

Unifying Micro-Foundations, Firm Orientations, and Macro-Environments: A Multi-Level Conceptual Framework for Sustainable E-Commerce Adoption and Performance

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ABSTRACT

The rapid development and structural maturation of the global digital economy have revealed a crucial limitation of the existing research, namely the gap between localized, micro-level behavioral models and macro-environmental realities. Digital venture success is a multi-layered and emergent process, rather than the traditional frameworks that assess consumer perceptions, entrepreneurial traits, and leadership styles in isolation. This study synthesizes multidisciplinary literature on consumer psychology, entrepreneurial competencies, adaptive leadership models, and crisis management to propose an all-encompassing conceptual framework. The framework identifies individual micro-foundations (consumer trust, benefit awareness, and entrepreneurial risk tolerance) as antecedents influencing firm-level strategic orientations. These orientations are operationalized through transformational and empowering leadership, which fosters employee psychological safety and workplace thriving as key mediating mechanisms for innovative work behaviors. Most importantly, the entire operational pipeline is moderated by macro-environmental boundary conditions, such as infrastructure quality, socio-economic constraints, and regional crises, which determine the extent to which internal dynamics can translate into sustained e-commerce adoption, consumer retention, and venture resilience. The paper concludes with concrete theoretical, methodological, practical, and conceptual propositions for future empirical research in terms of longitudinal, multi-wave designs and systematically integrated models.

Keywords: E-commerce Adoption, Micro-Foundations, Adaptive Leadership, Psychological Safety, Innovative Work Behavior, Macro-Environmental Moderation

Introduction

The global digital economy has transitioned into a phase of structural maturation, with worldwide retail e-commerce sales projected to reach approximately \$7.41 trillion, commanding a 21.8% share of all global retail (eMarketer, 2024). Rather than experiencing the volatile growth spikes seen earlier in the decade, the modern marketplace is defined by stabilization, cross-border digital acceleration, and localized infrastructure developments. According to the International Trade Administration (2024), regions like the Asia-Pacific (APAC) dominate digital market development, with nations like India experiencing retail e-commerce growth rates exceeding 14% annually.

Simultaneously, the McKinsey & Company *State of the Consumer Report* (2026) emphasizes that rapid technological shifts—such as the integration of generative AI interfaces and short-form video discovery platforms—are completely altering retail frameworks. However, this expansion remains intensely fragmented. Industrial monitoring by Grand View Research (2025) demonstrates that while advanced digital infrastructure facilitates rapid mobile super-app adoption across Southeast Asia, Western markets (such as Germany and the UK) adapt at a much more conservative pace due to differing payment preferences, varying logistics capabilities, and regional consumer anxieties.

At the intersection of this expansion lies a multifaceted phenomenon: the convergence of micro-level human psychology, evolving digital trust architecture, and organizational agility. Modern academic and industry literature evaluates this phenomenon through foundational behavioral frameworks—such as Davis's (1989) Technology Acceptance Model (TAM), Venkatesh et al.'s (2003) Unified Theory of Acceptance and Use of Technology (UTAUT), and Mehrabian and Russell's (1974) Stimulus-Organism-Response (SOR) framework. These theoretical lenses demonstrate that consumer decisions are heavily mediated by platform-specific trust, perceived transaction security, and overall experiential quality.

A prominent example of this phenomenon is the explosive rise of live commerce—a market projected by Grand View Research (2023) to exceed \$230 billion—where immediate real-time peer interactions, influencer authenticity, and platform immersion trigger rapid, impulsive buying choices. On the supply side, this demand is met by the psychological characteristics of digital entrepreneurs. Studies published by the Asian Institute of Research (Auliya et al., 2022) confirm that modern digital channels require business leaders to translate raw personality indicators, like risk tolerance and achievement motivation, into fluid firm-level operations. These strategic orientations are supported internally by transformational (Bass & Avolio, 1994) or empowering leadership models (Amundsen & Martinsen, 2014), which establish the organizational psychological safety (Edmondson, 1999) needed to unlock continuous employee

innovation in a volatile market where industry benchmark data indicates nearly 70% of consumers will abandon an e-commerce platform over a single negative experience (PwC, 2018).

A significant knowledge gap remains despite this dense body of research: a distinct division between localized behavioral micro-models and macro-environmental realities. Traditional academic studies regularly focus on isolating individual variables within controlled data environments, frequently failing to evaluate structural constraints like local digital literacy gaps, regional infrastructure friction, or the impact of heavy employee workloads and job designs. The field's current methodological reliance on static, single-source, cross-sectional survey architectures presents a major limitation. These cross-sectional tools capture highly dynamic, real-time psychological adjustments, shifting leadership qualities, and fluid digital consumer trends as frozen images, which introduces significant common method, recall, and social desirability biases. Furthermore, standard sampling strategies feature strong urban biases and high non-response liabilities that systematically omit rural micro-enterprises and emergent developing contexts. This paper addresses these omissions by synthesizing individual micro-psychological behaviors alongside macro-environmental constraints, directly highlighting the methodological adjustments required to capture the true causal trajectories of sustainable digital growth.

Considering this landscape, this paper first explores e-commerce adoption in consumer behavior, synthesizing individual consumer-side adoption drivers under extended technology models, entrepreneur-side psychological traits in rural contexts, and emerging real-time marketing strategies within live commerce environments. Building directly upon these individual drivers, the analysis transitions into entrepreneurial traits and competencies, evaluating firm-level competencies through the Technology-Organization-Environment (TOE) framework (Hussain et al. 2022), qualitative cognitive dynamics driving venture creation, and cross-border tactical orientations across distinct market maturities. Moving inside the firm, the discussion advances to leadership styles and innovation, investigating the direct influence of managerial leadership typologies on organizational innovation, the role of cultural values in adapting leadership roles, and the micro-level psychological determinants of employee personal leadership. Expanding outward to real-world volatility, the paper then examines factors impacting leadership in crisis management and the implications of remote work, addressing proactive personality factors in driving innovative work behaviors, transformational leadership interventions in regional macroeconomic restructuring, and the operational evolution of hybrid and remote managerial practices during systemic disruptions. Finally, the study brings these multi-level insights together in the Discussion, reconciling these fragmented themes by introducing a holistic conceptual framework alongside targeted theoretical, methodological, practical, and conceptual propositions before drawing overall conclusions.

1. E-Commerce Adoption & Consumer Behaviour - The drivers for consumers and entrepreneurs

E-commerce adoption and usage are driven by a multifaceted set of technological, psychological, perceptual, and contextual factors that influence both consumers and entrepreneurs. These drivers determine not only initial intentions to adopt digital commerce platforms but also actual behaviours such as impulsive purchasing, particularly in developing economies and rural settings where barriers like infrastructure, digital literacy, and cultural contexts remain significant. The following section synthesises insights from three key studies, highlighting their theoretical foundations, empirical findings, methodological approaches, contributions, and limitations.

1.1 Consumer-Side Drivers: Extended UTAUT in Developing Countries

Mustafa, Hao, Qiao, Kifayatans and Sun (2022) utilised the Unified Theory of Acceptance and Use of Technology (UTAUT) as the foundation to develop an integrated model examining e-commerce adoption intentions among consumers in developing countries, with data collected from Pakistan. The study specifically investigated how successful implementation and long-term sustainability of e-commerce initiatives can be achieved by identifying key enabling and inhibiting factors. Their extended model incorporated core UTAUT variables alongside additional constructs: trust in e-commerce, perceived risk, ease of use, curiosity, facilitating conditions, and awareness of e-commerce benefits.

Employing a quantitative cross-sectional survey design with a hybrid Partial Least Squares Structural Equation Modelling (PLS-SEM) and Artificial Neural Network (ANN) approach, the researchers collected 796 valid responses. Sampling combined cluster and systematic techniques: Pakistan was divided into five urban clusters based on population density, literacy rates, and infrastructure, with every 10th supermarket visitor invited to participate. PLS-SEM tested theoretical relationships and hypotheses, while ANN enhanced predictive accuracy and enabled sensitivity analysis to rank the relative importance of determinants. Results showed that trust, perceived risk, ease of use, curiosity, facilitating conditions, and awareness of benefits all significantly influenced adoption intentions. Sensitivity analysis identified ease of use and awareness of e-commerce benefits as the two most critical determinants.

The study makes a meaningful contribution by explicitly building upon and extending the original UTAUT framework (Venkatesh et al., 2003) through the integration of curiosity and awareness constructs. It engages with prior literature by confirming findings on trust (e.g., Kalinić et al., 2021) while presenting contrasting results on ease of use (e.g., relative to Yadav et al., 2016). The novel application of ANN sensitivity analysis provides a more nuanced ranking of drivers beyond traditional hypothesis testing. However, the paper's objectives are described as

broad and loosely defined, lacking a dedicated, clearly articulated objectives section, which blurs the line between descriptive and explanatory goals. Methodological limitations include the cross-sectional nature of the data, which restricts causal inference and fails to capture how perceptions and intentions evolve in fast-changing digital markets. The urban-centric sampling introduces bias, as rural consumers with limited internet access and infrastructure are underrepresented. Additionally, reliance on self-reported responses raises risks of social desirability bias, and findings from Pakistan may not generalise well to other developing countries with differing cultural, political, or technological environments. The authors acknowledge some of these constraints, including the focus on general e-commerce rather than specific platforms and limited demographic controls.

1.2 Entrepreneur-Side Drivers: Psychological Traits Among Rural Micro-Entrepreneurs

Complementing the consumer perspective, Yusoff, Zainol, Ridzuan, Ismail, and Afthanorhan (2021) examined how psychological traits influence rural micro-entrepreneurs' intention to adopt e-commerce in Malaysia. The study addresses the gap where e-commerce potential for rural businesses remains underutilised despite evident benefits. Grounded in the Technology Acceptance Model (TAM), it specifically investigated the effects of two psychological traits — need for achievement and risk-taking propensity — on perceptions of e-commerce usefulness and ease of use, and ultimately on adoption intentions.

The research employed a quantitative survey approach with data analysed through Structural Equation Modelling (SEM). This methodology was suitable for simultaneously testing multiple interrelated variables and mediating effects. Findings demonstrated that both need for achievement and risk-taking propensity positively influenced perceived usefulness and perceived ease of use, which in turn significantly increased intention to adopt e-commerce. The sampling focused appropriately on rural micro-entrepreneurs, a segment often overlooked in broader digital adoption studies.

Strengths of the study include its clear purpose in linking entrepreneurial psychology to technology adoption and its extension of TAM into a rural micro-enterprise context. However, several limitations are evident. The paper focuses narrowly on only two psychological traits, excluding other relevant factors such as innovativeness, self-efficacy, or digital literacy. Research questions are not always explicitly stated, requiring inference from hypotheses and the conceptual framework. The cross-sectional design limits insights into dynamic, long-term behavioural changes. Sampling details are limited, raising concerns about representativeness and potential bias. The study also under-emphasises structural rural challenges (internet accessibility, infrastructure, education, and financial constraints), meaning the model explains only part of the adoption problem. While some limitations (e.g., rural Malaysian focus and cross-sectional

design) are acknowledged, others — such as self-report bias, social desirability bias, and potential response bias from digitally familiar participants — receive insufficient attention. The discussion prioritises statistical results over deeper interpretation of why these traits matter or how rural contexts shape them, and conclusions may overstate the model's predictive power. Overall, the contribution is contextual and incremental, reinforcing existing TAM and entrepreneurial psychology literature rather than introducing major theoretical innovation. The authors recommend policies and training programs that develop entrepreneurial confidence and positive perceptions alongside infrastructure improvements.

1.3 Emerging Formats: Marketing Strategies and Impulsive Consumer Behaviour in Livestreaming E-Commerce

Chen, Wang, Rasool, and Wang (2022) shift focus to consumer behaviour within livestreaming e-commerce, examining how specific marketing strategies influence impulsive purchase behaviour. The study tackles the rapid rise of livestreaming as a powerful yet under-theorised sales channel. Drawing on Stimulus-Organism-Response (SOR) theory, the authors propose a model in which marketing stimuli — product presentation, host interaction, promotional tactics, and platform immersion — shape consumers' internal psychological states, ultimately driving impulsive buying.

Data were gathered through a quantitative consumer survey among individuals with livestreaming purchase experience and analysed using Structural Equation Modelling (SEM). Results indicated that platform immersion was the strongest predictor of impulsive purchase behaviour, followed by host interactivity and promotional urgency. The study provides practical recommendations for marketers and platform designers to prioritise immersive and interactive environments. It effectively addresses a literature gap, as prior impulsive buying research focused mainly on traditional or static e-commerce.

The quantitative approach and SOR framework are appropriate for testing mediated relationships. However, the cross-sectional design limits causal claims, especially given the dynamic, real-time nature of livestreaming. Reliance on self-reported measures introduces risks of recall bias and social desirability effects. Sampling details are sparse (likely convenience or snowball sampling), raising self-selection and representativeness concerns. The paper lacks transparent discussion of common method bias risks from single-source data collection. While some limitations (cross-sectional design and self-reports) are noted, others — such as failure to differentiate platforms, product categories, host types, or individual differences (e.g., impulsivity levels or financial literacy) — are underexplored. The discussion sometimes restates statistical findings rather than offering deeper theoretical explanations for why immersion dominates. The work contributes modestly to SOR theory and impulsive buying literature (Rook, 1987;

Aragoncillo & Orús, 2018; Akram et al., 2018) by highlighting immersion's prominent role, but remains more confirmatory than groundbreaking.

1.4 Synthesis and Implications

These studies collectively underscore critical drivers of e-commerce adoption and behaviour. For consumers in developing contexts, ease of use, benefit awareness, trust, reduced risk, and immersive experiences stand out. For rural entrepreneurs, psychological traits like achievement motivation and risk tolerance shape technology perceptions and intentions. Livestreaming research adds that real-time interactivity and immersion powerfully trigger impulsive actions.

Despite their contributions, common weaknesses include cross-sectional designs that hinder causality and temporality insights, heavy reliance on self-reported data, context-specific samples (urban Pakistan bias, rural Malaysia specificity, unclear livestreaming samples), and incomplete integration of structural barriers with psychological factors. Objectives and research questions are sometimes loosely framed, and explanatory depth occasionally yields to statistical reporting.

For policymakers, multinational firms, and platforms, the findings suggest promoting ease of use, awareness campaigns, trust-building, immersive technologies, and targeted entrepreneurial training. Future research should adopt longitudinal and mixed-methods designs, broader and more representative sampling (including rural and cross-national comparisons), and fuller models that combine psychological, technological, and socioeconomic variables for a richer understanding of sustainable e-commerce ecosystems. Considering these, the next section focuses on the individual entrepreneurial characteristics in particular, in an attempt to shed further light on how e-commerce venture creation and performance are shaped.

2. Entrepreneurial Traits & Competencies

Entrepreneurial traits and competencies determine entrepreneurs' and firms' perception, utilization, and exploitation of digital technologies that influence venture creation, e-commerce adoption, digital marketing behavior, and ultimately firm performance. These capabilities include cognitive and personality characteristics (such as risk-taking and creativity), firm-level skills and resources, and strategic orientations that affect tactical decisions in different market contexts. Within this section, insights of three seminal studies and their theoretical foundations, empirical findings, methodological approaches, contributions, and limitations are reviewed. The main areas of investigation are concerning the entrepreneur and firm-level competencies, cognitive dynamics and e-commerce venture creation, and the strategic orientations for cross-border tactical adoption.

2.1 Entrepreneur and Firm-Level Competencies: TOE, E-commerce, and SME Performance

Hussain et al. (2022) included entrepreneurial competency in the TOE (technological, organizational, environmental) framework to investigate the effect of TOE antecedents on e-commerce adoption in SMEs and to check whether entrepreneurial competencies moderate the effect of e-commerce on firm performance. This study moves beyond treating e-commerce strictly as a mediator. Instead, it tests a model where e-commerce mediates the influence of TOE (Technology-Organization-Environment) factors on performance, with entrepreneurial competency hypothesized to act as a strengthening moderator. The constructs of interest are technological readiness, organizational practices, environmental support (government support), e-commerce usage, entrepreneurial competency, and firm performance.

Using a quantitative cross-sectional survey approach, the researchers gathered information from manufacturing SMEs in different provinces in Pakistan. They collected 250 useful responses from middle and upper managers using cluster random sampling. In order to map out the intricate mediation and moderation paths while maintaining structural validity, the data was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The empirical findings verified that the use of e-commerce greatly influences and mediates business success. The study did, however, also yield some surprising findings: the association between e-commerce and success was not moderated by entrepreneurial competencies, and government backing was shown to be statistically unimportant.

The study makes an incremental contribution by blending the Resource-Based View (RBV), Diffusion of Innovations (DOI), and TOE frameworks to capture digital transitions in a developing economy. It confirms that digital adoption improves business performance, which is consistent with other research. Nevertheless, the paper's goals are wide and a little disjointed, which dilutes its conceptual emphasis and underdevelops some theoretical topics. Because the cross-sectional methodology treats dynamic behavioral features as static images, it is challenging to derive meaningful causal inferences. Because it represents less than half of the dispersed surveys, the sample of 250 useable replies also increases the possibility of non-response bias, and the manufacturing-only focus restricts generalizability to retail or service sectors. Additionally, weak R^2 values for particular constructs indicate that statistical significance may occasionally take precedence over in-depth theoretical interpretation. The brief limitation section is undeveloped because important limitations—like managers' self-report bias, social desirability effects, and common technique variance—are not given enough consideration.

2.2 Qualitative Trait Identification: Cognitive Dynamics and E-Commerce Venture Creation

Shifting from quantitative firm-level dynamics to an individual psychological focus, Fadzil et al. (2021) explored how cognitive factors and personality traits influence the creation of innovative e-commerce ventures in Malaysia. The study addresses a distinct gap in the literature regarding the personal backgrounds, work experiences, and core behaviors required to launch digital storefronts. The research aimed to identify certain characteristics such as imagination, risk-taking, motivation, autonomy, tolerance of uncertainty, determination, optimism, and key computer and communication skills, based on cognitive and psychological theories of entrepreneurship.

The research employed a qualitative case study method to conduct in-depth semi-structured interviews with 12 e-commerce entrepreneurs. The participants were selected purposively from a list supplied by the Malaysian Communications and Multimedia Commission (MCMC). Using grounded theory techniques (Corbin & Strauss, 2008), the researchers analyzed the narratives with open, axial, and selective coding to identify core behavioral themes. The results clearly indicated that background factors such as formal education and exposure to family business, and psychological traits such as creativity and persistence, have a direct effect on digital venture creation.

The qualitative richness is the main contribution of the study, which uses direct quotations from the participants to illustrate vividly how internal psychological characteristics correspond to e-commerce environments. However, some conceptual and methodological shortcomings are evident. The paper's aims are not entirely sharp, as it covers secondary topics like assessing the role of governments in capacity building, without separating these from the primary psychological focus. The central research questions are not posed as separate questions, but the reader has to interpret them from the text. Methodologically, the paper does not justify its specific rationale for sampling, nor does it demonstrate inter-coder reliability for the coding process. The findings are very context-specific and therefore cannot be generalized universally. The paper also does not have a dedicated section on limitations, leaving structural issues unaddressed. Limitations include total reliance on self-reported data from interviews (where respondents may inflate positive characteristics), and lack of data triangulation through financial records or direct observations. The cross-sectional, single-point-in-time interviews fail to capture the fluid nature of digital markets, and the abstract constructs, such as "creativity", are never explicitly operationalized. Nor does the study consider how demographic differences such as age or gender might influence these traits, limiting its overall explanatory power.

2.3 Strategic Orientations: Cross-Border Tactical Adoption and Market Maturity Contexts

Goldman et al. (2020) extend the discussion of entrepreneurial traits to strategic orientations at the firm level. They look at how the orientations of foreign markets, growth, and customers influence the use of digital marketing tactics and international performance. The paper tackles a fundamental question: why, despite the rapid growth of cross-border online trade, small e-retailers lag behind larger firms in digital competence. Importantly, the authors test whether these strategic traits are universally applicable in different market contexts, by comparing small B2C e-retailers from developed and emerging European e-commerce markets.

This research adopted a quantitative survey based methodology and used a sample from the publicly available URLs of 20 European countries. A total of 7,865 e-retailers were contacted, and 446 usable responses were generated, which were analyzed using multi-group structural equation modeling (SEM) in R. The analysis also tested for convergent validity, discriminant validity, and measurement invariance across the market groups. The results of the empirical study show that strategic orientations are context dependent and cannot be applied universally. Foreign market orientation was the single most consistent predictor of digital marketing adoption. However, growth orientation was a predictor of digital marketing use only for firms in developed markets. Customer orientation reduced digital marketing adoption among firms operating in emerging e-commerce markets.

The paper contributes to the literature by challenging the assumption that e-commerce strategies are uniform, engaging with debates on market heterogeneity and the non-generalizability of SME research across distinct economic boundaries. Despite these strengths, some limitations persist. The boundaries between the paper's three core objectives occasionally overlap, and the central research question is presented implicitly through hypotheses rather than as a formal standalone question. The purely quantitative approach limits the capacity to explain the behavioral anomalies discovered, such as the negative performance effect of customer orientation in emerging markets. Methodologically, the low 12% response rate introduces self-selection bias, and drawing samples from trust-mark or price-comparison websites may systematically exclude less visible or smaller micro-enterprises. Measuring digital marketing tactics as a simple summative count rather than a weighted scale oversimplifies the construct. Furthermore, results regarding growth orientation were only marginally significant ($p=0.07$) between groups, making parts of the study exploratory. The authors acknowledge limitations like the cross-sectional design and the perceptual nature of performance metrics, but fail to critically address that the study is geographically confined to Europe, that the \$250 per capita market classification threshold is arbitrary, and that the data lacks controls for industry-specific fixed effects across varied product categories. Lastly, because the same manager evaluated both firm strategy and performance, the data remains vulnerable to social desirability and common method bias.

2.4 Synthesis and Implications

Taken together, these three studies indicate that entrepreneurial competencies, psychological traits, and strategic orientations are important elements that affect digital venture success, e-commerce integration, and marketing execution. At the individual level, specific psychological characteristics (e.g., risk-taking, imagination, and achievement motivation) serve as important precursors that shape positive perceptions of digital tools and influence venture creation. At the firm level, these personal attributes are translated into strategic orientations—such as foreign market or growth focus—that determine how effectively a business adopts digital tactics. But these papers show that entrepreneurial traits do not work in isolation, and the extent to which they can drive e-commerce performance or marketing success is highly contingent upon environmental factors, industry classifications, and the maturity of the target market.

However, there are common weaknesses in the literature in this area, despite the valuable insights it provides. Methodologically, there is an over-reliance on cross-sectional designs, which collect data at one point in time and do not allow us to track how competencies or strategic behaviors change within dynamic and real-time digital spaces. Sampling problems are also rife, ranging from high rates of non-response and urban/regional biases in quantitative surveys to very small, non-triangulated samples in qualitative case studies. Conceptually, these papers have overall broad and overlapping objectives and implied research questions. The focus is often on confirmation of statistical hypotheses rather than an in-depth theoretical probe into the reasons for the non-occurrence of certain relationships (e.g., the statistical insignificance of the moderating effect of entrepreneurial competencies in Pakistan, or the negative effect of customer orientation in emerging European markets). Furthermore, the use of self-reported data from owners or managers alone creates common method variance and social desirability bias in the data.

For practitioners, platform developers, and policymakers, these findings highlight that investment in digital infrastructure must be paired with targeted training that fosters entrepreneurial soft skills, confidence, and context-specific strategic capabilities. Future research should address these gaps, using longitudinal or mixed-method designs to establish causal dynamics; larger cross-national samples to reduce regional biases; and integrated models examining the interplay of individual psychological traits, firm strategic orientations, and external macroeconomic constraints.

3. Leadership Styles & Innovation

Leadership styles determine how organizations navigate digital transformation, foster employee creativity, and achieve strategic outcomes in high-velocity digital environments. These

behavioral frameworks encompass traditional managerial dynamics, such as transformational, supportive, autocratic, and democratic styles, alongside emerging employee-level paradigms like personal leadership and self-directed empowerment. Within this section, four contemporary studies are reviewed to evaluate their theoretical foundations, empirical findings, methodological approaches, contributions, and critical limitations. The structure moves from the direct impact of leadership typologies on organizational innovation, through the cultural role adaptations of management, down to the micro-level psychological drivers of personal employee leadership, concluding with a comprehensive synthesis of their broader implications.

3.1 Leadership Styles and Innovation

Wang et al. (2022) and Costa et al. (2023) both investigate the direct relationships between strategic leadership typologies and innovation outcomes, though they approach the dynamic from different levels of analysis. Wang et al. (2022) focus on a micro-level mechanism, exploring how supportive leadership styles promote innovative employee behavior within the volatile Chinese e-commerce industry. Grounded in Edmondson's theory of psychological safety, their analytical model positions psychological safety as a core mediator, while identifying environmental uncertainty as a boundary condition that moderates the leadership–innovation relationship. Their empirical strategy relied on a quantitative survey design analyzed through Structural Equation Modeling. The statistical outcomes confirmed that supportive leadership exerts a powerful direct effect on innovative behavior, a relationship fully mediated by psychological safety, which lowers the perceived penalties of risk-taking. Furthermore, the moderation analysis demonstrated that the positive influence of supportive leadership becomes significantly stronger under high environmental uncertainty, acting as a crucial psychological buffer against external market turbulence.

Taking a macro-organizational perspective, Costa et al. (2023) constructed a structural tripod framework to evaluate how four distinct leadership typologies—autocratic, transactional, democratic, and transformational—interact with human capital to influence product, service, process, marketing, and organizational innovation. Utilizing the 2018 Community Innovation Survey database, they analyzed a nationally representative sample of 13,702 Portuguese firms through 28 binary logit regression models. Their empirical estimations demonstrated that transformational and democratic leadership styles exert strong positive effects on innovation, with transformational leadership emerging as the most powerful accelerator across all five innovation variants. Conversely, autocratic and transactional styles displayed negative relationships with innovative outcomes. Their moderation models revealed that while human capital independently drives innovation, it significantly amplifies the positive impact of transformational leadership, whereas its interaction effect with transactional leadership was entirely negligible.

Both studies offer valuable contributions to understanding digital firm transitions, but they share significant methodological vulnerabilities. Wang et al. (2022) suffer from cross-sectional constraints by collecting single-source data at a single point in time, which prevents the confirmation of definitive causal directions and treats a dynamic process as a static image. They also fail to control for individual-level differences, such as employee tenure or role seniority, and by omitting objective measures of innovation like patents filed, their conclusions remain exposed to common method bias. Similarly, Costa et al. (2023) rely on a cross-sectional dataset that precludes definitive causal claims despite their use of causal language. Their paper contains conceptual ambiguities, occasionally conflating human capital as both a mediator and a moderator, and leaves the operationalization of democratic leadership highly underdeveloped. Furthermore, their empirical execution lacks vital diagnostic disclosures, omitting multicollinearity tests and goodness-of-fit indicators, while their policy recommendations remain somewhat generic by failing to differentiate meaningfully between firm sizes or specific industrial sectors.

3.2 Cultural Influences on Leadership Roles and Styles

Arun and Gedik (2021) expand this dialogue by utilizing a role theory lens to examine how structural shifts in managerial responsibilities alter leadership styles, specifically investigating the extent to which these dynamics are shaped by traditional Asian cultural values. Moving beyond standard descriptive profiles, the study tests a conceptual model where cultural values are hypothesized to predict the adoption of specific leadership roles, which in turn map onto distinct leadership typologies. The underlying constructs of interest include perceived cultural values, structural leadership roles derived from classical role theory, and a spectrum of leadership behaviors ranging from autocratic to participative. Using a quantitative, cross-sectional survey design, the researchers gathered data from an organized industrial zone in western Turkey, utilizing a stratified random sampling method to collect 368 usable questionnaires from mid- and senior-level managers, which were then evaluated using multiple regression and structural equation modeling.

The empirical findings revealed a significant symbolic interaction between deeply held values and active leadership roles, showing strong statistical correlations between specific roles and corresponding leadership styles. Managers engaged in heavy decision-making and information processing frequently exhibited a blended autocratic-participative style, and leaders were found to actively shape the interpersonal roles of their subordinates. However, the structural model yielded complex and unexpected results because while Asian cultural values significantly influenced leadership roles, these roles failed to act as structural mediators for leadership styles, leading to the outright rejection of their mediation hypothesis. The study makes an incremental contribution by embedding its analysis within role theory, symbolic interactionism, and the

cultural dimensions of Hofstede and GLOBE to capture leadership transitions in an ethnically diverse industrial setting. Nevertheless, the study's broad objectives risk conceptual overload by attempting to analyze role frequency and style relationships simultaneously, leaving the mechanisms of how values translate into daily action theoretically ambiguous.

The methodology suffers from several critical vulnerabilities that limit its broader academic utility. Limiting the sample to a single industrial zone in western Turkey severely restricts the external validity of the findings across other sectors or cultural geographies. Furthermore, despite framing the context around a culturally diverse, high-immigrant workforce, the instrument omitted direct measures of ethnicity or migrant status, relying instead on a macro-level essentialist categorization of Asian values. The reliance on self-reported, manager-level data also introduces substantial social desirability and survivorship bias. Finally, the discussion connects results to hypotheses in a mechanical, point-by-point manner, offering limited explanatory insight into why the rejected mediation paths failed to emerge.

3.3 Drivers of Personal Leadership among Employees

Mikalauskiene et al. (2023) pivot the analytical focus entirely away from top-down managerial typologies to explore the determinants of personal leadership, which is defined as the capacity for self-directed, empowered, and autonomous behavioral expression among employees within flat, digital corporate structures. The study investigates a vital transformation in the digital economy, focusing on the reality that traditional, rigid hierarchies are increasingly replaced by decentralized, e-commerce operating models that require employee autonomy at all organizational tiers. To capture this dynamic, the authors deployed a mixed-methods case study design within the Lithuanian branch of a major e-commerce platform, gathering survey responses from 175 employees alongside semi-structured interviews executed with 3 managers representing different structural tiers of seniority.

The descriptive results revealed that internal psychological and environmental factors exercise the most profound influence over the manifestation of personal leadership. Specifically, explicit leader support, consistent managerial praise, and structured performance feedback emerged as the primary drivers of autonomous employee action. Furthermore, workers heavily tied their willingness to demonstrate personal initiative to their overall job satisfaction and the equity of their financial compensation. The study concluded that personal leadership in digital spaces is an interactive phenomenon, requiring an inclusive organizational culture that intentionally delegates structural responsibility. A key behavioral insight from this research is that in digital e-commerce platforms, employees place a higher premium on soft skills, managerial empathy, and psychological empowerment than on the technical or technological competencies typically emphasized in classical e-leadership literature.

While providing useful descriptive nuances regarding employee expectations, the study represents a highly localized, methodologically vulnerable inquiry. The paper completely omits a dedicated limitations section, attempting no critical self-reflection. The quantitative and qualitative datasets are presented entirely in parallel rather than being structurally synthesized or triangulated, which severely limits the explanatory power of the mixed-methods label. Because the analysis relies entirely on basic percentages and descriptive tendencies, it is mathematically impossible to establish the statistical significance, relative weight, or true predictive value of any of the identified drivers. Furthermore, the qualitative interviews were restricted exclusively to managers, meaning the actual employee voice regarding personal leadership was funneled entirely through a rigid survey instrument. Finally, the single-firm, single-country focus prevents any meaningful generalizability to broader e-commerce contexts, and the reality that nearly all respondents expressed explicit pride in the organization indicates a heavily skewed sample prone to acute social desirability bias.

3.4 Synthesis and Implications

Synthesizing these four readings reveals a deep structural tension in the digital economy between rigid, macro-level structural frameworks and fluid, micro-level psychological needs. When viewed collectively, the literature indicates that driving innovation in digital contexts cannot be achieved through a one-size-fits-all managerial mandate. Instead, innovation is an emergent property generated at the intersection of a leader's behavioral typology, the psychological safety of the immediate workplace environment, and the structural mobilization of firm-level human capital. While macro-level empirical models confirm that transformational and democratic styles universally accelerate diverse innovation modes, the micro-level studies add a vital boundary condition, demonstrating that these styles only succeed if they successfully build psychological safety and structurally delegate autonomy down to individual employees.

Furthermore, the integration of these texts highlights that leadership expressions are deeply bounded by geography, organizational design, and cultural values. Traditional cultural values shape what roles are deemed appropriate for a manager to assume, yet the operational demands of high-velocity digital industries frequently force a blending of behavioral styles, such as the autocratic-participative hybrid observed in industrial transitions. In fast-paced and uncertain sectors like e-commerce, traditional top-down hierarchies become counterproductive because they suppress the organic risk-taking required to innovate. The primary implication for digital firms is the necessity of transitioning from a philosophy of managerial control to a philosophy of psychological enablement. To remain resilient against environmental volatility, modern organizations must design decentralized structures that prioritize soft skills, supportive communication, and explicit feedback systems, thereby transforming passive workers into active possessors of personal leadership

4. Factors impacting Leadership in Crisis Management & Remote Work

Leadership behavior serves as a primary determinant of corporate agility, structural adaptation, and digital performance when organizations encounter environmental volatility, regional transformation, or shifting operational frameworks. Within the digital economy, these dynamics require a complex blend of psychological enablement, strategic crisis management, and the evolution of virtual communication paradigms. This section reviews three contemporary studies to evaluate their theoretical foundations, empirical findings, methodological approaches, contributions, and critical limitations. The structure moves from the psychological and behavioral factors influencing innovative workplace behavior, through strategic leadership interventions in macro-economic regional crises, down to the operational evolution of remote leadership practices during structural disruptions, concluding with a comprehensive synthesis of their broader organizational implications.

4.1 Leadership and Personality Factors in Innovative Behavior

Auliya et al. (2022) investigate the structural determinants of innovative work behavior among marketing project division employees within major Indonesian e-commerce platforms, specifically targeting Shopee, Lazada, Tokopedia, and Bukalapak. The study constructs an analytical model designed to evaluate the concurrent effects of empowering leadership and a proactive personality type on employee innovation, while positioning psychological thriving at work as a central mediating mechanism. Theoretically grounded in the Conservation of Resources theory and the Socially Embedded Model of Thriving, the researchers look to map how external behavioral resources and internal personality traits combine to generate proactive workplace outcomes.

The empirical execution relied on a quantitative, cross-sectional survey design utilizing non-probability purposive sampling to gather data from 200 permanent marketing employees. The structural paths and indirect mediation effects were analyzed simultaneously using Structural Equation Modeling–Partial Least Squares. The statistical findings proved conclusive, resulting in the acceptance of all seven hypotheses. The data demonstrated that empowering leadership, a proactive personality, and thriving at work all exert direct positive influences on innovative work behavior. Furthermore, the analysis confirmed that thriving at work acts as a significant mediator, meaning that empowering leadership and proactive personal traits successfully drive workplace innovation by first fostering an internal psychological state of vitality and continuous learning.

The study makes a clear contextual contribution by applying resource-focused organizational behavior theories to competitive Southeast Asian digital marketplaces. However, it suffers from

several distinct design limitations that restrict its overall theoretical innovation. Because the hypotheses and findings are largely predictable and consistent with long-established organizational behavior principles, the study reinforces existing literature rather than introducing novel conceptual insights. Methodologically, the reliance on a cross-sectional design prevents the confirmation of definitive causal paths, as all variables were captured at a single point in time. The study also relies exclusively on self-reported questionnaires, exposing the dataset to acute social desirability and common method biases. Finally, by using a highly localized purposive sample of Indonesian marketing professionals, the authors limit the generalizability of their findings, while completely failing to control for confounding organizational variables such as workload, corporate culture, or specific job design variations.

4.2 Regional Transformation and Crisis Management

Pivoting from corporate psychological frameworks to macroeconomic stabilization, Gkanatsiou, Triantari, and Chatzidimitriou (2024) examines the strategic role of leadership in driving e-commerce growth and executing crisis management within transitional economies. The study focuses specifically on the regional socioeconomic restructuring of Western Macedonia, Greece, during its mandated phase-out of lignite energy production—a period characterized by acute economic decline, institutional uncertainty, and high regional unemployment. To understand how leadership behavior can leverage digital technology to stabilize a collapsing local economy, the authors build a conceptual framework drawing on transformational leadership theory, the Technology Acceptance Model, and the Unified Theory of Acceptance and Use of Technology.

The paper's findings indicate that specific transformational leadership qualities, namely vision, structural adaptability, and the capacity to empower local businesses, are critical prerequisites for driving e-commerce adoption and sustaining regional economic recovery during post-industrial crises. By aligning technology acceptance models with leadership metrics, the analysis illustrates how proactive governance can reduce regional barriers to digital adoption. The study successfully highlights an underexplored intersection between leadership theory and regional economic restructuring, demonstrating that infrastructure investments must be paired with visionary leadership to achieve digital economic growth during structural shocks.

Despite the compelling nature of its conceptual narrative, the study is severely weakened by an absolute lack of methodological transparency. The authors fail to explicitly clarify whether their research design relies on qualitative case analysis, secondary statistical data, or a mixed-methods approach. There is no systematic explanation of how empirical evidence was gathered within Western Macedonia, omitting details regarding stakeholder consultations, document selection, or participant interviews. This opacity makes it impossible to evaluate the interpretive rigor of the study, assess researcher bias, or understand the exact mechanisms through which

transformational governance translates into measurable e-commerce performance. Furthermore, the single-case design lacks a comparative baseline, making it difficult to isolate the true impact of leadership from confounding external variables such as national policy changes, baseline digital infrastructure, or European Union structural funding.

4.3 Evolution of Remote Leadership Practices

Haatainen and Boroun (2024) shift the operational focus down to the corporate level, investigating how remote leadership practices evolved within Finnish e-commerce companies during and after the disruptions of the COVID-19 pandemic. The study explores the core characteristics of virtual managerial behavior and seeks to determine whether these adapted remote practices ultimately improved or diminished overall organizational performance. Adopting an exploratory, qualitative leadership-as-practice approach, the researchers conducted four semi-structured interviews with managers across small-to-medium Finnish e-commerce firms who possessed direct supervisory duties and had no widespread remote working practices prior to the pandemic.

The thematic analysis revealed a high degree of operational consistency across the participating companies, showing that remote contexts permanently shifted leadership norms toward hybrid models. To maintain organizational cohesion, managers gravitated toward clear, structured communication protocols, a strict balance of employee autonomy and accountability, deliberate software tool selection, and empathetic soft leadership skills. These findings strongly align with authentic and transformational leadership theories. Furthermore, the interviewed leaders reported net improvements in organizational performance, noting that flexible hybrid models ultimately boosted employee well-being and corporate retention rates without sacrificing financial productivity.

While offering useful insights into lived managerial experiences during a global crisis, the study's conclusions are heavily qualified by severe methodological vulnerabilities. The empirical sample is extremely small and homogenous, consisting of only four leaders recruited entirely through the authors' personal professional networks, which introduces significant selection and confirmation bias. Because the study relies exclusively on manager self-ratings, it lacks any triangulation from follower perspectives, objective financial metrics, or external corporate data, meaning the reported performance improvements are assumed rather than empirically validated. The analytical process also lacks transparency, omitting an explicit coding framework or established thematic protocols, which introduces interpretive distortion during the translation of interviews from Finnish to English. Finally, the authors fail to account for how differences in firm size alter remote leadership dynamics, while completely ignoring the confounding influence

of the general pandemic-era e-commerce boom and the unique cultural context of Finnish low power distance.

4.4 Synthesis and Implications

A collective synthesis of these three readings outlines the critical role that leadership behavior plays in securing organizational survival, innovation, and resilience during complex digital and structural transitions. When analyzed as a unified body of work, the literature demonstrates that successful leadership in modern digital environments requires a shift from transactional control to psychological and operational enablement. Whether navigating an industrial crisis in Greece, a global pandemic in Finland, or intense market competition in Indonesia, leaders must possess the capacity to cultivate internal psychological safety, distribute autonomous responsibility, and project a clear transformational vision. The reviewed studies collectively illustrate that technological infrastructure or proactive employee personalities are insufficient on their own; they require an empowering leadership framework to unlock innovative work behaviors and drive measurable performance outcomes.

The broader implications for digital organizations highlight that modern leadership must become highly adaptive, context-aware, and structurally decentralized. In high-velocity sectors like e-commerce, the traditional top-down hierarchy functions as an active barrier to crisis resolution and employee innovation. Organizations must explicitly design leadership development pipelines that prioritize emotional intelligence, clear hybrid communication protocols, and the deployment of supportive feedback mechanisms. Furthermore, the aforementioned studies imply that leadership cannot be studied in isolation from its macro-environmental and cultural realities. Digital firms must intentionally construct workplace cultures that encourage psychological thriving and autonomy, thereby enabling employees to innovate organically and remain resilient against ongoing macroeconomic volatility.

5. Discussion

The synthesized literature reveals that sustainable e-commerce adoption, venture performance, and organizational innovation are not driven by single, isolated variables but by a multi-layered interplay of consumer psychology, entrepreneurial traits, and leadership dynamics. On the consumer side, digital adoption and behavior are heavily shaped by technological perceptions (ease of use, benefit awareness), internal psychological states (trust, curiosity, risk mitigation), and experiential stimuli such as real-time platform immersion and host interactivity (Chen et al., 2022). On the supply side, these consumer dynamics are met by the psychological traits of entrepreneurs—most notably the need for achievement and risk tolerance—which directly shape how digital tools are perceived, utilized, and exploited for venture creation (Mikalauskiene et al.,

2023). Furthermore, these individual-level traits are translated into firm-level strategic orientations and amplified by adaptive leadership styles, including transformational configurations (Gkanatsiou et al., 2024), personal leadership variables (Mikalauskiene et al., 2023), and supportive or empowering variations (Auliya et al., 2022; Wang et al., 2022). These leadership frameworks act as vital anchors that foster employee psychological safety, thriving at work, and the multifaceted innovative work behaviors required to sustain digital enterprises (Costa et al., 2023). This directly mirrors the organizational settings of digital marketing divisions within expanding tech ecosystems (Auliya et al., 2022), volatile international e-commerce platforms (Mikalauskiene et al., 2023; Wang et al., 2022), and modern hybrid corporate infrastructures (Haatainen & Boroun, 2024).

However, a recurring theme across these sections is that these internal behavioral and psychological drivers do not function in a vacuum. They are highly contingent upon structural and environmental macro-factors, such as internet accessibility, infrastructure quality, socioeconomic constraints, regional crises, and market maturity. The digital economy experiences a deep structural tension between rigid, macro-level structural frameworks and fluid, micro-level psychological needs. Neglecting these structural realities or relying on static, single-source, cross-sectional data limits the explanatory depth of existing models and risks overstating the predictive validity of psychological and technological frameworks alone (Podsakoff et al., 2003; Gkanatsiou et al., 2024; Haatainen & Boroun, 2024).

5.1 Conceptual Framework

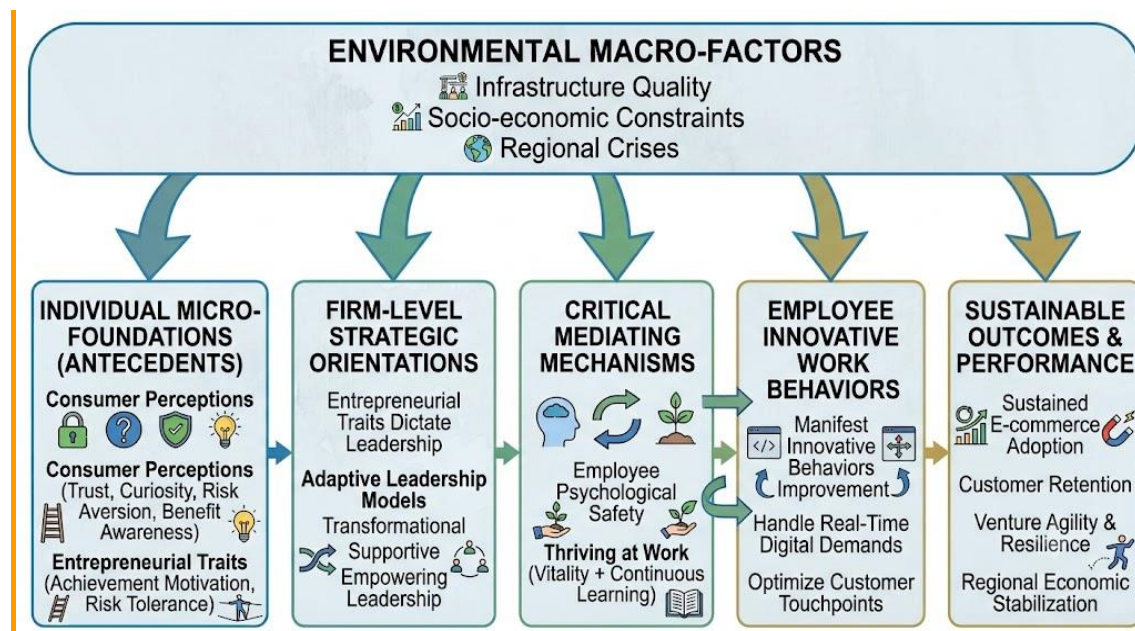
To reconcile these fragmented themes, a holistic conceptual framework is established to link the individual, firm, and environmental components identified across the studies. The framework begins with individual micro-foundations as the foundational antecedents, capturing consumer perceptions (trust, curiosity, risk aversion, benefit awareness) alongside entrepreneurial traits (achievement motivation, risk tolerance).

These individual micro-foundations directly shape firm-level strategic orientations, where entrepreneurial traits dictate how internal leadership models are structured. Transformational and empowering leadership styles convert these orientations into critical mediating mechanisms, specifically fostering employee psychological safety and thriving at work (vitality and continuous learning). These internal psychological states empower frontline workers to manifest innovative work behaviors and handle real-time digital demands. Ultimately, these dynamics translate into final outcomes and performance metrics, such as sustained e-commerce adoption, consumer retention, and venture resilience. Surrounding this entire pipeline are environmental macrofactors—including infrastructure quality, socio-economic constraints, and regional

crises—which act as critical boundary conditions moderating how effectively micro-level behavioral dynamics translate into macro-level market performance.

As illustrated in Figure 1 below, this holistic framework visually maps the progression from individual micro-foundations through mediating mechanisms, ultimately leading to sustainable e-commerce outcomes within the boundaries of macro-environmental factors.

Figure 1: A multilayer conceptual model for sustainable e-commerce adoption



Considering the above, a series of propositions are outlined in the next section, which can assist with advancements in the field.

5.2 Propositions

To advance the field, future research must address current theoretical, methodological, practical, and conceptual limitations through targeted strategies. Theoretically, integrating classical technology adoption models like TAM and UTAUT (Davis, 1989; Venkatesh et al., 2003) with organizational leadership constructs will significantly increase predictive accuracy regarding customer conversion and platform trust (Sariannidis et al., 2024; Wang et al., 2022). Methodologically, researchers must transition away from cross-sectional, self-reported data toward longitudinal, multi-wave designs that pair subjective employee metrics with objective business outcomes—such as verified sales and retention rates—to eliminate common method bias (Podsakoff et al., 2003; Auliya et al., 2022). In practice, managers facing rapid digital shifts must implement decentralized, empowering leadership structures to accelerate frontline

operational adaptation and foster workplace thriving (Auliya et al., 2022; Haatainen & Boroun, 2024). Finally, conceptual frameworks must explicitly treat regional infrastructure and market maturity as systemic moderators, recognizing that individual psychological traits exert a much weaker direct effect on performance in underdeveloped or crisis-burdened environments (Sariannidis et al., 2024; Haatainen & Boroun, 2024). This perspective pulls directly from the macro-environmental contexts examined across the literature, such as the socio-economic transition during the post-industrial energy shift in Western Macedonia (Sariannidis et al., 2024) and the sudden operational pivots forced by the global pandemic (Haatainen & Boroun, 2024).

6. Conclusion

The main contribution of this study is that sustainable e-commerce adoption and organizational performance are contingent on a multi-layered alignment where individual micro-foundations (consumer perceptions and entrepreneurial traits) lead to firm-level strategic orientations, which are then translated into employee innovative work behaviors via adaptive leadership and psychological safety. However, this entire operational pipeline remains deeply moderated by environmental macro-factors, meaning individual traits and leadership models exert a far weaker effect in underdeveloped or crisis-burdened settings without adequate regional infrastructure. These insights are nonetheless constrained by significant literature limitations, including a pervasive reliance on cross-sectional, self-reported survey designs prone to common method bias, as well as sampling strategies heavily skewed toward urban centers or single-firm case studies that limit generalizability. To overcome these vulnerabilities, future research must adopt longitudinal, multi-wave methodologies pairing subjective metrics with objective performance outcomes; integrate classic adoption models (i.e. TAM and UTAUT) with leadership constructs; and conduct cross-national comparative studies to evaluate how varying market maturities shape firm resilience.

References

- Akram, U., Hui, P., Khan, M. K., Yan, C., & Akram, A. (2018). Factors affecting online impulse buying behavior in China: Is user satisfaction crucial? *Journal of Retailing and Consumer Services*, 42, 331–343. <https://doi.org/10.1016/j.jretconser.2018.02.005>
- Amundsen, S., & Martinsen, Ø. L. (2014). Empowering leadership: Construct clarification, conceptualization, and validation of a new scale. *The Leadership Quarterly*, 25(3), 487–511. <https://doi.org/10.1016/j.leaqua.2013.11.009>
- Aragoncillo, L., & Orús, C. (2018). Impulse buying behaviour in multi-channel retail. *Journal of Fashion Marketing and Management*, 22(1), 122–138. <https://doi.org/10.1108/JFMM-05-2017-0046>

Arun, K., & Gedik, N. K. (2020). Impact of Asian cultural values upon leadership roles and styles. *International Review of Administrative Sciences*, 88(2), 428–448. <https://doi.org/10.1177/0020852320935982>

Auliya, A., Mas'ud, F., & Rahyuda, A. G. (2022). Effect of empowering leadership and proactive personality on innovative behavior in e-commerce through thriving at work. *International Journal of Business and Applied Social Science*, 8(12), 5–18. <https://doi.org/10.33642/ijbass.v8n12p5>

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. SAGE Publications.

Chen, B., Wang, L., Rasool, H., & Wang, J. (2022). Research on the impact of marketing strategy on consumers' impulsive purchase behavior in livestreaming e-commerce. *Frontiers in Psychology*, 13, 905531. <https://doi.org/10.3389/fpsyg.2022.905531>

Costa, J., Pádua, M., & Moreira, A. C. (2023). Leadership styles and innovation management: What is the role of human capital? *Administrative Sciences*, 13(2), 47. <https://doi.org/10.3390/admsci13020047>

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). SAGE Publications. <https://doi.org/10.4135/9781452230154>

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383. <https://doi.org/10.2307/2666999>

Eurostat. (2020). *Community innovation survey 2018 (CIS 2018)* [Data set]. European Commission. <https://ec.europa.eu/eurostat/web/microdata/community-innovation-survey>

eMarketer. (2024). *Global e-commerce forecast 2024–2028: Retail sales projections and platform market shares*. Insider Intelligence.

Fadzil, A. F. M., Zainol, F. A., Wan Ismail, W. N., & Afthanorhan, A. (2021). The inclinations of entrepreneurial cognitive, personality traits and competencies: The empirical study of e-commerce new ventures in Malaysia. *Turkish Online Journal of Qualitative Inquiry*, 12(9), 2741–2764.

Gkanatsiou, M. A., Triantari, S., & Chatzidimitriou, E. (2024). Leadership's impact on e-commerce growth and crisis management in Post-Lignite Urban Transitions. *Εκπαίδευση Δια Βίου Μάθηση Έρευνα Και Τεχνολογική Ανάπτυξη Καινοτομία Και Οικονομία*, 3, 1–20. <https://doi.org/10.12681/elrie.6583>

Goldman, S. P., Van Herk, H., Verhagen, T., & Weltevreden, J. W. (2020). Strategic orientations and digital marketing tactics in cross-border e-commerce: Comparing developed and emerging markets. *International Small Business Journal Researching Entrepreneurship*, 39(4), 350–371. <https://doi.org/10.1177/0266242620962658>

Grand View Research. (2023). *Live commerce market size, share & trends analysis report by platform, by product, by region, and segment forecasts 2023–2030*. <https://www.grandviewresearch.com/industry-analysis/live-commerce-market-report>.

Grand View Research. (2025). *E-commerce infrastructure and digital retail trends report*. <https://www.grandviewresearch.com/>

Haatainen, T., & Boroun, M. (2024). REMOTE LEADERSHIP IN FINNISH E-COMMERCE COMPANIES DURING AND AFTER THE COVID-19 PANDEMIC. In University of Oulu, *Master's Thesis* (Master's Thesis No. 2). Oulu Business School.

Hussain, A., Akbar, M., Shahzad, A., Poulova, P., Akbar, A., & Hassan, R. (2022). E-Commerce and SME Performance: The moderating influence of entrepreneurial competencies. *Administrative Sciences*, 12(1), 13. <https://doi.org/10.3390/admsci12010013>

International Trade Administration. (2024). *Global e-commerce guide and regional market growth analysis*. U.S. Department of Commerce. <https://www.trade.gov/ecommerce-sales-size-forecast>

Kalinić, Z., Marinković, V., Kalinić, L., & Liébana-Cabanillas, F. (2021). Neural network modeling of consumer satisfaction and loyalty in mobile commerce. *International Journal of Information Management*, 59, 102339. <https://doi.org/10.1016/j.ijinfomgt.2021.102339>

McKinsey & Company. (2026). *The state of the consumer report: Generative AI, video commerce, and dynamic purchasing paths*. <https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/state-of-consumer>

Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. The MIT Press.

Mikalauskiene, A., Smalskyte, K., & Siudikiene, D. (2023). Evaluation of personal leadership factors of employees in e-commerce. In Vilnius University, Vilnius University, & Vilnius University, *TRANSFORMATIONS IN BUSINESS & ECONOMICS* (Vols. 22–22, Issue 3, pp. 40–62) [Journal-article]. <http://www.transformations.knf.vu.lt/60/rp60.pdf>

Mustafa, S., Hao, T., Qiao, Y., Shah, S. K., & Sun, R. (2022). How a Successful Implementation and Sustainable Growth of e-Commerce can be Achieved in Developing Countries; a Pathway Towards Green Economy. *Frontiers in Environmental Science*, 10. <https://doi.org/10.3389/fenvs.2022.940659>

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>

PwC. (2018). *Experience is everything: Here's how to get it right* (PwC Consumer Intelligence Series).PricewaterhouseCoopers. <https://www.pwc.com/us/en/services/consulting/library/consumer-intelligence-series/future-of-customer-experience.html>

Rook, D. W. (1987). The buying impulse. *Journal of Consumer Research*, 14(2), 189–199. <https://doi.org/10.1086/209105>

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>

Wang, Y., Chin, T., Caputo, F., & Liu, H. (2022). How Supportive Leadership Promotes Employee Innovation under Uncertainty: Evidence from Chinese E-Commerce Industry. *Sustainability*, 14(12), 7491. <https://doi.org/10.3390/su14127491>

Yadav, R., Sharma, S. K., & Tarhini, A. (2016). A multi-analytical approach to understand social commerce adoption in an emerging economy. *Computers in Human Behavior*, 65, 381–392. <https://doi.org/10.1016/j.chb.2016.08.028>

Yusoff, M. N. H. B., Zainol, F. A., Ridzuan, R. H., Ismail, M., & Afthanorhan, A. (2021). Psychological Traits and Intention to Use E-Commerce among Rural Micro-Entrepreneurs in Malaysia. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1827–1843. <https://doi.org/10.3390/jtaer16050102>