süreci şirketlerin fiili korunma düzeyini belirlemektedir.

Teslim şekilleri, ödeme yöntemleri ve sigorta klozları uluslararası ticarette riskin hangi aşamada hangi tarafa geçtiğini belirleyen başlıca araçlardır. Incoterms kurallarının işletmenin lojistik kapasitesiyle uyumsuz seçilmesi, sözleşme hükümlerinin eksik kurulması veya teminatın gerçek taşıma akışını izlememesi uyuşmazlık ve maliyet üretmektedir. Pandemi, liman tıkanıklığı, siber saldırı, ambargo ve tedarikçi iflası gibi olaylar, fiziksel hasar odaklı poliçe mantığının kapsamını zorlayan risk alanları yaratmaktadır.

Araştırmanın hareket noktası, sektör paydaşlarının geleneksel sigorta uygulamalarını ve bütünleşik sigorta modellerini nasıl değerlendirdiğini nicel verilerle açıklamaktır. Sigorta şirketleri, lojistik ve taşımacılık firmaları, ihracat veya dış ticaret işletmeleri ile brokerlik ve aracılık alanlarından elde edilen yanıtlar, risk algısı ve teminat değerlendirmelerinin kurumsal konuma göre farklılaşma biçimini göstermektedir.

2. LİTERATÜR

Uluslararası ticaret literatürü, sınır aşan işlemlerde riskin taşıma sürecinden, ödeme yapısından, belge düzeninden, gümrük rejiminden ve sözleşme yorumundan beslendiğini göstermektedir. Duranoğlu (2013), dış ticarette coğrafi uzaklık ve farklı hukuk sistemlerinin operasyonel belirsizliği artırdığını vurgulamaktadır. Ağaoğlu (2020), Incoterms kurallarının uluslararası satım sözleşmelerinde ortak terminoloji sağlayarak risk devri, masraf paylaşımı ve belge yükümlülüklerini daha belirgin hale getirdiğini belirtmektedir. Polat (2021), Incoterms 2020 düzenlemelerinin özellikle sigorta yükümlülükleri ve risk transfer noktaları açısından uygulamada dikkatle ele alınması gerektiğini ifade etmektedir. Vogt ve Davis (2020), Incoterms yazınını kapsamlı biçimde inceleyerek alandaki araştırma boşluklarını ve ortak bir araştırma çerçevesine duyulan ihtiyacı ortaya koymaktadır.

Tedarik zinciri riskleri operasyonel kesintiler, finansal dalgalanmalar, çevresel tehditler, jeopolitik belirsizlikler ve teknolojik kırılganlıklar etrafında yoğunlaşmaktadır. Kazan ve Uzun Kocamış (2024), çevresel, sosyal ve jeopolitik risklerin tedarik zinciri sürdürülebilirliği üzerinde doğrudan etki ürettiğini göstermektedir. Jüttner et al. (2003), tedarik zinciri risk yönetiminin firma sınırlarını aşan aktörler arası koordinasyonla ele alınması gerektiğini belirtmektedir. Fiziksel hasar koşuluna bağlı geleneksel sigorta yaklaşımı, pandemi ve benzeri sistemik kesintilerin finansal etkisini kapsamada sınırlı kalabilmektedir; Schmitt ve Spaeter (2023) iş durması teminatlarında çift tetikleyici ve pandemi kapsamı tartışmalarını bu eksende ele almaktadır. Fan ve Stevenson (2018), tedarik zinciri risk yönetimini riskin belirlenmesi, değerlendirilmesi, işlenmesi ve izlenmesini kapsayan bütüncül bir süreç olarak çerçevelemektedir. Ivanov ve Dolgui (2020), COVID-19 deneyiminden hareketle, birbirine bağlı tedarik ağlarının dayanıklılığın ötesinde değişen koşullarda işlevini sürdürebilmesini yaşayabilirlik yaklaşımıyla açıklamaktadır.

Bütünleşik sigorta modelleri, operasyonel, finansal, hukuki ve teknolojik riskleri ortak veri mimarisi içinde değerlendirmeye yönelmektedir. Tektaş ve Kırbaç (2020), blokzinciri tabanlı doğrulama sistemlerinin lojistik süreçlerde belge güvenilirliği ve izlenebilirlik sağlayabileceğini ortaya koymaktadır. Tunca ve Sezen (2020), sigorta işlemlerinde blokzinciri ve akıllı sözleşmelerin tazminat süreçlerini hızlandırma potansiyelini tartışmaktadır. Strupczewski et al. (2021), alternatif risk transferi araçlarının geleneksel sigorta kapasitesini tamamlayan finansal koruma seçenekleri sunduğunu belirtmektedir. Gatteschi et al. (2018), blokzinciri ve akıllı sözleşmelerin sigorta sektöründeki potansiyelini değerlendirirken teknolojinin yararları, sınırlılıkları ve somut kullanım örneklerinin birlikte ele alınması gerektiğini vurgulamaktadır.

3. VERİ METODOLOJİSİ

Araştırma nicel yöntemle yürütülmüş, kesitsel ve betimsel-karşılaştırmalı bir tasarım benimsenmiştir. Çalışma grubunu uluslararası ticaret, lojistik, sigortacılık ve sigorta aracılığıyla ilişkili kurumsal yapılarda çalışan 303 katılımcı oluşturmuştur. Katılımcılar faaliyet alanı, kurumdaki pozisyon, sektörde toplam çalışma süresi ve kurumun uluslararası ticaret ile tedarik zinciri faaliyet düzeyi değişkenleri üzerinden sınıflandırılmıştır.

Veriler, kurumsal ve mesleki bilgi formu ile M1-M16 arasında kodlanan 16 maddelik beşli Likert tipi anket aracılığıyla toplanmıştır. Maddeler başlangıçta risk algısı, sigorta yeterliliği, teminat yetersizliği algısı ve bütünleşik modele destek başlıkları altında tasarlanmıştır. Güvenirlik analizleri planlanan alt boyutların yeterli iç tutarlılık üretmediğini göstermiştir. Analizlerde alt boyut toplam puanları kullanılmamış, her madde bağımsız analiz birimi olarak değerlendirilmiştir.

İstatistiksel süreçte tanımlayıcı istatistikler, Cronbach alfa ve McDonald omega katsayıları, Kruskal-Wallis testi, Bonferroni düzeltmeli Dunn ikili karşılaştırma testi ve epsilon kare etki büyüklüğü hesaplamaları uygulanmıştır. Likert tipi verinin sıralı yapısı, parametrik olmayan analiz hattını desteklemiştir. Anlamlılık düzeyi ,05 olarak alınmış, yorumlarda p değerleri ile etki büyüklükleri birlikte değerlendirilmiştir.

4. BULGULAR

Tanımlayıcı bulgular, madde ortalamalarının 2,78 ile 4,60 arasında değiştiğini göstermiştir. En yüksek ortalama M6 maddesinde, en düşük ortalama M13 maddesinde elde edilmiştir. M6, M10, M11, M15 ve M16 maddelerinde medyan ve mod değerleri üst kategorilerde yoğunlaşmıştır. M8, M9 ve M13 maddelerinde daha sınırlı katılım düzeyleri kaydedilmiştir. Yanıt dağılımları, katılımcıların bazı risk ve model başlıklarında güçlü bir ortak eğilim sergilediğini, bazı maddelerde daha ayrışmış değerlendirmeler ürettiğini göstermektedir.

Güvenirlik analizleri, planlanan alt boyut yapısının örneklemde yeterli iç tutarlılığa ulaşmadığını ortaya koymuştur. Risk algısı ve bütünleşik modele destek başlıklarında negatif alfa değerleri hesaplanmıştır. Sigorta yeterliliği ile teminat yetersizliği algısı başlıklarında alfa ve omega katsayıları düşük düzeyde kalmıştır. Analiz stratejisinin madde düzeyinde kurulması, ölçüm aracının fiili veri yapısına uygun ve temkinli bir çözümleme hattı sağlamıştır.

Tablo 1, grup karşılaştırmalarında anlamlı farklılaşma üreten maddeleri özetlemektedir.

Tablo 1: Gruplar Arası Karşılaştırma Bulgularının Özeti

Karşılaştırma değişkeni	Anlamlı farklılaşan maddeler	Yorum
Faaliyet alanı	M3, M4, M6, M9, M10	Lojistik, dış ticaret, sigorta ve aracılık grupları arasında risk ve teminat değerlendirmeleri ayrışmıştır.
Kurumdaki pozisyon	M6, M12, M15	Pozisyon düzeyi sigorta yeterliliği, teminat algısı ve bütünleşik modele destek maddelerinde farklı yanıt örüntüleri üretmiştir.
Sektörde çalışma süresi	M3, M4, M6, M8, M10, M13, M15, M16	Deneyim yılı, sekiz maddede anlamlı farklılaşma üretmiş ve değerlendirmelerin mesleki birikimle ilişkili olduğunu göstermiştir.
Kurum faaliyet düzeyi	M5, M6, M11, M12	Uluslararası faaliyet yoğunluğu, risk ve sigorta algısını belirli maddelerde etkilemiştir.

Faaliyet alanı değişkeninde M3, M4, M6, M9 ve M10 maddeleri anlamlı farklılaşma üretmiştir. Epsilon kare değerleri M3 ve M4 maddelerinde yüksek düzeyde etkiye işaret etmiştir. Kurumdaki pozisyon değişkeninde M6, M12 ve M15 maddeleri anlamlı bulunmuştur. Sektörde çalışma süresi değişkeninde sekiz madde anlamlı farklılaşma üretmiş ve deneyim yılı araştırmanın en geniş ayrışma alanını oluşturmuştur. Kurumun uluslararası ticaret ve tedarik zinciri faaliyet düzeyinde M5, M6, M11 ve M12 maddeleri anlamlı sonuç vermiştir.

5. SONUÇ

Araştırma bulguları, uluslararası ticaret ve küresel tedarik zinciri risklerinin sektör paydaşları tarafından aynı yoğunlukta değerlendirilmediğini göstermektedir. Risk algısı, sigorta yeterliliği, teminat boşlukları ve bütünleşik modele destek başlıkları faaliyet alanı, pozisyon, deneyim yılı ve kurum faaliyet düzeyine göre değişen yanıt örüntüleri üretmiştir. Özellikle faaliyet alanı ve sektörde çalışma süresi değişkenleri, sigorta ve tedarik zinciri risklerine ilişkin değerlendirmelerde güçlü bir ayrışma alanı oluşturmuştur.

Geleneksel sigorta uygulamaları, küresel tedarik zincirlerinde ortaya çıkan finansal ve operasyonel etkileri kapsamada sınırlı kalmaktadır. Fiziksel hasar koşuluna dayalı poliçe tasarımı, siber saldırı, lojistik darboğaz, tedarikçi iflası, ambargo, veri kesintisi ve pandemi kaynaklı iş durması gibi olaylarda genişletilmiş ürün tasarımına ihtiyaç doğurmaktadır. Dijital izlenebilirlik, parametrik sigorta, şarta bağlı iş durması teminatları, alternatif risk transferi ve blokzinciri tabanlı doğrulama sistemleri, araştırma bulgularının işaret ettiği bütünleşik model ihtiyacını karşılayabilecek araçlar arasında yer almaktadır.

Uygulama düzeyinde sigorta şirketleri ve brokerler için ürün tasarımı, lojistik ve dış ticaret firmaları için teminat planlaması, düzenleyici kurumlar için veri paylaşımı ve risk standardizasyonu başlıkları öne çıkmaktadır. Uluslararası ticaretin daha dayanıklı bir sigorta mimarisiyle desteklenmesi, poliçe kapsamı, sözleşme düzeni, dijital veri altyapısı ve kurumsal risk yönetimi süreçlerinin birlikte tasarlanmasına bağlıdır. Gelecek araştırmalarda firma hasar kayıtları, poliçe metinleri ve sektör bazlı veri setleri kullanılarak modelin uygulamadaki karşılığı daha ayrıntılı biçimde incelenebilir.

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WHEN AUTHENTICITY SIGNALING BACKFIRES: AN INVERTED RELATIONSHIP

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ABSTRACT

Purpose- This conceptual study develops a new framework for consumer behaviour by examining the unintended negative consequences of excessive authenticity signalling by digital creators, such as influencers. While prior research has largely emphasised the positive role of digital creators, including influencers and micro-celebrities, in building trust, credibility, and purchase intentions, this study explores whether repetitive and exaggerated authenticity claims may elicit adverse consumer responses.
Methodology- This study adopts a conceptual approach and develops a research framework grounded in Trust-Commitment Theory and Signalling Theory. Drawing on these perspectives, the framework specifies the proposed relationships among authenticity signalling, authenticity fatigue, and consumer scepticism, and how these may erode trust through a series of theoretical propositions explaining how repeated signalling practices affect consumers' opinions over time. In addition, the study proposes a multidimensional conceptualisation of authenticity fatigue within signalling theory.
Findings- Grounded in Signalling Theory, which posits that greater signalling quantity can result in more favourable perceived outcomes, the proposed framework suggests that excessive authenticity signalling may paradoxically increase consumer scepticism and erode trust over time. Repeated exposure to authenticity-based persuasive messaging is also expected to generate authenticity fatigue, thereby weakening the persuasive value of authenticity cues, which may decrease online engagement, reduce the effectiveness of user-generated marketing, and potentially encourage negative electronic word of mouth. Collectively, these relationships indicate that authenticity may backfire when strategically overused in digital environments.
Conclusion- This study contributes to the influencer marketing and consumer psychology literature by reframing authenticity as a persuasive signal whose value and effectiveness are not unlimited; excessive exposure may erode its persuasive power and lead to fatigue. The study identifies several key relationships, including the potential for excessive authenticity signalling to increase consumer scepticism, thereby weakening trust in brand-endorsed claims. Additionally, repeated exposure to authenticity-based persuasive cues may lead to authenticity fatigue, thereby reducing the persuasive effectiveness of authenticity appeals. These relationships suggest that authenticity does not function as an unlimited persuasive resource, as its effectiveness may decline when used repeatedly or strategically. Finally, the study provides a foundation for future empirical research examining the boundary conditions under which authenticity strengthens persuasion or backfires.

Keywords: Consumer scepticism, authenticity fatigue, authenticity signalling, consumer trust, commitment-trust theory
JEL Codes: M31, M37, D91

1. INTRODUCTION

The fragmentation of meaning and identity in modern society makes it harder for people to tell what is genuine. As a result, authenticity has emerged as a key driver of meaningful consumption and consumer–brand relationships (Morhart et al., 2015), shaping how individuals evaluate products and brands. Within Web 2.0, self-presentation practices have become increasingly prominent in use between users of the digital spaces (Chatzopoulou & Navazhylava, 2022). This is especially relevant for Generation Z, born after 1995 (Rosenberg et al., 2025), who see authenticity as part of their identity (Theocharis & Tsekouropoulos, 2025). Their consumption behaviours are strongly influenced by digital environments, where online shopping and social media platforms play a central role in shaping preferences and purchase decisions (Ridwan et al., 2025). Consequently, making authenticity a critical determinant of consumer perception and brand positioning in digital markets (Beverland et al., 2008).

Within this context, the communication of authenticity narratives has evolved into a strategic tool used by both brands and digital creators to establish credibility and trust. Such narratives are frequently embedded in influencer marketing, celebrity endorsements, user-generated content (UGC), and brand-generated content (BGC) (Moulard et al., 2015; Audrezet et al., 2020). Moreover, electronic word-of-mouth (eWOM) amplifies these signals among these native individuals (Liu et al., 2024). This phenomenon is often conceptualized as “authentic advertising” or “ad authenticity” (Um, 2022).

While prior research has predominantly emphasized the positive role of authenticity, limited attention has been given to its potential overuse and the unintended consequences that may arise in saturated digital environments. Existing studies have examined related phenomena such as over-endorsement and credibility dilution in influencer marketing (Cheah et al., 2024), yet they fall short of capturing the broader experiential and psychological impact of continuous exposure to authenticity-driven messaging. By addressing this gap, the present conceptual study introduces the notion of authenticity fatigue, defined as a state in which consumers become cognitively and affectively exhausted by persistent exposure to authenticity claims, leading to increased scepticism and diminished responsiveness to such signals.

2. LITERATURE REVIEW

Brand authenticity typically refers to consumers’ perceptions of a brand's identity and claims (Guèvremont, 2015). Which, highlights the importance of its approach that lies in their consistent alignment with consumers’ values (Morhart et al., 2015), With the growth of digital platforms, and This is highly relevant to Generation Z, whose daily social media use increases their exposure to UGC and brand-related conversations (Twenge & Martin, 2020). These in-real-time online reviews and conversations of idea exchange and open peer-reviews and discussion on their opinion of both the brand and the product/service (Campagna et al., 2023), thereby, influencing the effectiveness the marketing champaigns effectiveness.

Brand authenticity has multifaceted nature, however, the term is often used to express ‘true or genuine’ (Beverland, 2005; Beverland & Farrelly, 2010). Moreover, it is often perceived through sincere storytelling and commitments to tradition (Beverland, 2005). Becoming more important than price (Gilmore & Pine, 2007). Which enhance “brand-related communication” process (Campagna et al., 2023). However, authenticity dimensions rather, a term that needs to be judged from multiple angles to judge its effectiveness in its perception (Beverland & Farrelly, 2010). Which can vary based on industry, gender, age, and personal values.

The concept of (brand) authenticity is rooted in signalling theory, which usually cited by scholars in the management sector from Spence’s (1973) or Ross’s (1977). While Berger & Heath (2007) approach the signalling theory application in the social sector, to focus on consumer behaviours in approaching products, hence, individuals need to present their identity in a unique manner, or a small group of individuals with the same interests when choosing products that reflect their identity.

Signaling theory provides a basis for communicating quality through signals, whether observable or not, with the goal of reducing miscommunication and information asymmetry (Connelly et al., 2011). The social approach provides the fundamental framework for interpreting signals of uniqueness in products that align with the individual’s need for uniqueness (Berger & Heath, 2007). When applied to consumer authenticity seeking, it contributes to how consumers might perceive a brand’s claims of unobservable and judge their alignment with the observed quality presented in the real product. Moreover, signaling theory posits that, to improve the outcomes of conveyed signals, a firm can either increase the number of signals or enhance their observability (Connelly et al., 2011). Therefore, comes this study to investigate whether the increased number of authenticities signaling and in this case through digital endorsement, which will investigate the effect of signaling perception on young digital cosmetic consumers, based on the understanding studies of the literature on; Gen Z impulse purchasing behaviors, purchasing decision-making, and consumer quest for authenticity (e.g. Napoli et al. 2014; Um, 2022; Huh & Kim, 2024; Ridwan et al., 2025).

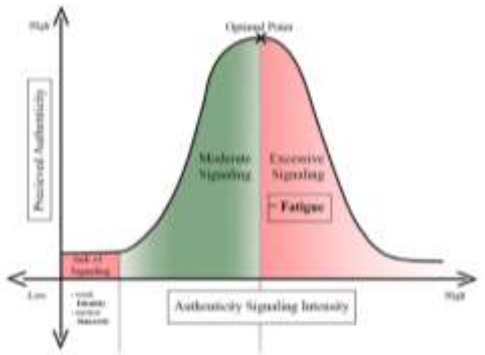
In the marketing world, consumer skepticism is used to describe a person being alerted by doubts and disbelief of the advertiser’s claims or motives; it also categorizes certain customers of their psychological status as “cynical”, Which is defined by the literature as “Consumer Skepticism” (Obermiller & Spangenberg, 1998). Obermiller & Spangenberg (1998), define it as a disposition of established patterns of negative response towards advertisements’ claims.

Having Gen Z grown up in algorithm-driven environments, has given them heightened awareness of social, environmental, and ethical issues (Dragolea et al., 2023). This awareness has further expanded into digital nativeness which increased their expectations toward brands, particularly in relation to social responsibility and sustainability initiatives (Theocharis & Tsekouropoulos, 2025). At the same time, it has also intensified their skepticism toward authenticity claims that are perceived as inconsistent, exaggerated, or misaligned with actual practices (Djafarova & Trofimenko, 2019).

In the fast-moving, widely available, and highly accessible product offerings in the beauty and cosmetics industry as McKinsey & Company (2025) described it as trend-based industry. Which consistent change of trends can question the credibility and sincerity behind the endorsed brand and with the rise USG claims are often repeated highlighting Gen Z consumer’s skepticism via such term such as ‘over-hyped’, or ‘trap-hole’ views’ (e.g. Casaló et al., 2020; Campagna et al., 2023). Accordingly, excessive authenticity signaling may create a shift from positive perception of authentic claims toward doubt, and fatigue. Resulting in a lack of perceived credibility which can erode trust and damage the brand’s image, especially when the endorsement appears overly commercial or strategically managed (Audrezet et al., 2020; Cheah et al., 2024), doubting the motive of the ad (Erkan & Evans, 2018), eroding trust, reduce brand-consumer engagement as a form of resistance of excessive endorsing deception. Accordingly, providing the conceptual basis for examining authenticity fatigue as a potential consequence of overexposure and signaling excessiveness.

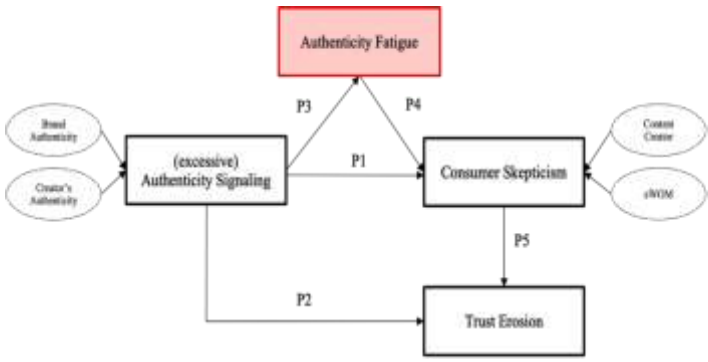
Building on the commitment-trust theory, the key for successful marketing is the need for a consistent relationship of built trust between firms and consumers, which is referred to as ‘relationship marketing’ (Morgan & Hunt, 1994). Considering the base success of influencer marketing, serving as ‘product-placement’ in promotional contents (Audrezet et al., 2020). The ‘parasocial’ relationship between the online person and the audience, in which it has a huge influence in converting positive emotions into authentic products, where it affects the purchasing behavior of consumers (Taher et al., 2022). A positive relationship between both can encourage consumer imitation intention of their admired online person, (Taher et al., 2022). Therefore, building on signaling theory (Connelly et al., 2011), effective implementation of brand authenticity signals is critical to the success of digital endorsement strategies, particularly when consumer trust is low and doubt is high.

Despite its strategic importance, conveying authenticity signals in digital environments presents a growing challenge, where the increasing reliance on authenticity claims has introduced a critical tension. When such signals become excessive, they risk being perceived as performative or staged, thereby triggering scepticism among audiences (Zhu, 2025). Repeated exposure of Gen Z to such claims—especially when the brand-creator content fails to deliver meaningful substance—may gradually erode trust and reduce the persuasive power of authenticity as a communication strategy. Furthermore, authenticity fatigue may increase consumer scepticism and erode trust in both brands and digital content creators. As consumers become more doubtful toward exaggerated or repeatedly used authenticity claims, their responsiveness to digital endorsements may decline, reducing the effectiveness of authenticity as a marketing strategy. Therefore, consumer scepticism and trust erosion represent key outcomes of excessive authenticity signalling.



3. DATA AND METHODOLOGY

This study aims to propose a conceptual research model for enhancing authenticity digital signalling by marketing managers' set of tactics to implement, where the purpose of the study is to help firms understand how to avoid consumers' weariness and fatigue of authenticity claims, by first setting a framework and base on theoretical well-investigation theories in the literature and link it to consumer's process of reaching distrust and scepticism,, based on contribution of previous peer-investigation. However, this study develops a path of investigation into consumer behaviour of when and how digital native consumers reach fatigue and burnout of excessive authenticity claims.



The conceptual model is developed through the integration of signalling theory and commitment-trust. These theories provide the foundation for explaining how authenticity signals are communicated, and interpreted by consumers when they become repetitive, exaggerated, or extreme. The proposed framework focuses on the relationships between excessive authenticity signalling, authenticity fatigue, consumer scepticism, and trust erosion. The study particularly emphasizes Generation Z consumers in digital environments, where influencer marketing, eWOM, and brand–creator collaborations shape consumer perceptions and responses.

4. FINDINGS

The conceptual findings suggest that authenticity remains valuable when it is perceived as consistent, credible, and aligned with actual brand or creator behaviour. However, when authenticity signals are used excessively, they may lose persuasive strength and become perceived as performative or strategically managed. This study proposes that excessive authenticity narratives may lead to authenticity fatigue through two subdimensions: intensity and repetition. Intensity refers to the strength, extremity, and emotional weight of authenticity cues, where exaggerated or emotionally charged claims may require greater cognitive evaluation and create weariness when perceived as overstated. Repetition refers to the continuous exposure to similar authenticity claims across digital platforms, where repeated narratives of honesty, transparency, uniqueness, or meaningful endorsement may reduce signal distinctiveness and contribute to cognitive and affective fatigue, especially in saturated digital markets such as cosmetics.

The graph was created to explain and visualize the research argument that authenticity signalling does not always increase perceived authenticity in a linear way. At low levels of signalling, consumers may not receive enough cues to evaluate the sincerity, identity, or credibility of the brand or digital creator, resulting in weak perceived authenticity. As signalling increases to a moderate level, authenticity cues become clearer, more credible, and more persuasive, reaching an optimal point where authenticity is more likely to be perceived as genuine and trustworthy. However, when signalling exceeds this optimal threshold, authenticity claims may become too intense or repeatedly emphasized, which can create authenticity fatigue and shift consumer perception from genuine authenticity toward performativity, scepticism, and trust erosion. Therefore, the graph supports the main conceptual argument of the study by showing that authenticity remains valuable, but only when it is communicated with balance, credibility, and moderation.

5. CONCLUSION

In conclusion, the conceptual findings suggest that authenticity remains an important factor in digital marketing when it is perceived as credible, consistent, and aligned with actual brand or creator behaviour. However, authenticity should not be treated as an unlimited persuasive strategy. When authenticity signals are used with excessive intensity or repeated too frequently, they may lose their persuasive value and become perceived as performative, strategic, or less genuine. Future studies are recommended to empirically test the proposed conceptual model and examine the relationship between excessive authenticity signalling, authenticity fatigue, consumer scepticism, and trust. Further research may also develop and validate measurement scales for authenticity fatigue and its proposed subdimensions, intensity and repetition. In addition, future studies could compare different generations, product categories, digital platforms, and types of endorsers to better understand when authenticity supports consumer trust and when it begins to backfire.

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