The Impact of Digital Communication on Digital Marketing Strategy with the Mediating Role of Industry Competition Intensity from the Perspective of Loyal Customers (Case Study: Parsian E-Commerce Company)

Seyed Issa Emad[1], Mohammad Abbaszadeh [2,*], Mehran Samadi[3] and Samad Sabbagh [3]

[1] PhD Student of Communication Sciences, Department of Social Communication Sciences, Ta.C., Islamic Azad University, Tabriz, Iran;

[2] Full Professor, Department of Social Sciences, University of Tabriz, Tabriz, Iran;

[3] Assistant Prof, Department of Social Communication Sciences, Ta.C., Islamic Azad University, Tabriz, Iran;

[3] Assistant Prof, Department of Social Communication Sciences, Ta.C., Islamic Azad University, Tabriz, Iran;

* Correspondence: m-abbaszadeh@tabrizu.ac.ir

Abstract: Given that in today's technological era, the influence of digital communication on the higher-level goals of economic enterprises has garnered significant attention in the world of technology, this study examined the impact of digital communication on digital marketing strategy, considering the mediating role of industry competition intensity from the perspective of loyal customers. The purpose of this research is applied in nature. A descriptive-survey method of the correlational type was employed to conduct the study. The statistical population consisted of employees from organizations loyal to Parsian E-Commerce Company in the role of customers. The sample size was determined using Cochran's formula, and 393 individuals were selected through stratified random sampling. The data collection instrument was a questionnaire with confirmed validity and reliability. Data analysis and hypothesis testing were performed using the Partial Least Squares (PLS) technique with the Smart PLS software. The results ultimately indicated that digital communication has a significant and positive effect on digital marketing strategy both directly and indirectly through the mediating role of industry competition intensity. Furthermore, digital communication exerts a significant and positive effect on the intensity of industry competition, and in turn, industry competition intensity has a significant and positive effect on digital marketing strategy.

Keywords: Digital Communication, Digital Marketing Strategy, Industry Competition Intensity, Customer Loyalty.

1. Introduction

Today, societies are influenced in various ways by digital communication and interaction with it, to the extent that this issue has become essential and necessary in business environments. Organizations utilize such communication through websites, social media, emails, platforms, and mobile applications to enhance business relationships, develop brand identity, and improve customer engagement [1].

In this era of technological growth, companies need to undergo significant transformations in the nature of their communication to survive effectively in competitive environments and achieve organizational goals. In this context, the optimal use of digital communication can be regarded as a competitive advantage that not only creates potential opportunities but also aids in executive management and core activities [2].

Digital media, by establishing a parallel communication space, have eliminated the costs associated with physical interaction and have fundamentally transformed the flow of information, resulting in fundamental changes to the structure of contemporary society [3].

By employing digital communication, organizations can attain higher levels of quantitative and qualitative efficiency and foster innovation. Therefore, understanding and strategically implementing digital communication within the organizational structure is key to achieving optimal performance in this regard [4-6].

Since the beginning of the 21st century, digital marketing strategies have played a significant role in corporate strategies, and this role is expected to grow even further in the future. Consequently, developing and selecting the best digital marketing strategies across different industries is crucial [4].

Bourlakis et al. (2002) introduced digital marketing strategies as a modern business methodology that addresses the need of organizations, managers, and customers to reduce costs while simultaneously improving the quality of goods and services [7]. On the other hand, competition has emerged as one of the recent trends in strategic management research. Industry competition intensity is considered a threatening factor that affects firms' ability to maintain long-term competitive advantages and performance. It enables the observable level of competition in each market to be identified and corresponds to the degree of competitive pressure applied by rivals within that market [8].

As a result, beyond internal company factors, external elements such as market structure, competitive conditions, and the activities of rivals can significantly influence the strategic decisions of corporate managers. The highly competitive landscape in which modern companies operate requires awareness of competitive principles and advantages, and consequently the implementation of strategies that ensure organizational flexibility in adapting to or even influencing their external environment [9].

A business strategy demonstrates how a company should compete or collaborate within a specific industry. In this context, increasing value for customers in order to gain competitive advantage is closely tied to the company's strategic choices [10].

Moreover, the digitalization of communication within companies provides a path to improving process efficiency and achieving high-level business objectives by enabling greater competitiveness. This is because digital technologies can positively impact production, services, performance, and productivity [11].

As the industry evolves, the nature of competition has also changed, now encompassing elements such as technology adoption, innovation capacity, and sustainability. Information and communication technologies, as well as computer networks, have become essential and indispensable components of business and entrepreneurial activities in every economy—particularly the internet, which is critical for the production and consumption of goods and services and is now an integral part of everyday life for many people. Hence, the acceptance and development of ICT, by influencing financial environments, labor markets, and corporate human resources, is considered a key factor in the competitiveness of a country's industries [12].

It must be acknowledged that digital communication technologies significantly influence corporate strategies and competitive advantages. At the industry level, the development of the digital economy or digital

transformation has altered the economic-technological paradigm of the manufacturing sector. At the organizational level, it has created a connected, decentralized, and intelligent innovation ecosystem for manufacturing firms [13].

Given the above explanations, it becomes essential to examine the importance of digital communication from the perspective of loyal customers and its influence on various organizational dimensions. Accordingly, this study investigates the impact of digital communication on digital marketing strategy with the mediating role of industry competition intensity from the perspective of loyal customers of Parsian E-Commerce Company—a recognized firm in the field of payment services and the banking industry.

2. Methodology

In the process of conducting the present study, a descriptive-survey method of the correlational type was utilized. In terms of purpose, this research is applied in nature, and from the perspective of data collection and analysis, it is quantitative.

The statistical population of this study consisted of all employees from organizations loyal to Parsian E-Commerce Company who utilize its services and support. These loyal organizations were previously identified based on customer loyalty indicators such as repeat purchases, utilization of a wide range of products and services, recommending the company to others, and reluctance to purchase or use similar services from competitors. The sample size was determined using Cochran's formula and 393 individuals were selected through stratified random sampling. The necessary data were collected through a questionnaire.

The questionnaire used in this research comprised three main dimensions or constructs and 24 items: 8 items to measure digital marketing strategy, 9 items to assess digital communication, and 7 items to measure industry competition intensity. The items were rated using a 5-point Likert scale. The validity of the instrument was examined through convergent and discriminant validity, and its reliability was assessed using Cronbach's alpha, Composite Reliability (CR), and Rho coefficient (i.e., composite internal consistency), all of which were confirmed. To determine the adequacy of questionnaire items in measuring latent variables, the significance levels of factor loadings and their t-values were evaluated and accepted.

Subsequently, data analysis and hypothesis testing were performed using the Partial Least Squares (PLS) method with the help of Smart PLS software.

3. Findings and Results

In this section, following a presentation of descriptive statistics, inferential statistics were assessed in two stages: the measurement model fit and the structural model fit. Afterwards, the overall model fit and hypothesis testing were conducted for final confirmation.

The descriptive statistics section includes a demographic description of the respondents to the questionnaire as a sample of the study population. As outlined in the methodology section, data were collected from 393 participants. Among them, 247 were men (63%) and 146 were women (37%). Regarding age distribution, 24 participants (6%) were under 30 years old, 247 (63%) were between 30 and 40 years, 104 (26%) were between 40 and 50 years, and 18 participants (5%) were 50 years or older.

In terms of job position, 299 respondents (76%) were experts, 58 (15%) were department heads, and 36 (9%) were managers. Concerning educational qualifications, 12 individuals (3%) held associate degrees, 188 (48%) held bachelor's degrees, 163 (41%) held master's degrees, and 30 (8%) held doctoral degrees.

To assess the measurement model fit, indicators of validity and reliability were employed. In this study, questionnaire validity was examined through convergent and discriminant validity. In terms of convergent validity, the Average Variance Extracted (AVE) for all three constructs—digital marketing strategy, digital communication, and industry competition intensity—exceeded 0.50, confirming adequacy.

Discriminant validity was confirmed using the square root of the AVE values and the Fornell and Larcker (1981) criteria. Additionally, to ensure reliability, Cronbach's alpha, Composite Reliability (CR), and Rho (composite internal consistency) were calculated. All three reliability coefficients exceeded 0.70, indicating acceptable reliability (see Table 1). Overall, the questionnaire's validity and reliability were reported as satisfactory.

Table 1. Results of Questionnaire Validity and Reliability Assessment (Measurement Model Fit)

| Variable	AVE	√AVE	Composite Reliability (CR)	Rho (Homogeneous Reliability)	Cronbach's Alpha
Digital Communication	0.520	0.721	0.885	0.907	0.885
Digital Marketing Strategy	0.523	0.723	0.870	0.898	0.870
Industry Competition Intensity	0.533	0.730	0.854	0.889	0.853

The strength of the relationship between questionnaire items (indicators) and latent variables was assessed through factor loadings and their significance levels using the t-statistic. In this study, the observed factor loadings were greater than 0.40 and even 0.50, while the t-statistics exceeded 1.96. As a result, the significance levels were acceptable and desirable (Table 2).

Table 2. Results of Factor Loadings and t-Statistics for Assessing Indicator Significance

Indicators	Factor Loading	t-Statistic
→ Q01 Digital Marketing Strategy	0.714	27.479
→ Q02 Digital Marketing Strategy	0.713	23.276
→ Q03 Digital Marketing Strategy	0.756	31.128
→ Q04 Digital Marketing Strategy	0.732	30.166
→ Q05 Digital Marketing Strategy	0.722	26.779
→ Q06 Digital Marketing Strategy	0.711	26.916
→ Q07 Digital Marketing Strategy	0.713	23.894
→ Q08 Digital Marketing Strategy	0.724	25.888
→ Q09 Digital Communication	0.734	28.858
→ Q10 Digital Communication	0.745	30.978
→ Q11 Digital Communication	0.735	27.200
→ Q12 Digital Communication	0.691	23.965
→ Q13 Digital Communication	0.695	24.108
→ Q14 Digital Communication	0.705	24.828
→ Q15 Digital Communication	0.703	23.022
→ Q16 Digital Communication	0.749	33.281
→ Q17 Digital Communication	0.733	27.116
→ Q18 Industry Competition Intensity	0.737	28.119
→ Q19 Industry Competition Intensity	0.771	33.084
→ Q20 Industry Competition Intensity	0.754	29.623
→ Q21 Industry Competition Intensity	0.664	20.034
→ Q22 Industry Competition Intensity	0.733	26.991
→ Q23 Industry Competition Intensity	0.725	26.731
→ Q24 Industry Competition Intensity	0.723	24.944

Following the measurement model assessment using PLS analysis, the structural model was evaluated. For this purpose, the coefficients of determination (R^2), predictive relevance index (Q^2), t-statistic values (bootstrapping),

effect size (f^2), and overall model fit (Goodness of Fit, GOF) were analyzed. The output of the structural model fit using Partial Least Squares, based on the conceptual framework, was presented in Figure 1.
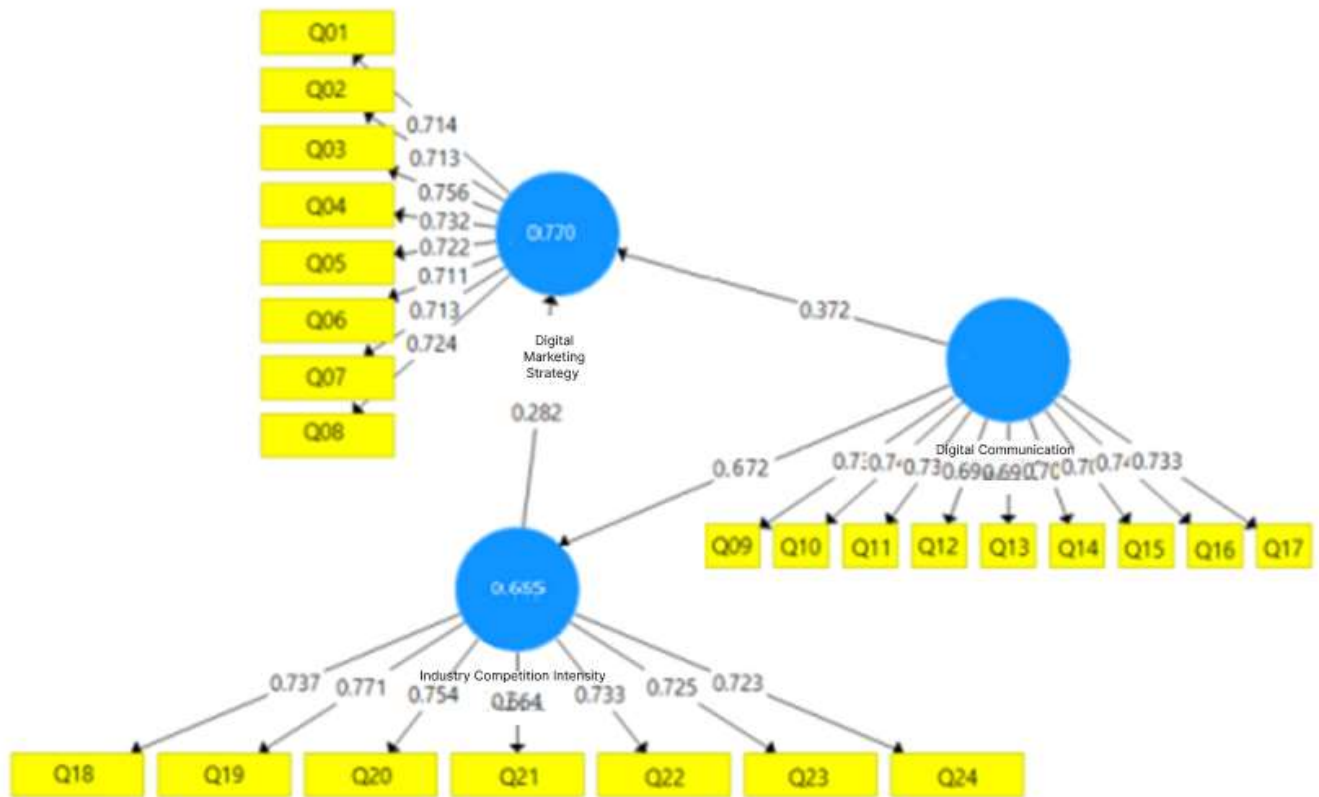
Figure 1. Software Output for Structural Model Fit Using Partial Least Squares Method

Generally, the values of 0.19, 0.33, and 0.67 are considered benchmark thresholds for evaluating weak, moderate, and strong structural model fit using R^2 (Chin, 1998). In this study, the R^2 values of 0.770 and 0.665 for the dependent variables indicate an appropriate and desirable model fit.

The predictive relevance index (Q^2), introduced by Stone and Geisser, reflects the model's predictive capability when it yields positive values. The obtained Q^2 values (0.402 and 0.374) were positive, indicating good predictive ability (Table 3).

To test direct relationships between variables, path coefficients and *t*-values (bootstrapping) were analyzed. At a 5% significance level, the bootstrapping *t*-statistics were greater than 1.96, indicating significant correlations.

The effect size (f^2) represents the extent of change an independent variable causes in a dependent variable and helps determine relationship strength. In this study, all values exceeded 0.02, indicating desirable effect sizes across the model.

The overall model fit (GOF) was calculated using the corresponding formula and the results of *AVE* and R^2, then compared to threshold values: weak (0.10–0.25), moderate (0.25–0.36), and strong (>0.36). With a GOF value of 0.501, the model exhibits strong overall fit.

Table 3. Results of R^2, Q^2, and GOF for Structural Model Fit

Variable	R^2	Q^2	Result
Digital Communication	–	–	–

Digital Marketing Strategy	0.770	0.402	Confirmed	
Industry Competition Intensity	0.665	0.374	Confirmed	
GOF = 0.501 (Strong Model Fit)	–	–	Confirmed	

With the structural model fitted, hypothesis testing and its results became accessible. In the data analysis process, path coefficients and *t*-statistics (bootstrapping) were used to interpret relationships and their significance. At a 5% error level, if the bootstrapping *t*-value exceeds 1.96, the observed correlations are statistically significant. Bootstrapping plays a critical role in assessing the significance of relationships in PLS-SEM.

To evaluate the mediating role of industry competition intensity between digital communication and digital marketing strategy, both the Variance Accounted For (VAF) and Sobel test were applied. VAF assesses the strength and magnitude of the mediation effect, while the Sobel test evaluates its significance.

When sample sizes are not large, the Bootstrapping command in Smart PLS is used to determine mediation significance. If VAF is less than 20%, no mediation exists; values above 80% indicate full mediation; values between 20% and 80% suggest partial mediation.

In this analysis, based on path coefficients and the VAF formula, the VAF was calculated as 33%, indicating that industry competition intensity partially mediates the relationship between digital communication and digital marketing strategy. In other words, digital communication affects digital marketing strategy both directly and indirectly via industry competition intensity.

Ultimately, with confirmation of the mediating role and based on the software output results presented in Table 4, it can be stated with 95% confidence that the study hypotheses are supported.

Table 4. Results of Variable Relationships and Hypothesis Testing

No.	Variable Relationship (Hypothesis)	Path Coefficient	t-Statistic	Significance Level	Result
1	Digital Communication → Digital Marketing Strategy	0.372	5.935	0.000	Confirmed
2	Digital Communication → Industry Competition Intensity	0.672	15.507	0.000	Confirmed
3	Industry Competition Intensity → Digital Marketing Strategy	0.282	4.167	0.000	Confirmed
4	Digital Communication → Industry Competition Intensity → Digital Marketing Strategy	–	6.545	0.000	Confirmed
–	VAF = 33%	–	–	–	Partial Mediation

4.   Discussion and Conclusion

This section presents an analysis of the relationships among variables and the testing of hypotheses in light of the research findings, which aimed to examine the effect of digital communication on digital marketing strategy with the mediating role of industry competition intensity from the perspective of loyal customers of Parsian E-Commerce Company.

The evaluation of the first hypothesis revealed a positive and significant effect of digital communication on digital marketing strategy. This result aligns with the prior findings [8, 14-20]. Therefore, it can be concluded that from the perspective of loyal customers of Parsian E-Commerce Company—who are familiar with digital services and their advantages—focusing on and developing digital communication tools, such as adopting modern digital communication methods, utilizing social media and digital multimedia features, deploying secure applications and accessible platforms, and building customer trust, can positively influence the organization's digital marketing strategy by supporting goal setting and operational planning.

The analysis of the second hypothesis, which confirms the positive and significant impact of digital communication on industry competition intensity, is consistent with the prior findings [11-13, 21, 22]. It can thus be argued that digital communication and the application of innovative technologies significantly affect the competitive intensity of organizations within their respective industries. In the digital age, the trend toward digitalization is inevitable, and any organization that offers more advanced digital services to its customers is more likely to outperform competitors in a highly competitive market environment.

The third hypothesis, which indicates a positive and significant influence of industry competition intensity on digital marketing strategy, is supported by the prior findings [6, 9, 21, 22]. It follows that, from the viewpoint of loyal customers who monitor market competition, industry competition intensity is perceived as a crucial factor that can shape marketing strategies such as digital marketing strategy and lay the foundation for competitive strategic planning. Duralia (2022) also demonstrated that competitive intensity can guide practical policy formulation and define organizational procedures and execution processes to achieve strategic goals [21].

Finally, the analysis of the fourth hypothesis demonstrates that digital communication also has a positive and significant effect on digital marketing strategy through the mediating role of industry competition intensity, corroborating the prior findings [13, 21, 22]. This suggests that industry competition intensity not only directly influences an organization's digital marketing strategy but also mediates the impact of digital communication on it. In summary, it can be stated that, from the perspective of loyal customers of Parsian E-Commerce Company, digital communication—when applied across various organizational levels—serves as a competitive driver in the payment and banking industry and can shape the roadmap and strategic direction of the company's digital marketing initiatives.

• In light of the importance of digital communication and its significant impact on the strategic structures of organizations, it is necessary to establish a creative and specialized team focused on research and development of technical infrastructure. This team should stay aligned with technological advancements and emerging global digital innovations to enhance service delivery to customers.

• A dedicated task force should be formed to gather data on the activities, products, and services of industry competitors. This task force must regularly analyze and interpret market data and maintain close intellectual collaboration with the R&D team to ensure information exchange between the two groups. The outcome should be the creation of competitive, customer-oriented digital products or services.

• There is a need to align the objectives of the organization's planning unit with those of the R&D team and the market analysis task force to standardize and define effective strategies within the digital communication and marketing domains.

• Further research should identify and investigate other influencing variables on digital marketing strategy within different populations and industrial contexts.

As with all studies, this research is not without limitations, despite careful design and implementation. For example, the study would benefit from a larger sample size in future replications. Additionally, the availability of certain comparison sources was limited, which may have constrained aspects of the analysis. Future research could improve precision by using larger sample sizes and integrating a broader range of previously tested variables and relationships to overcome these limitations.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

Acknowledgments

Authors thank all participants who participate in this study.

Conflict of Interest

The authors report no conflict of interest.

Funding/Financial Support

According to the authors, this article has no financial support.

References

[1] Q. Y. Nasidi, M. F. Ahmad, A. Adamu, and H. M. Sani, "Effect of Corporate Digital Communication on Organisational Performance: Systematic Literature Review," *Journal of China University of Mining and Technology,* vol. 29, no. 4, pp. 304-311, 2024.

[2] H. AlDreabia *et al.,* "The role of digital communication in developing administrative work in higher education institutions," *International Journal of Data and Network Science,* vol. 8, pp. 1261-1274, 2024, doi: 10.5267/j.ijdns.2023.11.008.

[3] C. Strauss, M. D. Harr, and T. M. Pieper, "Analyzing digital communication: a comprehensive literature review," *Management Review Quarterly,* 2024, doi: 10.1007/s11301-024-00455-8.

[4] N. Mohammadi and E. Soltanifar, "Analysis of Digital Marketing Strategies for Tourism Platforms Using a Multi-Criteria Fuzzy Hybrid Approach.," *Scientific Quarterly of Advertising and Sales Management,* vol. 5, no. 3, pp. 112-128, 2024.

[5] S. Moradi Ziba, J. Abbasi, R. Radfar, and M. A. Abdolvand, "Designing a Model of Causes and Consequences for Implementing Digital Marketing Strategies in Successful Iranian Startups Using a Mixed Approach.," *Quarterly Journal of Value Creation in Business Management,* vol. 3, no. 3, pp. 129-157, 2023.

[6] J. Naseri and M. Mobaleghi, "The Impact of Competition Intensity on Organizational Performance Components in the Metal Industry.," *Journal of Technology Growth,* vol. 20, no. 77, pp. 54-65, 2024, doi: 10.61186/jstpi.34152.20.77.54.

[7] A. Hojjati, "The Impact of Digital Marketing Strategy on Implementing Customer Commitment in Bank Maskan, Hamedan Province.," *Quarterly Journal of New Research Approaches in Management and Accounting,* vol. 6, no. 85, pp. 376-387, 2022.

[8] S. Bylykbashi, G. Roehrich, and K. H. Assala, "How To Measure Competitive Intensity?," *European Journal of Economics, Law and Social Sciences,* vol. 5, no. 1, pp. 22-42, 2021.

[9] V. Rostami, L. Rezaei, and Z. Bazgani, "The Impact of Product Market Competition and Life Cycle on Business Strategy of Companies with Emphasis on New Companies.," *Studies in Intelligent Business Management,* vol. 9, no. 36, pp. 157-182, 2021.

[10] M. Imani Barandeq, F. Abdollahpour, and N. Ghadamyari, "The Impact of Product Market Competition on the Relationship Between Business Strategy and Earnings Management.," *Scientific Journal of Motahar Auditing Studies,* vol. 1, no. 2, pp. 15EP - 40, 2023.

[11] J. Bacca-Acosta *et al.,* "The impact of digital technologies," *Competitiveness Review: An International Business Journal,* vol. 33, no. 7, pp. 22-46, 2023.

[12] F. G. Arredondo-Trapero, J. C. Vazquez-Parra, and E. M. Guerra-Leal, "Information and communication technologies and their impact on competitiveness in Latin America," *Journal of Technology Management and Innovation,* vol. 15, no. 4, pp. 43-53, 2020, doi: 10.4067/S0718-27242020000400043.

[13] H. Wen, Q. Zhong, and C. C. Lee, "Digitalization, competition strategy and corporate innovation: Evidence from Chinese manufacturing listed companies," *International Review of Financial Analysis (IRFA),* vol. 82, 2022, doi: 10.1016/j.irfa.2022.102166.

[14] C. Eklund and T. Brandt, *Capturing the Digital Era: Utilizing Digital Technologies to Strengthen Marketing and Communication - A multiple case study of eight Swedish international industrial organizations*. University of Gothenburg/Graduate School, 2021.

[15] J. Fakhari and R. Talebi, "The Impact of Market Competition on Corporate Cash Holdings: An Analysis of Corporate Innovation and Financial Constraints.," *Quarterly Journal of Accounting and Management Perspectives,* vol. 7, no. 93, pp. 270-287, 2024.

[16] M. R. Javid, S. Nemati Zadeh, and B. Ghasemi, "Measuring the Quality of Customer Relationship Management to Develop Digital Marketing Strategies in Bank Shahr.," *Quarterly Journal of Financial Economics,* vol. 17, no. 2, pp. 313-334, 2023.

[17] A. A. Mocanu and A. C. Szakal, "Digital Marketing Strategies: A Comprehensive Literature Review," *Bulletin of theTransilvaniaUniversity of Braşov Series V: Economic Sciences,* vol. 16, no. 65, pp. 37-44, 2023, doi: 10.31926/but.es.2023.16.65.2.4.

[18] Y. Modarresi, M. A. Seyed Naqavi, H. Roudsaz, and I. Raeisi Vanani, "A Conceptual Framework for Digital Soft Transformation in the Ministry of Communications and Information Technology.," *Studies in Improvement and Transformation Management,* vol. 32, no. 109, pp. 27-80, 2023.

[19] M. Rezaei, A. Ali Ahmadi, M. H. Hosseini, and M. T. Amini, "Alignment of E-Marketing with Macro Strategies of Commercial Organizations.," *Journal of Management of Governmental Organizations,* vol. 8, no. 2, pp. 39-54, 2020.

[20] M. Shirkhodaie, M. Alizadeh Sani, and S. Masoumi Aghbolagh, "Examining the Effect of Industry Competitive Intensity: The Mediating Role of Marketing Capabilities and Market-Focused Learning," *Journal of International Marketing Modeling,* vol. 2, no. 1, pp. 82-92, 2021.

[21] O. A. Duralia, "Consumer Behavior and Competition Factor of a Successful Marketing Strategy," *Studies in Business and Economics,* vol. 17, no. 3, pp. 70-79, 2022, doi: 10.2478/sbe-2022-0046.

[22] O. A. Duralia, "The impact of digital marketing on consumer behaviour," *Studies in Business and Economics,* vol. 19, no. 2, pp. 96-109, 2024, doi: 10.2478/sbe-2024-0027.