

Investigating the Impact of Social Media Platform Usage on the Growth and Efficiency Performance of Small Economic Enterprises with the Mediating Role of Innovation in Small Economic Enterprises (Case Study: Companies Located in Tehran Province Science and Technology Park)

Elaheh Mohammadi Farani[1], Naser ShamBayati[2*], Leila Razavi[3]

[1] MA, Department of Business Management (FinTech), Payame Noor University, Tehran, Iran
[2] Assistant Professor, Department of Business Management, Payame-Noor University, Tehran, Iran
[3] MA, Department of Business Management, Payame Noor University, Tehran, Iran

*** Corresponding author email address**: Shambayati@pnu.ac.ir

Received: 2026-02-01 **Reviewed:** 2026-06-01 **Revised:** 2026-06-07 **Accepted:** 2026-10-17 **Published:** 2027-02-01

Abstract

This study was conducted to investigate the impact of social media platform usage on the growth and efficiency performance of small economic enterprises with the mediating role of innovation in small economic enterprises (case study: companies located in the Tehran Province Science and Technology Park). The statistical population of the study consisted of managers of companies located in the Tehran Province Science and Technology Park, totaling 210 individuals. Based on the Morgan table, a sample of 132 participants was selected randomly. The present study is descriptive-correlational in nature and applied in terms of purpose. In this research, Structural Equation Modeling (SEM) was employed to examine the relationships among the variables. Descriptive and inferential statistics were used to analyze the collected data. In the descriptive statistics section, frequency, percentage, cumulative percentage, and tables and charts were utilized. In the inferential statistics section, Structural Equation Modeling was applied to investigate the relationships among the variables. In this study, the components of social media platform usage, growth performance of small economic enterprises, efficiency performance of small economic enterprises, and innovation in small economic enterprises were defined, and the research hypotheses were tested using a standard questionnaire. Ultimately, all research hypotheses were confirmed.

Keywords: *Social media platform usage, growth performance of small economic enterprises, efficiency performance of small economic enterprises, innovation in small economic enterprises.*

How to cite this article:

Mohammadi Farani, E., ShamBayati, N., & Razavi, L. (2027). Investigating the Impact of Social Media Platform Usage on the Growth and Efficiency Performance of Small Economic Enterprises with the Mediating Role of Innovation in Small Economic Enterprises (Case Study: Companies Located in Tehran Province Science and Technology Park). Management Strategies and Engineering Sciences, 9(2), 1-14.

1. Introduction

The rapid expansion of digital technologies and the widespread adoption of social media platforms have transformed the operational landscape of contemporary businesses, particularly small and medium-sized enterprises (SMEs). In recent years, social media platforms have evolved from mere communication tools into strategic organizational resources capable of influencing customer engagement, market intelligence, innovation, and business performance. SMEs increasingly rely on social media platforms to establish communication channels with customers, access competitive information, strengthen knowledge-sharing practices, and improve organizational agility in dynamic markets [1, 2]. The growing significance of social media in organizational activities has encouraged researchers and practitioners to investigate the mechanisms through which these technologies contribute to firm performance and long-term competitiveness.

© 2027 The author(s). Published By: The Research Department of Economics and Management of Tomorrow's Innovators. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

Small economic enterprises play a crucial role in economic development, employment generation, technological advancement, and regional competitiveness. Despite their economic importance, these enterprises often face significant challenges related to resource limitations, market uncertainty, technological adaptation, and competitive pressures. Consequently, SMEs require innovative and flexible mechanisms to sustain their growth and improve efficiency performance. Social media platforms provide these firms with relatively low-cost opportunities to interact with customers, gather market information, and develop collaborative relationships that support innovation and organizational learning [3, 4]. The increasing accessibility of digital communication technologies has enabled SMEs to compete more effectively with larger organizations by reducing information asymmetry and improving responsiveness to market demands.

The emergence of social commerce and digital communication ecosystems has substantially altered the relationship between firms and customers. Social media platforms facilitate direct interactions between businesses and stakeholders, enabling organizations to identify customer preferences, monitor market trends, and respond rapidly to environmental changes. Previous studies have emphasized that social media adoption positively affects firm performance through enhanced customer engagement, communication quality, and relational capabilities [5, 6]. Social media technologies also provide organizations with opportunities to improve brand image, increase customer loyalty, and strengthen trust among consumers [7-9]. These mechanisms are particularly important for SMEs because customer relationships and market responsiveness are among the most critical determinants of survival and sustainability in competitive environments.

One of the most important advantages of social media platforms is their ability to facilitate access to information. Organizations can utilize social media channels to collect customer information, monitor competitor activities, and identify emerging market opportunities. Customer information acquisition enables firms to better understand consumer preferences, expectations, and behavioral patterns, thereby improving organizational decision-making and strategic planning. Studies have demonstrated that customer-oriented firms are more likely to develop innovative capabilities and achieve higher organizational performance [10]. Similarly, competitor information acquisition through social media platforms enhances firms' awareness of industry dynamics, technological trends, and competitive strategies. Access to competitive intelligence enables organizations to adapt more effectively to market conditions and improve strategic flexibility [11, 12].

Knowledge sharing is another critical organizational capability that can be strengthened through social media usage. Modern organizations increasingly recognize knowledge as a strategic asset capable of creating sustainable competitive advantage. Social media platforms facilitate communication, collaboration, and information exchange among organizational members, thereby supporting collective learning and innovation processes. Research has shown that effective knowledge-sharing practices improve organizational creativity, innovation capability, and overall performance [13, 14]. In digital environments, social media platforms create virtual communities where employees, managers, and stakeholders can exchange experiences, insights, and expertise. These interactions enhance organizational learning and contribute to the development of innovative products, services, and processes [15].

Innovation is widely recognized as one of the primary drivers of organizational success and competitive advantage. In the context of SMEs, innovation enables firms to respond effectively to environmental changes, customer demands, and technological developments. Innovative firms are generally more capable of adapting to market uncertainty, improving operational efficiency, and achieving sustainable growth. Several studies have emphasized the positive relationship between innovation and firm performance, particularly in SMEs operating in dynamic industries [16, 17]. Social media platforms can support innovation by facilitating knowledge acquisition, customer interaction, idea generation, and collaborative problem-solving. Through digital communication channels, organizations can access diverse perspectives and external knowledge sources that stimulate innovative thinking and organizational creativity.

The relationship between social media usage and innovation performance has attracted growing academic attention in recent years. Empirical evidence suggests that firms using social media technologies effectively are more likely to improve their innovation capabilities and organizational performance [18, 19]. Social media platforms provide opportunities for organizations to engage with customers, suppliers, and business partners in real time, thereby enabling rapid feedback collection and collaborative innovation processes. In industrial SMEs, the use of social media technologies for competitive information gathering

and informational trust has been shown to positively influence innovation outcomes [12]. Furthermore, studies focusing on fashion SMEs and tourism businesses have demonstrated that social media marketing activities contribute significantly to innovation performance and customer responsiveness [18, 20].

Another important dimension of organizational performance is growth performance, which reflects the extent to which firms achieve expansion in sales, market share, customer base, and strategic development. Social media platforms contribute to growth performance by increasing organizational visibility, enhancing customer communication, and facilitating market penetration. SMEs using social media technologies can reach broader audiences with lower marketing costs compared to traditional advertising methods. Moreover, digital communication channels enable firms to build stronger relationships with customers and improve brand awareness, which ultimately supports business growth [21, 22]. Growth performance is especially critical for SMEs because organizational expansion often determines long-term sustainability and competitive positioning in the marketplace.

Efficiency performance represents another essential indicator of organizational success. Efficiency performance refers to the organization's ability to utilize available resources effectively while minimizing operational costs and maximizing outputs. SMEs frequently face resource constraints that necessitate efficient management practices and optimized operational processes. Social media technologies may improve efficiency performance by reducing communication costs, accelerating information exchange, improving coordination, and facilitating decision-making processes. Research on SMEs has shown that organizational efficiency is significantly associated with innovation capability, technological adaptation, and knowledge management practices [23, 24]. By enabling real-time communication and collaborative interactions, social media platforms may enhance organizational responsiveness and operational efficiency in SMEs.

The COVID-19 pandemic further accelerated the digital transformation of SMEs and highlighted the importance of social media technologies in maintaining organizational continuity and competitiveness. During the pandemic, many small businesses adopted digital platforms to communicate with customers, promote products, and manage operational challenges [25]. These developments demonstrated that social media platforms are no longer optional marketing tools but strategic resources essential for organizational resilience and sustainability. SMEs that successfully integrated digital technologies into their business models were generally better positioned to adapt to environmental disruptions and maintain customer relationships during periods of uncertainty [4]. Consequently, understanding the relationship between social media usage, innovation, and organizational performance has become increasingly important for researchers and policymakers.

Despite the growing body of literature on social media adoption and organizational performance, several research gaps remain. First, many previous studies have focused primarily on large organizations, while the specific conditions and challenges of SMEs have received comparatively less attention. Second, although social media usage has been linked to organizational performance, the mediating mechanisms underlying this relationship require further investigation. In particular, the mediating role of innovation in explaining how social media platforms influence growth and efficiency performance remains insufficiently explored. Third, contextual factors related to developing economies and technology-oriented business environments, such as science and technology parks, have not been adequately addressed in prior research [2, 6]. Technology parks provide unique ecosystems characterized by innovation-oriented cultures, entrepreneurial activities, and digital infrastructures, making them suitable environments for examining the strategic role of social media platforms in SME performance.

Furthermore, contemporary business environments increasingly emphasize the integration of social media technologies with organizational strategies, customer relationship management, and innovation systems. Firms that effectively combine digital communication capabilities with knowledge management and innovation practices are more likely to achieve sustainable competitive advantage [14, 15]. Social media platforms facilitate continuous interactions among organizational stakeholders and enable firms to create value through collaborative networks and digital ecosystems. In this regard, organizational innovation may function as a key mechanism linking social media usage with improved performance outcomes. Understanding these relationships can provide valuable insights for managers seeking to enhance SME competitiveness through digital transformation initiatives.

In Iran, the increasing penetration of digital technologies and social media usage among businesses has created new opportunities and challenges for SMEs operating in technology-oriented sectors. Companies located in science

and technology parks are particularly dependent on innovation, networking, and knowledge exchange to maintain competitiveness and organizational growth. However, limited empirical research has examined how social media platform usage influences innovation and organizational performance within this context. Investigating these relationships can contribute to both theoretical development and managerial practice by identifying the mechanisms through which digital communication technologies support SME advancement and efficiency.

Accordingly, the present study aims to investigate the effect of social media platform usage on the growth and efficiency performance of small economic enterprises with the mediating role of innovation among companies located in the Tehran Province Science and Technology Park.

2. Methodology

The present study was conducted using a descriptive-correlational research design and was applied in terms of its objective. The research aimed to investigate the impact of social media platform usage on the growth and efficiency performance of small economic enterprises with the mediating role of innovation among companies located in the Tehran Province Science and Technology Park. The statistical population consisted of all managers of companies operating within the Tehran Province Science and Technology Park in 2026, totaling 210 individuals. Based on the Morgan and Krejcie sample size determination table, a sample of 132 participants was selected through simple random sampling. Inclusion criteria included managerial responsibility within the company, at least one year of work experience in the relevant enterprise, and familiarity with the use of social media platforms in business activities. Participants who submitted incomplete questionnaires or declined to continue participation were excluded from the study. Prior to data collection, the objectives of the research were explained to the participants, and they were assured that all collected information would remain confidential and would be used solely for academic purposes. Data collection was conducted through field research and direct distribution of questionnaires among the selected participants.

Data were collected using a researcher-made questionnaire developed based on the theoretical foundations and literature related to social media platform usage, innovation, and organizational performance in small economic enterprises. The questionnaire consisted of two sections. The first section included demographic information such as age, gender, educational level, managerial experience, and company activity type. The second section measured the main research variables, including social media platform usage, growth performance of small economic enterprises, efficiency performance of small economic enterprises, and innovation in small economic enterprises. The questionnaire items were designed using a five-point Likert scale ranging from “strongly disagree” to “strongly agree.” To assess content validity, the questionnaire was reviewed and evaluated by a panel of university experts and specialists in management and entrepreneurship. Based on their feedback, necessary modifications were applied to improve the clarity and relevance of the items. Construct validity was examined using confirmatory factor analysis within the Structural Equation Modeling framework. Reliability of the questionnaire was evaluated using Cronbach’s alpha coefficient and composite reliability indices. The obtained Cronbach’s alpha values for all constructs exceeded the acceptable threshold of 0.70, indicating satisfactory internal consistency and reliability of the instrument.

The collected data were analyzed using both descriptive and inferential statistical methods. In the descriptive statistics section, frequency distributions, percentages, cumulative percentages, means, and standard deviations were calculated, and the results were presented through tables and graphical illustrations. In the inferential statistics section, Structural Equation Modeling (SEM) was employed to examine the relationships among the research variables and to test the proposed hypotheses. Prior to hypothesis testing, the assumptions of normality, multicollinearity, and adequacy of the measurement model were assessed. Confirmatory factor analysis was conducted to evaluate the validity of the measurement model and the factor loadings of the questionnaire items. The structural model was then tested to determine the direct and indirect effects among variables, particularly the mediating role of innovation in the relationship between social media platform usage and organizational performance dimensions. Data analysis was performed using SPSS version 27 for descriptive statistics and AMOS version 26 for Structural Equation Modeling. The significance level for hypothesis testing was considered at $p < .05$.

3. Findings and Results

Before examining the research hypotheses, the normality of the study variables was assessed. The Kolmogorov–Smirnov test was used to evaluate the normality assumption of the variables. The results of this test are presented in the following table. As shown, all variables followed a normal distribution because the significance levels for all variables were greater than 0.05. Therefore, the null hypothesis regarding the normality of the data distribution was not rejected.

H_0: The studied variable has a normal distribution.

H_1: The studied variable does not have a normal distribution.

Table 1. Results of the Kolmogorov–Smirnov Test for Assessing Normality Assumption

Variables	Sample Size	Test Statistic	Significance Level	Result
Social Media Platform Usage	132	1.178	0.125	Normal
Customer Information Acquisition	132	1.315	0.063	Normal
Competitor Information Acquisition	132	1.294	0.070	Normal
Knowledge Sharing	132	1.039	0.231	Normal
Innovation	132	1.100	0.178	Normal
Growth Performance	132	1.412	0.069	Normal
Efficiency Performance	132	1.310	0.099	Normal

Considering that the significance level for all variables was greater than 0.05, the null hypothesis regarding the normal distribution of the variables was accepted. Therefore, parametric statistical methods were employed to test the research hypotheses.

At this stage, the measurement model was evaluated using factor loadings, Cronbach's alpha coefficients, composite reliability (CR), Average Variance Extracted (AVE), communality index, discriminant validity based on the Fornell and Larcker method, and cross-factor loadings. If the factor loading of each item on its corresponding construct exceeded 0.40, the item was considered to possess sufficient accuracy for measurement. Items with factor loadings below 0.40 were considered inadequate and were excluded from the analysis process. Composite reliability and Cronbach's alpha values greater than 0.70 indicated acceptable reliability of the constructs. The communality index measures the model's ability to predict observable variables through their corresponding latent variables. Positive communality values indicate the acceptable quality of the measurement model.

The cross-loading approach was also applied as one of the criteria for assessing discriminant validity. In this method, the loading of each indicator on its associated construct should be greater than its loading on other constructs.

Table 2. Measurement Model Fit Indices

Variables	Calculated Value	CR	Cronbach's Alpha	AVE	Communality Index
Social Media Platform Usage	Calculated	0.866	0.793	0.418	0.088
Acceptable Level		>0.70	>0.70	>0.40	>0
Customer Information Acquisition	Calculated	0.704	0.701	0.440	0.162
Acceptable Level		>0.70	>0.70	>0.40	>0
Competitor Information Acquisition	Calculated	0.846	0.797	0.413	0.043
Acceptable Level		>0.70	>0.70	>0.40	>0
Knowledge Sharing	Calculated	0.803	0.770	0.468	0.276
Acceptable Level		>0.70	>0.70	>0.40	>0
Innovation	Calculated	0.703	0.700	0.721	0.011
Acceptable Level		>0.70	>0.70	>0.40	>0
Growth Performance	Calculated	0.801	0.774	0.451	0.234
Acceptable Level		>0.70	>0.70	>0.40	>0
Efficiency Performance	Calculated	0.705	0.728	0.516	0.153
Acceptable Level		>0.70	>0.70	>0.40	>0

The results presented in the table above indicate that the composite reliability and Cronbach's alpha values for all constructs exceeded 0.70, demonstrating satisfactory reliability of the model. Furthermore, the AVE values for the constructs were above 0.40, indicating acceptable convergent validity. Positive communality values also confirmed the quality of the measurement model.

After evaluating the outer model, the inner model representing the relationships among the latent variables was assessed. The inner model enables the researcher to investigate the complex relationships among latent variables and examine the hypothesized relationships within the study. The second stage in model estimation involved testing the significance of the proposed path coefficients in the research model and assessing the explained variance or coefficient of determination estimated by each path. Based on the fitted model, the standardized regression coefficients were reported. Smart PLS software was used to analyze the overall research model.

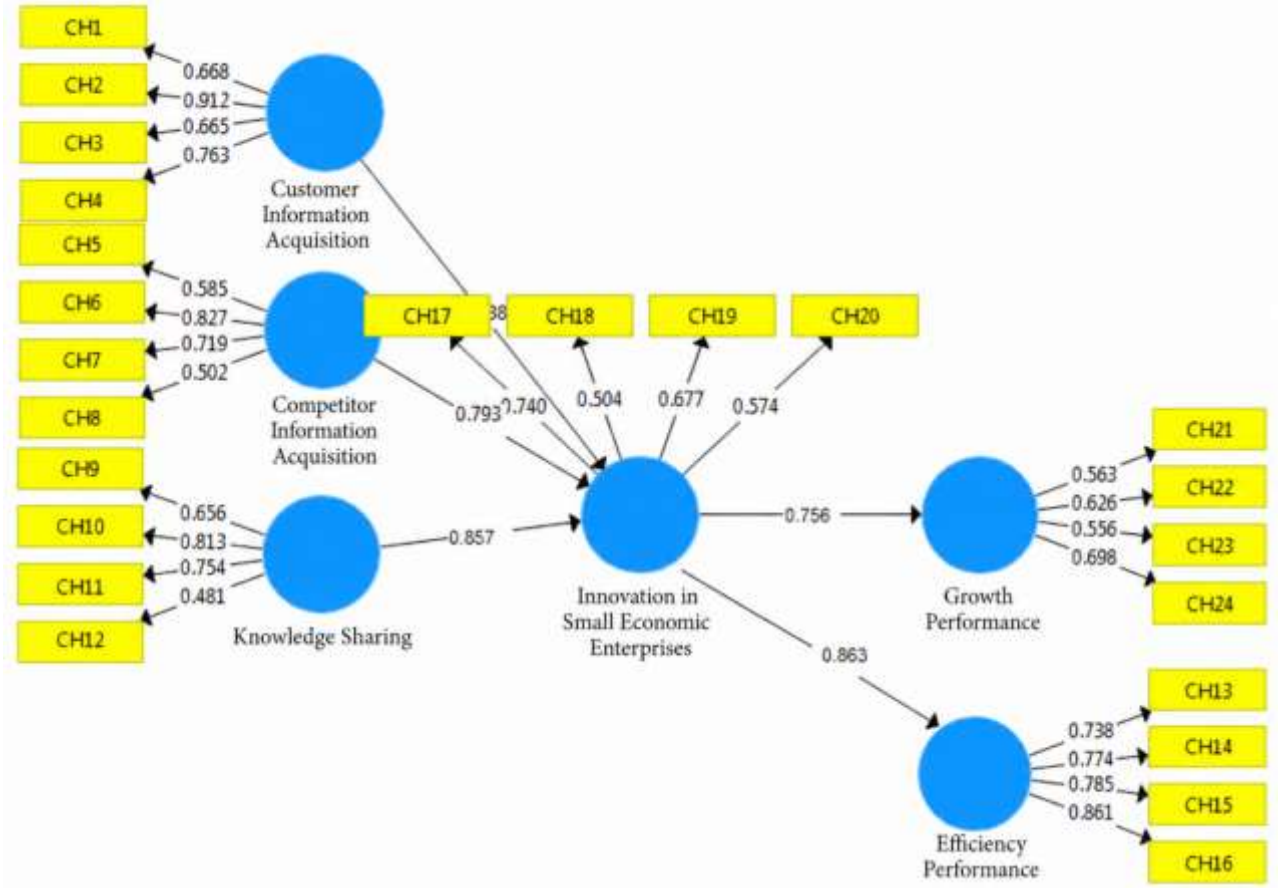

Figure 1. Factor Loadings of the Overall Research Model (Path Coefficients)

In this section of the study, the path coefficients among the research variables were examined. Path analysis specifically demonstrates the direction and strength of the relationships among the study variables. The coefficients reported in this analysis are known as path coefficients. These coefficients indicate the existence of a linear causal relationship and the strength and direction of the relationship between two latent variables. The coefficient values range between -1 and +1, indicating the nature and intensity of the relationships among the variables. Path analysis identifies which paths are more significant or influential. Path coefficients are calculated based on standardized regression coefficients. Each variable is considered a function of other variables, and its regression model is estimated accordingly. To calculate the main path coefficients, each endogenous variable is regressed on the variables that directly affect it. In other words, standardized regression coefficients (path coefficients) are obtained through structural equations specifying the hypothesized relationships in the model.

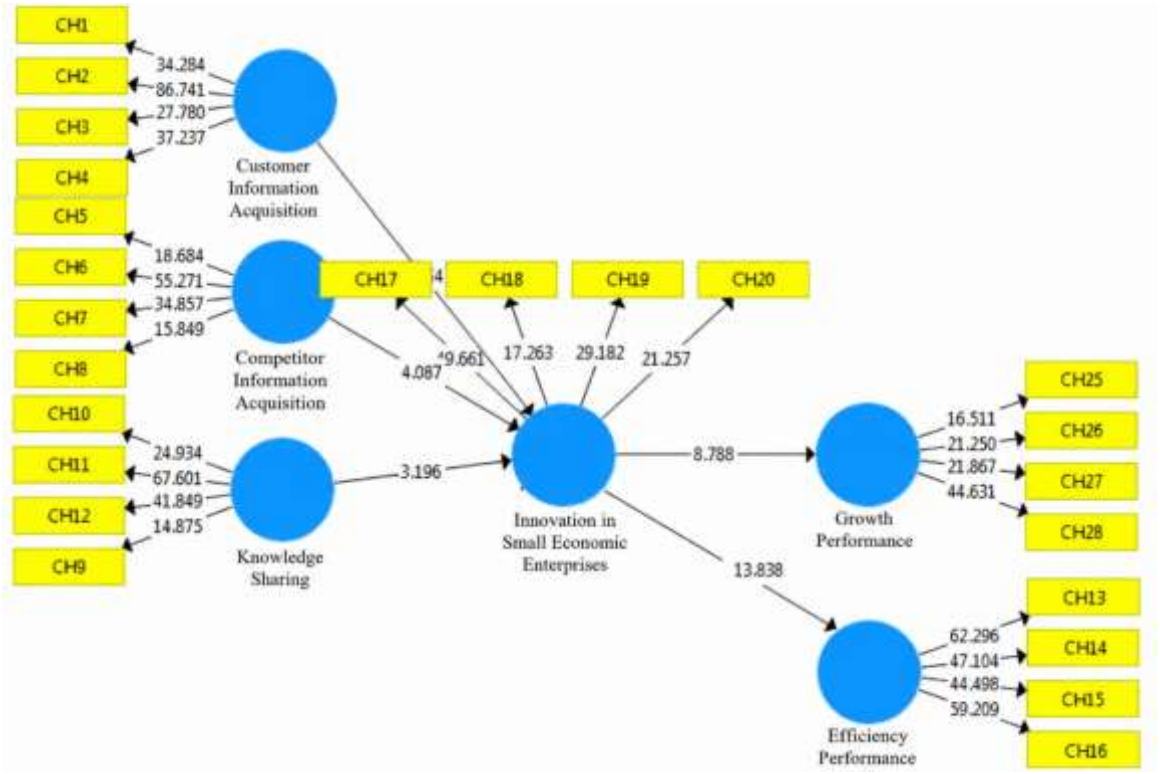

Figure 2. T-Value Statistics of the Overall Research Model (Significance State)

Figure 2 presents the t-statistics of the model. If the t-value for a path exceeds 1.96, the path is considered significant, and the corresponding hypothesis is confirmed at the 0.05 error level. The model in the significance state demonstrates that all obtained coefficients and parameters were significant because significance values greater than 1.96 indicate meaningful relationships among the variables.

First Main Hypothesis

The use of social media platforms has a significant effect on the growth performance of small economic enterprises through the mediating role of innovation in small economic enterprises.

Initially, the model was estimated using the main variables. The following figure presents the structural equation model in the standardized estimation state for the first main hypothesis.

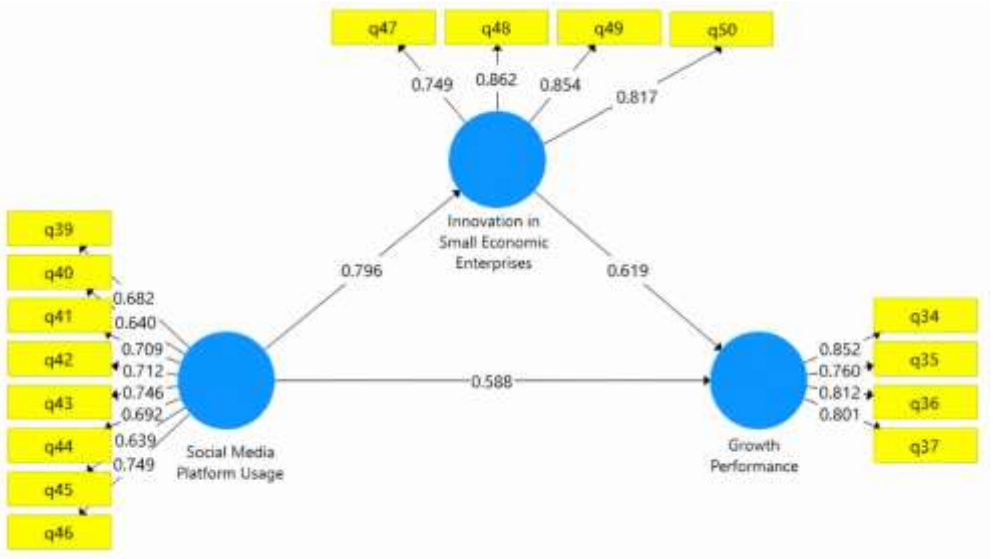

Figure 3. Structural Equation Model in Standardized Estimation State for the First Main Hypothesis

The next output presents the model in the significance state of the coefficients and parameters. All estimated coefficients were significant because significance values greater than 1.96 or lower than -1.96 indicate statistically significant relationships. The Smart PLS software applied in this study is variance-based.

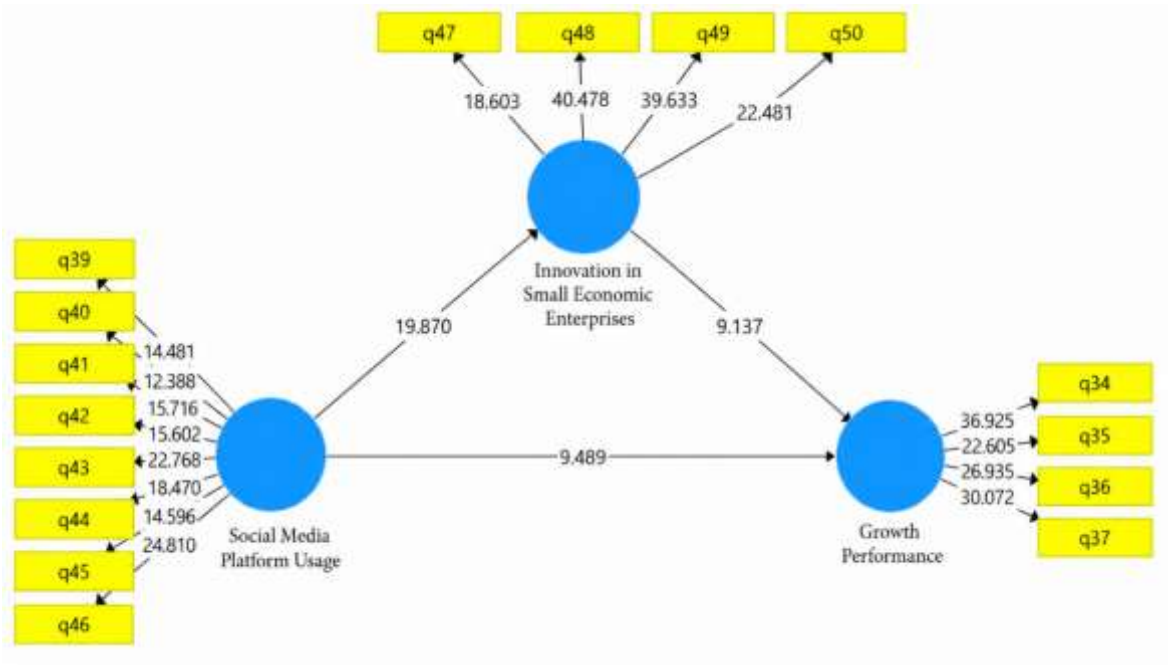

Figure 4. Structural Equation Model in the Significance State

To test the effect of a mediating variable, the Sobel test was employed, which is commonly used to determine the significance of the mediating effect between two variables.

In the Sobel test, a Z-value is obtained using the following formula. If this value exceeds 1.96, the mediating effect is considered significant at the 95% confidence level.

$$Z = \frac{a \times b}{\sqrt{(b^2 \times s_a^2) + (a^2 \times s_b^2) + (s_a^2 \times s_b^2)}}$$

By substituting the values into the Sobel formula, the following result was obtained:

$$Z = \frac{0.796 \times 0.619}{\sqrt{(0.619^2 \times 0.037^2) + (0.796^2 \times 0.068^2) + (0.037^2 \times 0.068^2)}} = \frac{0.492}{0.058} = 8.36$$

As observed, the Z-value obtained from the Sobel test was 8.36, which is greater than 1.96. Therefore, it can be concluded with 95% confidence that the mediating effect of innovation is significant. The path coefficient was obtained by multiplying the path coefficient between the independent and mediating variables by the path coefficient between the mediating and dependent variables.

Second Main Hypothesis

The use of social media platforms has a significant effect on the efficiency performance of small economic enterprises through the mediating role of innovation in small economic enterprises.

Initially, the model was estimated using the main variables. The following figure presents the structural equation model in the standardized estimation state for the second main hypothesis.

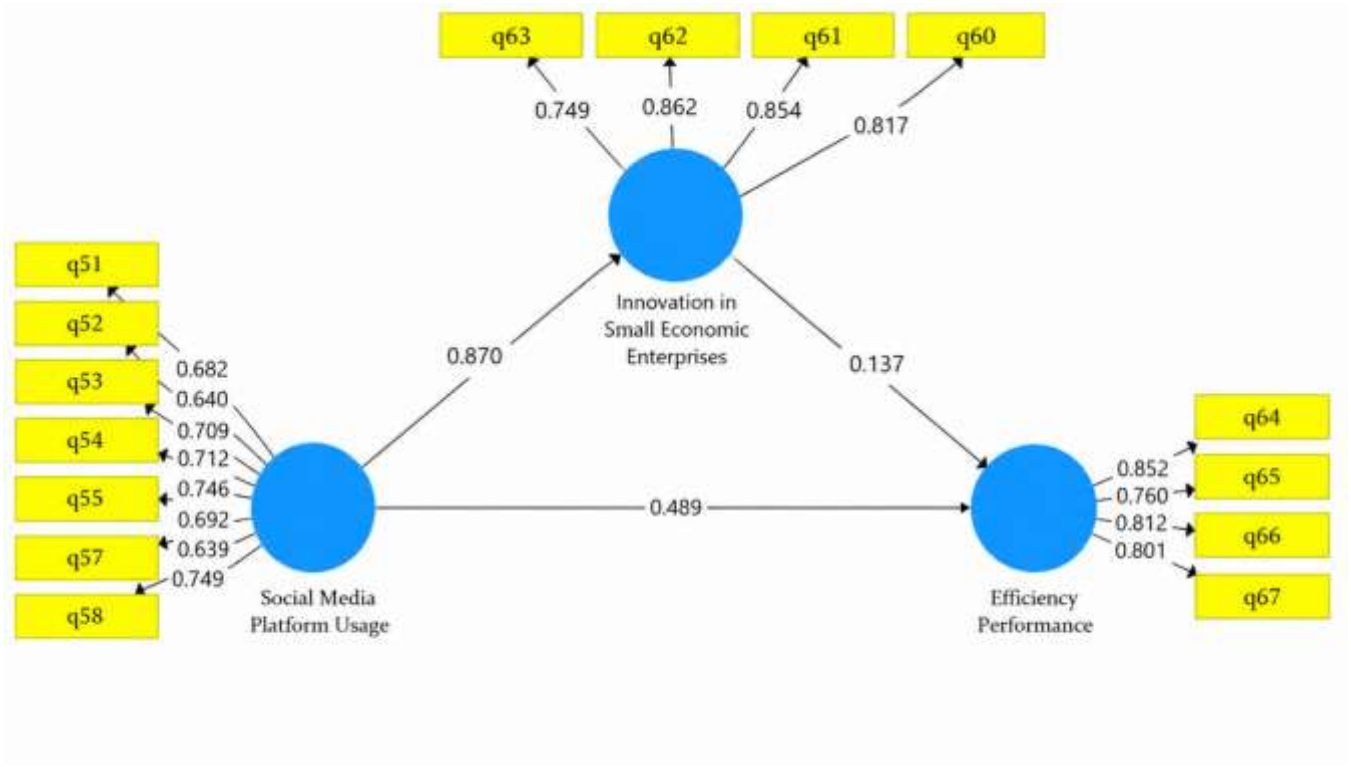

Figure 5. Structural Equation Model in Standardized Estimation State for the Second Main Hypothesis

The next output demonstrates the model in the significance state of the coefficients and parameters. All estimated coefficients were significant because significance values greater than 1.96 or lower than -1.96 indicate significant relationships. Smart PLS software is variance-based.

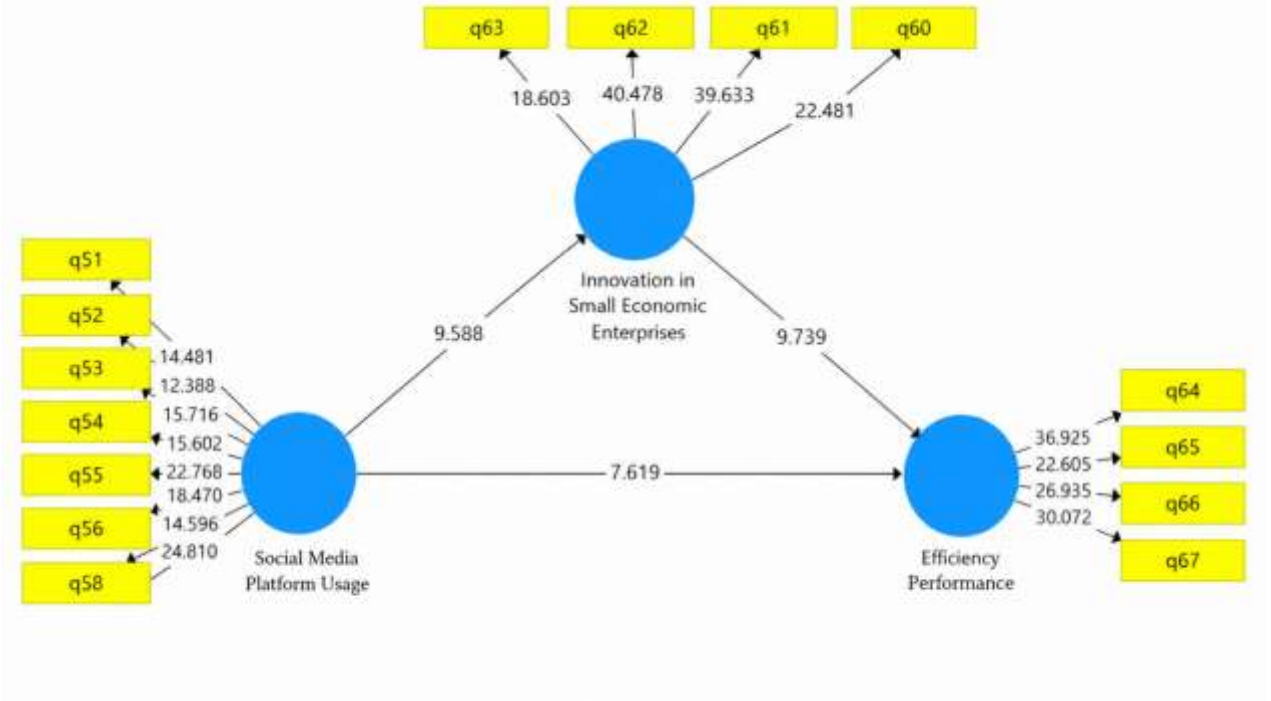

Figure 6. Structural Equation Model in the Significance State

To examine the mediating effect, the Sobel test was also applied for the second hypothesis.

By substituting the values into the Sobel formula, the following result was obtained:

$$Z = \frac{0.870 \times 0.137}{\sqrt{(0.870^2 \times 0.037^2) + (0.137^2 \times 0.068^2) + (0.037^2 \times 0.068^2)}} = \frac{0.119}{0.162} = 5.72$$

As observed, the Z-value obtained from the Sobel test was 5.72, which exceeds 1.96. Therefore, it can be stated with 95% confidence that the mediating effect of innovation is statistically significant. The path coefficient was calculated by multiplying the path coefficient between the independent and mediating variables by the path coefficient between the mediating and dependent variables.

Table 3. Results of Hypothesis Testing

Hypotheses	Path Coefficient	Significance	Confirmation/Rejection
Social media platform usage significantly affects the growth performance of small economic enterprises through the mediating role of innovation	0.492	8.36	Confirmed
Social media platform usage significantly affects the efficiency performance of small economic enterprises through the mediating role of innovation	0.740	5.72	Confirmed
Customer information acquisition significantly affects innovation in small economic enterprises	0.235	3.458	Confirmed
Competitor information acquisition significantly affects innovation in small economic enterprises	0.793	4.087	Confirmed
Knowledge sharing significantly affects innovation in small economic enterprises	0.857	3.196	Confirmed
Innovation in small economic enterprises significantly affects growth performance	0.756	8.788	Confirmed
Innovation in small economic enterprises significantly affects efficiency performance	0.863	13.838	Confirmed

4. Discussion and Conclusion

The findings of the present study demonstrated that the use of social media platforms has a significant positive effect on the growth performance of small economic enterprises through the mediating role of innovation. Furthermore, the results revealed that social media platform usage significantly influences the efficiency performance of small economic enterprises through innovation. In addition, customer information acquisition, competitor information acquisition, and knowledge sharing were found to have significant positive effects on innovation in small economic enterprises. The results also confirmed that innovation significantly affects both growth performance and efficiency performance among companies operating in the Tehran Province Science and Technology Park. Overall, the findings indicate that social media platforms function not only as communication tools but also as strategic resources capable of improving innovation capabilities and organizational performance within SMEs.

The significant relationship between social media platform usage and growth performance suggests that SMEs can achieve higher levels of expansion and market development through effective digital engagement and communication strategies. Social media platforms provide organizations with opportunities to increase customer interaction, improve visibility, and access broader markets with relatively low operational costs. These findings are consistent with the results reported by Ahmad et al., who found that social media adoption positively influences firm performance through enhanced customer communication and market responsiveness [5]. Similarly, Marolt et al. emphasized that social media use improves business performance in SMEs through relational social commerce capability and competitive advantage [6]. The findings of the present study also align with the work of Gieure et al., who highlighted the strategic importance of social media in entrepreneurship and organizational growth [1]. These results suggest that SMEs that actively use social media platforms are more capable of adapting to changing market conditions and expanding their competitive position.

The findings further demonstrated that innovation mediates the relationship between social media platform usage and growth performance. This result indicates that social media platforms contribute to organizational growth primarily by facilitating innovation processes within firms. Social media technologies create opportunities for organizations to access external knowledge, identify customer needs, and develop creative solutions that support

business expansion. Previous research has similarly emphasized the relationship between social media usage and innovation performance. Monshaat et al. reported that social media usage positively influences innovation performance among fashion SMEs in Jordan [18]. Likewise, Weerawardena Halbusi et al. found that social media technologies used for competitive information and informational trust significantly enhance innovation in industrial SMEs [12]. The present findings extend prior studies by demonstrating that innovation serves as a mediating mechanism linking digital communication technologies to organizational growth outcomes.

Another important finding of the study was the significant effect of social media platform usage on the efficiency performance of small economic enterprises through innovation. This result indicates that social media platforms improve organizational efficiency by supporting innovative practices, communication quality, and operational flexibility. SMEs frequently encounter resource limitations and financial constraints, making operational efficiency essential for sustainability and competitiveness. Social media technologies can reduce communication costs, facilitate rapid information exchange, and improve coordination among organizational stakeholders. These findings are consistent with the work of Gamage et al., who reported that organizational efficiency in SMEs is closely associated with innovation capability and effective managerial practices [23]. Similarly, Nah and Saxton argued that effective knowledge management practices significantly improve organizational performance and efficiency [24]. The present study confirms that innovation acts as a critical pathway through which social media usage enhances organizational efficiency.

The significant influence of customer information acquisition on innovation indicates that SMEs that effectively gather and analyze customer information are more likely to develop innovative capabilities. Social media platforms provide organizations with immediate access to customer opinions, preferences, and behavioral patterns, enabling firms to design products and services that better satisfy market demands. This finding is consistent with Dehghani and Nejadi Anbaran, who demonstrated that customer orientation positively affects organizational innovation [10]. Customer information acquisition enables firms to anticipate market changes and develop proactive strategies for innovation and competitive positioning. Furthermore, digital communication technologies allow organizations to receive continuous customer feedback, which supports product improvement and service innovation.

The findings also revealed that competitor information acquisition significantly influences innovation in SMEs. Through social media platforms, firms can monitor competitor activities, analyze industry trends, and identify emerging opportunities in the marketplace. Access to competitive intelligence improves organizational awareness and strategic flexibility, thereby encouraging innovative behavior. These findings are aligned with the work of He et al., who emphasized the role of social media competitive analysis and information mining in organizational strategy development [11]. Similarly, Weerawardena Halbusi et al. highlighted that competitive information obtained through social media technologies positively contributes to innovation performance in industrial SMEs [12]. The present results suggest that competitor information acquisition enhances firms' ability to respond creatively to environmental changes and market competition.

Knowledge sharing was also found to significantly affect innovation in small economic enterprises. This finding highlights the importance of collaborative learning and information exchange in promoting organizational creativity and innovation. Social media platforms create environments in which employees, managers, and stakeholders can share experiences, expertise, and ideas in real time. Such interactions enhance collective learning and facilitate innovative problem-solving. The findings support the arguments presented by Bhimani and Mention, who emphasized the importance of organizational knowledge retention and sharing in improving innovation and organizational sustainability [13]. Likewise, Soluk and Noe identified knowledge sharing as a critical determinant of organizational innovation and future competitiveness [14]. Fu and Alsabban also argued that social media platforms significantly facilitate knowledge-sharing processes in modern organizations [15]. The findings of the present study reinforce the view that knowledge sharing through digital communication technologies contributes directly to innovation development within SMEs.

Another important result of the study was the direct positive effect of innovation on both growth performance and efficiency performance. This finding demonstrates that innovative SMEs are more capable of achieving organizational expansion, improving operational processes, and enhancing resource utilization. Innovation enables organizations to introduce new products, improve existing services, and adapt more effectively to environmental

uncertainty. These findings are consistent with Chatterjee et al., who reported that innovation culture significantly contributes to SME performance and sustainability [16]. Ghazwani and Alzahranim similarly emphasized the importance of external knowledge and innovation performance at the firm level [17]. The present results indicate that innovation functions as a strategic capability through which SMEs can achieve sustainable growth and operational excellence.

The results of this study can also be interpreted within the broader context of digital transformation and technological adaptation among SMEs. Contemporary business environments increasingly require organizations to integrate digital technologies into their strategic and operational activities. Social media platforms are among the most accessible and cost-effective digital tools available to SMEs, particularly in developing economies and resource-constrained environments. The findings suggest that SMEs operating in science and technology parks can significantly benefit from the strategic use of social media platforms to strengthen innovation and improve organizational performance. These results are also consistent with research conducted during and after the COVID-19 pandemic, which highlighted the growing dependence of SMEs on digital technologies for survival and resilience [4, 25]. Digital communication platforms enabled firms to maintain customer relationships, adapt to market disruptions, and continue organizational operations during periods of uncertainty.

The positive role of social media usage in improving organizational outcomes may also be explained through relationship-building and trust-enhancement mechanisms. Social media platforms allow firms to establish stronger relationships with customers and stakeholders, thereby increasing organizational credibility and customer loyalty. Previous studies have demonstrated that trust, customer satisfaction, and relationship quality are strongly associated with organizational performance and purchase intentions [8, 9, 22]. The present findings suggest that innovation may strengthen these relationships by enabling organizations to deliver more responsive and customer-oriented products and services.

Additionally, the findings of the study support the Technology–Organization–Environment (TOE) perspective, which emphasizes that technological adoption improves organizational performance when firms effectively integrate technology into organizational processes and environmental interactions. Abed found that social commerce adoption among SMEs positively affects organizational outcomes through technological and organizational integration [2]. Similarly, social media technologies can improve communication efficiency, market intelligence, and innovation capability when organizations strategically incorporate them into managerial and operational systems. The present study contributes to this literature by empirically confirming the mediating role of innovation in the relationship between social media platform usage and SME performance.

The findings are particularly important for SMEs operating in science and technology parks because these organizations rely heavily on innovation, networking, and knowledge exchange to maintain competitiveness. Technology-oriented SMEs often operate in rapidly changing environments where innovation capability determines organizational survival and long-term success. Social media platforms provide these enterprises with opportunities to access information, collaborate with stakeholders, and improve innovation processes. The results therefore suggest that digital communication technologies should be considered integral components of organizational innovation strategies within technology-based SMEs.

One of the limitations of the present study was that the research population was limited to companies located in the Tehran Province Science and Technology Park, which may reduce the generalizability of the findings to other industries and geographical contexts. In addition, the study used a cross-sectional design, making it difficult to establish causal relationships among the variables over time. Another limitation was the reliance on self-reported questionnaire data, which may have been influenced by respondent bias or subjective perceptions. Furthermore, organizational and environmental variables such as firm size, organizational culture, and technological readiness were not examined as moderating factors in the proposed model.

Future research is recommended to examine the proposed relationships in different industrial sectors and geographical regions in order to improve the generalizability of the findings. Longitudinal studies may provide deeper insights into the long-term effects of social media usage and innovation on organizational performance. Researchers are also encouraged to investigate the moderating roles of organizational culture, digital literacy, technological capability, and leadership style in the relationship between social media platform usage and innovation performance. Comparative studies between SMEs and large organizations may further clarify how organizational size influences the

effectiveness of social media technologies in improving business outcomes.

From a practical perspective, managers of small economic enterprises should prioritize the strategic use of social media platforms as tools for innovation, market intelligence, and organizational development. SMEs should invest in training programs that improve employees' digital communication and knowledge-sharing capabilities. Organizations are also advised to establish systems for collecting customer and competitor information through social media analytics in order to strengthen innovation processes and market responsiveness. Policymakers and managers of science and technology parks should support SMEs by providing digital infrastructure, innovation-oriented training, and consultation services that facilitate the effective use of social media technologies for sustainable organizational growth and efficiency improvement.

Authors' Contributions

Authors equally contributed to this article.

Acknowledgments

Authors thank all participants who participate in this study.

Declaration of Interest

The authors report no conflict of interest.

Funding

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

Ethical Considerations

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

References

[1] A. S. T. Gieure, M. A. Hossain, N. Whiteside, and P. Mercieca, "Social media and entrepreneurship research: A literature review," *International Journal of Information Management*, vol. 50, pp. 90-110, 2020, doi: 10.1016/j.ijinfomgt.2019.05.011.

[2] S. S. Abed, "Social commerce adoption using TOE framework: An empirical investigation of Saudi Arabian SMEs," *International Journal of Information Management*, vol. 53, p. 102118, 2020, doi: 10.1016/j.ijinfomgt.2020.102118.

[3] A. W. Bartik *et al.*, "The entrepreneurial process: The link between intentions and behavior," *Journal of Business Research*, vol. 112, pp. 541-548, 2020, doi: 10.1016/j.jbusres.2019.11.088.

[4] A. A. F. Monshaat, S. F. Alkhatib, and M. H. A. Abbass, "Social media usage and innovation performance: The case of fashion SMEs in Jordan," *International Journal of Fashion Design, Technology and Education*, vol. 15, pp. 221-232, 2024, doi: 10.1080/17543266.2021.2011963.

[5] S. Z. Ahmad, A. R. A. Bakar, and N. Ahmad, "Social media adoption and its impact on firm performance: The case of the UAE," *International Journal of Entrepreneurial Behavior & Research*, vol. 25, pp. 84-111, 2019, doi: 10.1108/IJEBR-08-2017-0299.

[6] M. Marolt, H. D. Zimmermann, and A. Pucihar, "Social media use and business performance in SMEs: The mediating roles of relational social commerce capability and competitive advantage," *Sustainability*, vol. 14, p. 15029, 2023, doi: 10.3390/su142215029.

[7] A. Motameni, H. Moradi, and A. Hemmati, "The effect of brand personality on customer loyalty," *Business Management Perspective*, vol. 4, pp. 89-105, 2020.

[8] S. Azadeh, S. Ahmadian, and F. Mohagheghzadeh, "The effect of customer satisfaction, trust, certainty, and positive word of mouth on purchase intention with emphasis on social networks," ed, 2021.

[9] Z. Rahmani and S. M. S. Voloojay, "Investigating the effect of relationship quality on purchase intention with the mediating role of perceived enjoyment and trust: A case study of the Digikala social website," in *First International Conference on the Leap of Management Sciences, Economics, and Accounting*, Sari, 2021.

[10] A. Dehghani and M. Nejadi Anbaran, "Investigating the effect of customer orientation on organizational innovation in the Social Security Organization of Tehran," in *Second International Conference on New Research Achievements in Management Sciences, Accounting, and Industrial Engineering*, Sari, 2018.

[11] W. He, S. Zha, and L. Li, "Social media competitive analysis and text mining: A case study in the pizza industry," *International Journal of Information Management*, vol. 33, pp. 464-472, 2025, doi: 10.1016/j.ijinfomgt.2013.01.001.

[12] H. Weerawardena Halbusi, A. Hassani, and E. Mosconi, "Social media technologies' use for competitive information and informational trust and their effects on innovation in industrial SMEs," in *Proceedings of the 2021 IEEE International Conference on Technology Management, Operations and Decisions (ICTMOD)*, Marrakech, Morocco, 2021, doi: 10.1109/ICTMOD52902.2021.9739405.

[13] H. Bhimani and A. L. Mention, "Organizational knowledge retention and knowledge loss," *Journal of Knowledge Management*, vol. 23, pp. 176-199, 2019, doi: 10.1108/JKM-08-2017-0358.

[14] S. Soluk and R. A. Noe, "Knowledge sharing: A review and directions for future research," *Human Resource Management Review*, vol. 20, pp. 115-131, 2024, doi: 10.1016/j.hrmr.2009.10.001.

[15] M. Fu and A. Alsabban, "Knowledge sharing through social media platforms in the Silicon Age," *Sustainability*, vol. 15, p. 6765, 2024, doi: 10.3390/su15086765.

[16] M. R. Chatterjee *et al.*, "SMEs performance in Malaysia: The role of contextual ambidexterity in innovation culture and performance," *Sustainability*, vol. 14, p. 1679, 2020, doi: 10.3390/su14031679.

[17] S. S. Ghazwani and S. Alzahranim, "External knowledge modes and firm-level innovation performance: Empirical

evidence from sub-Saharan Africa," *Journal of Innovation & Knowledge*, vol. 5, pp. 81-95, 2024, doi: 10.1016/j.jik.2019.08.001.
[18] Monshaat, "SME Monitor Monsha'at Quarterly Report Q1 2024," 2024. [Online]. Available: https://monshaat.gov.sa/sites/default/files/2024-05/Monshaat%20Q1%2024%20_EN.pdf
[19] H. Al Halbusi, A. Hassani, and E. Mosconi, "Citizen behaviors, enterprise social media and firm performance," *Information Technology & People*, vol. 36, pp. 1298-1325, 2024, doi: 10.1108/ITP-07-2020-0514.
[20] M. Adineh Azadgoleh and N. Mousavi, "The effect of marketing components using social media platforms through brand equity on customer responsiveness in the tourism industry: A case study of Abhar County," *Marketing Management Quarterly*, no. 24, 2024.
[21] A. Hamidnia and A. R. Shekarchizadeh, "Consumer behavior and social media marketing in the luxury goods market: A review of related models," in *Second Conference on Economics, Management, and Accounting*, 2025.
[22] P. Ghandour and F. Setareh, "Investigating the effect of perceived social responsibility and satisfaction with organizational performance improvement on customer trust and loyalty," in *Conference on Modern Business Management, Business, and Marketing with an Approach to National Production Prosperity*, Qazvin, 2025: Islamic Azad University, Qazvin.
[23] P. G. Gamage, A. P. Marta, and A. Antonio, "Profit efficiency and its determinants in small and medium-sized enterprises in Spain," *BRQ Business Research Quarterly*, vol. 21, pp. 238-250, 2020, doi: 10.1016/j.brq.2018.08.003.
[24] S. Nah and G. D. Saxton, "How effective leadership of knowledge management impacts organizational performance," *Business Information Review*, vol. 36, pp. 30-38, 2025, doi: 10.1177/0266382119829643.
[25] L. A. Baqleh and M. M. Alateeq, "The impact of supply chain management practices on competitive advantage: The moderating role of big data analytics," *International Journal of Professional Business Review*, vol. 8, no. 3, 2024, doi: 10.26668/businessreview/2023.v8i3.679.