

# **Examining the impact of digital technologies and marketing capabilities on performance Small and medium enterprises**

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## **Abstract**

*In today's rapidly evolving business landscape, the role of digital technologies and marketing capabilities for the success of small and medium-sized companies has become increasingly important and has led to the need for these companies to use new tools to remain competitive and Reaching your target audience will be felt more than ever. Therefore, the current research aims to investigate the effect of digital technologies and marketing capabilities on the performance of small and medium-sized companies in the statistical population of small and medium-sized companies active in the Tehran Stock Exchange, and the sample size is determined using Morgan's table equal to 118 and sampling in the manner of Simple randomization was done. The tool of data collection in this research is a standard questionnaire, the reliability of which was calculated using Cronbach's alpha coefficient for all variables above 0.7, which indicates its desirability. Data analysis in this research was done using structural equation modeling method and Smart PLS3 software. The findings show the significant impact of digital marketing capabilities on business transformation. Also, the findings show the significant impact of dynamic digital capabilities on business transformation.*

**Keywords:** digital technologies, marketing capabilities, performance, small and medium enterprises

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## **I. Introduction**

Today, the increasing necessity of the role of small and medium-sized companies in increasing the welfare and economic growth of societies has attracted the attention of many scientists, because the increase in competition, change and uncertainty in many markets has put a huge pressure on companies, to From the point of view of experts, company managers should, regardless of the size of their economic enterprises, and with the aim of remaining stable in today's market competition and maintaining their target markets, continuously align and adapt to new technologies in the production, distribution and sales promotion process. Be diligent (Troise et al., 2021). In other words, the digital revolution in today's world has changed the way of working, communication and interaction of businesses with customers (Rahman et al., 2020). The use of digital technologies and marketing capabilities has become vital for the growth of small and medium-sized enterprises in the digital economy, and it requires that by investing in research, staying aware of digital trends, and using the right tools and strategies, small enterprises to interact more effectively with customers and improve their business performance by adapting to market changes and growing in a digitally driven competitive environment (Tang et al., 2022). In fact, with the business environment becoming more digital-oriented, many leading small and medium-sized companies need to use these new digital technologies such as social media, websites and e-commerce platforms and have strong marketing capabilities that can give them new opportunities. It is well understood to connect with customers, expand their access to consumers and increase sales, and help them stay competitive, reach their target audience and increase growth (Rahman et al., 2020). They have experienced that the adoption of technologies helps SMEs to differentiate themselves in the market by effectively promoting their products or services to consumers and create a loyal customer base (Bahalis et al., 2022). However, despite the potential benefits of using digital tools and marketing strategies, they often face challenges in using digital technologies and marketing capabilities to enhance their performance and effectively integrate these elements into their business operations, leading to missed opportunities for growth. Access to the market is limited and competitiveness is reduced for them (Gupta et al., 2021).

Smith et al. (2020), found that only 45% of SMEs have a defined digital marketing strategy, indicating a gap in the use of digital technologies for business growth. In addition, the research of Johnson and Williams (2019) also shows that small and medium-sized companies often lack the resources, skills and knowledge necessary to use the full potential of digital tools and marketing capabilities. This is a significant challenge for SMEs seeking to compete with larger companies and adapt to the rapidly evolving digital landscape (Tang et al., 2022). The inability of SMEs to effectively use digital technologies and marketing capabilities hinders their ability to reach their target audience, increase sales and build a strong online brand. This not only limits their growth potential, but puts them at a disadvantage compared to digital competitors who capitalize on the strength of their digital marketing strategies (Clark et al., 2021). Understanding the capabilities of digital technologies can help SMEs increase customer engagement and loyalty by using social media, email marketing, content marketing and other digital channels to create personalized experiences, deliver valuable content and engage with customers in interact in real time to build stronger relationships and drive repeat business (Wong et al., 2021). Finally, research on digital technologies and marketing capabilities by helping small and medium enterprises grow their business, expand their reach and increase their sales and income. By harnessing the power of digital tools and data-driven insights, SMEs can increase their marketing efforts, acquire new customers, and build a sustainable business model for long-term success (Asteni et al., 2021). Research on digital technologies and marketing capabilities is therefore critical to the growth of SMEs in today's digital economy. By investing in research, staying aware of digital trends and using the right tools and strategies, small and medium-sized companies can improve their performance by investing in research, staying aware of digital trends and using the right tools and strategies. Effectively engage with customers, facilitate operations, adapt to market changes, and drive user growth in a competitive competition and formative digital innovation (Mo et al., 2018). Examining the results of studies, especially in the field of internal studies, shows that the importance of using digital technologies and marketing capabilities in companies and small businesses has received less attention from researchers. This research aims to investigate the impact of digital technologies and marketing capabilities on the performance of small and medium enterprises active in the Tehran Stock Exchange.

## **II. Theoretical framework**

### **2-1- Digital technology and its role in small and medium enterprises**

Digital transformations, with technological advancements and changing customer needs, are driving the use of digital marketing. 11% of Swiss organizations consider digital marketing as a key investment area as part of their overall digital transformation strategy, and more than a third of Swiss organizations are currently investing in new sales and marketing tools. There are implementation gaps between small and medium enterprises (SME) and large enterprises (LE) and they do not use digital marketing tools, channels and platforms much (Erkan et al., 2020). The use of digital technologies can create many benefits for companies. Digitalization has the effect of reducing transaction costs, which provides better and faster access to information and communication between employees, suppliers, and networks (Han et al., 2019). It can also help small and medium-sized enterprises integrate into global markets by reducing the costs of transportation and cross-border operations. Digitization facilitates companies' access to resources, including financing, training, and recruitment channels, including government services that are increasingly available online (Steinkamp et al., 2020). In addition, it supports innovation, and greater access to innovative assets, as well as the potential for companies to create information and analyze their operations in new ways, to enhance performance (Erkan et al., 2020). Although digitalization brings the benefits mentioned above, many small and medium-sized companies are still lagging behind in adopting digital technologies compared to large companies (T Wari et al.; 2021). Of course, it should be noted that the digital transformation of companies also depends on factors such as the changing needs of consumers, the level of application of advanced technologies, the role of company leadership and the size of the company (Tarot et al., 2018). Based on this, in the long run, businesses that are more up-to-date in digitalization may see higher revenue and productivity than companies that are less inclined to digitalize. In addition, the use of these technologies can also help SMEs to optimize their online presence such as websites, social media profiles, search engine rankings, and online listings (Mo et al. 2018). Also, by focusing on quality content, improve user experience and other key factors, attract more traffic and convert leads to customers more effectively. However, some barriers such as cultural changes, limited resources/high costs, technology and expertise prevent SMEs from adopting higher digital marketing tools (Steinkamp et al., 2020).

### **2-1- Marketing capability and its role in small and medium enterprises**

Marketing capabilities is an integrated process in which companies use tangible and intangible resources to understand the complexity of specific customer needs, achieve a relative differentiation of products for competitive advantage, and finally achieve an appropriate brand quality (Tang et al. 2022). Marketing capabilities are considered as a company's resources that entrepreneurs and managers can use to create new products and services (Elam et al., 2020). Therefore, marketing capabilities are an integrated process in which the company uses tangible and intangible resources to understand the complexity of specific customer needs, to

achieve a relative differentiation in products for competition, and finally to achieve a suitable brand quality. And these abilities expand when they are placed in a dynamic environment and organizational entrepreneurship makes the company flexible and adaptable during environmental changes (Zahra et al., 2022). By understanding the potential impact of these tools on their performance, SMEs can discover new ways to grow and innovate. Marketing capabilities can also have a significant impact on the performance of small and medium-sized enterprises (SMEs) in today's digital business landscape, as they help these companies gain deeper insight into consumer behavior, preferences and trends in the digital marketplace. Jung et al., (2020). In addition, understanding how consumers interact with digital channels and make purchasing decisions, helps small and medium-sized companies to adjust their marketing strategies for effective access and communication with their target audience, and by identifying the most effective channels. , tactics and strategies to promote their products or services using the latest digital tools and techniques, create targeted campaigns and interact with customers in multiple channels and increase brand awareness and sales (Mo et al., 2018). Marketing capabilities can also help SMBs stay competitive by keeping up with emerging technologies, industry best practices, and digital marketing innovations. Actively adjust their strategies to consumer preferences, test new ideas and differentiate themselves in the market (Chang et al., 2024).

### III. Research methodology

In terms of the purpose of the applied studies, based on the method of data collection, the present research is descriptive-correlational. The statistical population of this research consists of managers and employees of small and medium-sized companies active in the Cochran Exchange, whose statistical sample size is based on the table Morgan is equal to 118 people and sampling was done by simple random method. The method of collecting information in this research was done using field method and questionnaire tool (Kritchka et al.; 2014). The questionnaire was developed based on the tool introduced in the research of Kritchka Yawised et al. (2022). In order to validate this research, confirmatory factor analysis method was used, and for its reliability, Cronbach's alpha coefficient was used, and structural equation modeling method and Smart-PLS software were used for data analysis and hypothesis testing.

### IV. Research Findings

The descriptive findings related to the participants are summarized in Table (1):

**Table 1- Demographic findings**

Frequency	Abundance	Variable	
23%	34	Female	gender
77%	84	Man	
8.8%	17	Less than 30 years	age
22.5%	20	40-31	
56.3%	29	50-41	
12.5%	12	51 and above	
55%	46	Bachelor's degree	Grade
31.3%	35	Master's degree	
6.3%	27	P.H.D	

Descriptive statistics were performed using SPSS software and analyzes such as mean, standard deviation, minimum and maximum values were investigated. Descriptive statistics of research variables are shown below. The mean and standard deviation of the studied variables are given in table (2).

**- Mean and standard deviation of the variables 2Table**

Highest	Deviation	Standard	Average	
20	4	3.493	17.89	Dynamic capacity
25	5	4.151	22.83	Digital marketing capabilities
30	6	5.844	26.57	Digital technologies
25	5	3.499	23.05	Business transformation
15	3	2.709	13.31	company's performance

According to the findings of the research, the average age of people is 35.96 years and the standard deviation is 9.69.

**Checking the distribution of data**

In order to analyze the assumptions, select the desired test and software, the distribution status of the variables must be examined first. For this purpose, the Kolmogorov-Smirnov test is used. If the significance level is less than 0.05, it means that the data has a non-normal distribution, and if the significance level is greater than 0.05, it indicates the normal distribution of the data. The results are presented in Table (3):

Table 3- Kolmogorov-Smirnov test results

Result	The significance level	Normal distribution parameter		Indicator
		standard deviation	Average	
It is not normal	0.000	0.884	3.185	Business transformation
It is not normal	0.000	0.786	3.234	Dynamic capacities
It is not normal	0.000	0.717	3.487	company's performance
It is not normal	0.005	0.713	3.187	Digital technologies
It is not normal	0.031	0.720	3.128	Digital marketing capabilities

According to the results of the above test, it has been determined that the significance level for all variables is less than the error value of 0.05. Therefore, the data has a non-normal (non-parametric) distribution and Smart PLS software can be used.

**Validity and reliability of the model**

The validity and reliability of the external model or the measurement model have been examined and evaluated with tests (Cronbach's alpha, composite reliability, convergent and divergent validity and transverse loadings for questions). The results are summarized in Table (4):

- Validity and reliability results of the external model4Table

extracted variance AVE	Composite reliability (CR)	Cronbach's alpha (CA)	Indicator
0.798	0.952	0.936	Business transformation
0.864	0.962	0.948	Dynamic capacities
0.921	0.972	0.957	company's performance
0.904	0.983	0.979	Digital technologies
0.829	0.960	0.948	Digital marketing capabilities

Also, the results of cross-loading tests for the questions showed that the factor loading of all questions was more than 1.96 in the meaningful mode and more than 0.4 in the standard mode, so the research questions were approved.

**Model fit: Fornell and Larcker test - diagnostic validity**

In partial least squares analysis, the Larcker-Fornell criterion (Fronel and Larcker, 1981) is used for diagnostic validity, which indicates the existence of partial correlations between the indicators of one structure and the indicators of other structures. The Larcker-Fornell criterion refers to the fact that the square root of the explained variance (AVE) of each construct is greater than the correlation values of that construct with other constructs. The values on the main diameter of the matrix must be greater than all the values in the corresponding column (Azer et al., 2011). Below is an example of the expression of the Fronel and Larcker matrix:

Table 5- Fornell-Larker matrix

Marketing Capabilities	Performance Digital	Company Business	Dynamic Capabilities	Business Transformation	
				0.893	Business transformation
			0.930	0.881	Dynamic capacities
		0.960	0.915	0.858	company's performance
	0.951	0.841	0.921	0.879	Digital technologies
0.911	0.877	0.844	0.859	0.875	Digital marketing capabilities

As it is known, the values on the main diameter of the matrix are larger than all the values in its corresponding column, and it indicates that our model has good diagnostic validity.

**Goodness suits him**

The fitting of the structural model is also done by adjusting R2 and Q2 indices. As shown in Table 12-4, the adjusted R2 values are presented. Chin (1998) introduces three values of 0.19, 0.33 and 0.67 as the criterion value for weak, medium and strong values of R2. Based on this, the adjusted R2 and R2 values of the dependent variables of the model are relatively average. GoF criterion is used to check the fit of the overall model that controls both measurement and structural model parts:

$$GoF = \sqrt{\text{Communalities} \times R^2}$$

(Communalities) is obtained from the average communal values of the first-order hidden variables. Wetzles et al. (2009, p. 187) introduce three values of 0.01, 0.25, and 0.36 as criteria values for weak, medium, and strong GoF values.

- Calculation of the goodness of fit of the structural model6Table

Common values	R <sup>2</sup>	Variable
0.798	0.836	Business transformation
0.921	0.861	Business performance of the company

Gof = 0/845

Obtaining a value of 0.848 for GoF indicates a strong overall fit of the model. According to the confirmation of the appropriateness of the model fit, the estimated path coefficients are presented below.

**Model test**

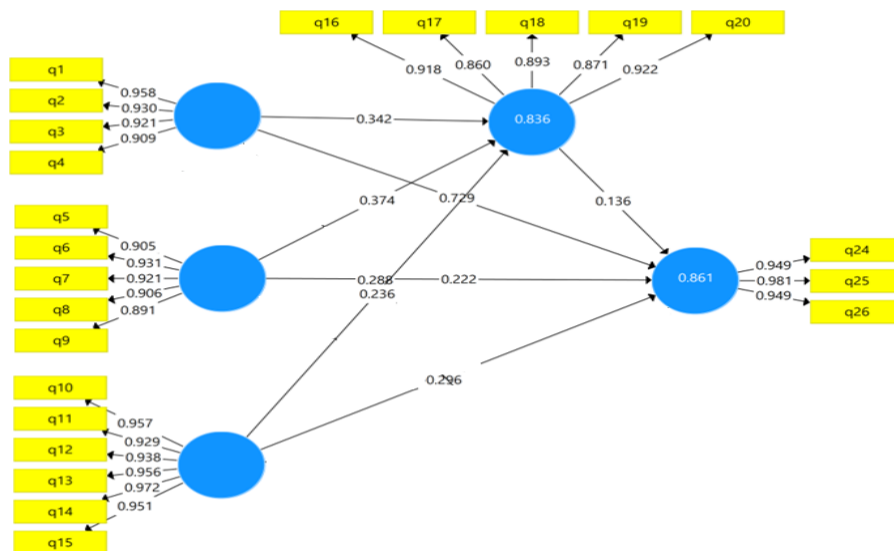


Figure 1- Research model in route estimation mode

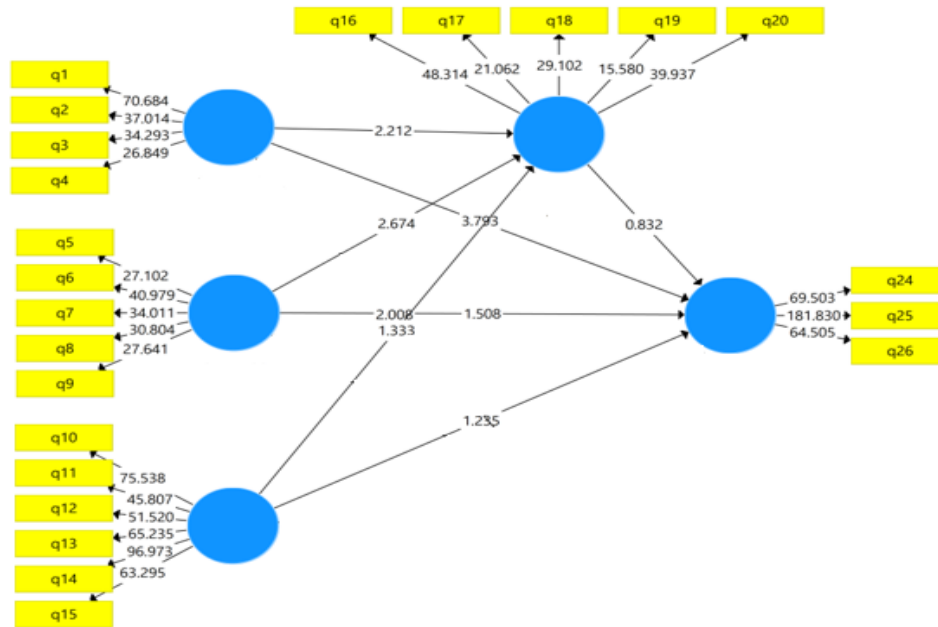


Figure 2 - The research model in meaningful mode

Table 7- Results of research hypothesis test

Accept or reject the hypothesis	meaningful	t statistic	Standardized path coefficient $\beta$	theories
disapproval	Sig<0.05	1.333	0.236	Digital technologies $\longrightarrow$ Business transformation
confirmation	Sig<0.05	2.674	0.374	Digital marketing capabilities $\longrightarrow$ Business transformation
confirmation	Sig<0.05	2.212	0.342	Dynamic capacities $\longrightarrow$ Business transformation
disapproval	Sig<0.05	0.832	0.136	Business transformation $\longrightarrow$ Business performance
disapproval	Sig<0.05	0.563	0.032	Digital technologies $\longrightarrow$ Dynamic capacities Business performance
disapproval	Sig<0.05	0.743	0.051	Digital marketing capabilities $\longrightarrow$ Dynamic capacities $\longrightarrow$ Business performance
disapproval	Sig<0.05	0.701	0.047	Business transformation $\longrightarrow$ Dynamic capacities $\longrightarrow$ Business performance

### V. Discussion and conclusion

The findings of this research show the significant impact of digital marketing skills on business transformation. It should be said that digital marketing capabilities represent the company's capabilities that allow it to adapt its resources and achieve new capabilities through interaction with stakeholders in real time. Companies are trying to improve the effectiveness of social networks and market analysis in terms of stakeholders. Furthermore, digital marketing skills are often linked to the communication skills needed to take advantage of digitization. Firms must be inherently adaptive to make flexible and diverse decisions. Similarly, previous studies distinguish between conventional and dynamic capabilities that facilitate firms to adapt to evolving environments. Common capabilities ensure that existing business processes run smoothly. Digital transformation in businesses is the application of technology to create new business models, processes, software and systems that lead to more profitable revenue and greater competitive advantage with greater efficiency. Essentially, businesses achieve workforce efficiency empowerment and innovation and personalization of customer experiences by changing business processes and models. The dynamic capabilities literature confirms that dynamic capabilities are necessary to cope with rapidly changing environments. Organizations that are

equipped with dynamic capabilities are always leading and superior in the competitive world. Therefore, according to the findings of the current research, it is suggested that small and medium companies do the following:

- ❖ Improving the infrastructure and training related to it in small and medium-sized companies;
- ❖ Increasing the agility and flexibility of the company's structure in the face of environmental changes and market demands;
- ❖ The promotion of dynamic digital capabilities through increasing the ability to predict market and product changes will provide the basis for improving the organization's ability to deal with the challenges ahead.

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