

## An Investigation of The Effect of Social Media Marketing and Innovation on Firm Performance with The Technology Acceptance Model

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### İşletme Performansı Üzerinde Sosyal Medya Pazarlaması ve İnovasyonun Etkisinin Teknoloji Kabul Modeli ile Birlikte İncelenmesi

#### Abstract

This study examines the effect of social media marketing and innovation on the performance of food and beverage firms with the technology acceptance model. Within the scope of the study, a survey was conducted as a field application. Data were collected from 163 food and beverage firms in Erzurum. Structural equation analysis was used in the AMOS program to test the hypotheses. As a result of the study, it was seen that facilitating conditions, compatibility, perceived usefulness, and perceived ease of use affected social media marketing, while cost had no effect. In addition, it has been concluded that social media marketing and innovation affect firm performance.

**Keywords** : Technology Acceptance Model, Social Media Marketing, Innovation, Firm Performance.

**JEL Classification Codes** : D31, D61, D73.

#### Öz

Bu çalışmanın amacı, yiyecek ve içecek işletmelerinin performansı üzerinde sosyal medya pazarlaması ve inovasyonun etkisinin teknoloji kabul modeli ile birlikte incelemektir. Çalışma kapsamında saha uygulaması olarak anket yapılmıştır. Toplamda 163 yiyecek-içecek işletmesinden veri toplanmıştır. Hipotezlerin test edilmesinde AMOS programında yapısal eşitlik analizinden faydalanılmıştır. Analiz sonucunda, sosyal medya pazarlaması üzerinde, kolaylaştırıcı koşullar, uygunluk, algılanan kullanılabilirlik ve algılanan kullanım kolaylığının etkisinin olduğu maliyetin ise etkisinin olmadığı görülmüştür. Ayrıca işletme performansını sosyal medya pazarlaması ve inovasyonun etkilediği sonuçlarına ulaşılmıştır.

**Anahtar Sözcükler** : Teknoloji Kabul Modeli, Sosyal Medya Pazarlaması, İnovasyon, İşletme Performansı.

## **1. Introduction**

Firms try to add technology, system or innovative applications in the spirit of time to their workflow processes to improve their performance, get better results, and reach their goals. Innovative applications can establish a system or process of adaptation to technology. Requests and needs can force firms to some innovative processes regardless of time, especially when situations relate to consumers or stakeholders. In particular, after the 2000s, social media channels that emerged with technology development have also imposed new adaptation processes on firms. The fact that consumers are involved in these channels has caused firms not to ignore this situation. Thus, firms have started professionally managing their social media marketing activities by creating accounts on social networks. It has also prepared an environment for evaluation regarding issues within technology and innovation, acceptance, adoption, and cost.

Consumers' spending more time on social media has enabled companies to create their accounts on these social networks (Barnes, 2008). Firms that easily reach their current and potential customers through social media have started to develop strategies to use these channels effectively. Firms interact more with their internal and external customers thanks social networks. This process is less costly than traditional channels (Mukherjee, 2011).

Advantages such as the ability of firms to offer their products and services to customers quickly and to reach customers instantly have also increased the importance of social media. Firms that use social media more actively than their competitors can respond to consumer requests more quickly. In addition, customer feedback contributes to the development of products or services of enterprises.

In this context, we investigated the processes of using social media marketing in terms of the effect of social media marketing on workflows within the framework of the technology acceptance model. We examined the impact of these processes on innovation and firm performance. In addition, we investigated social media marketing as technology in terms of cost, compatibility and facilitating conditions, considering the impact on firms. In the conceptual framework of this study, the concepts of perceived ease of use, perceived usefulness, compatibility, cost, facilitating conditions, social media marketing, innovation and firm performance are explained. After, a survey was applied to small and medium-sized firms, and the data obtained were analysed and interpreted.

## **2. Conceptual Framework**

### **2.1. Perceived Ease of Use**

Davis et al. (1989) developed the concept of perceived ease of use. It is a variable in the Technology Acceptance Model. It is a concept that emphasises the ease of use of a technology or system. Technologies that the user adapts to use comfortably and does not experience difficulty yield results at the expected level (Lin, 2011). Suppose users see themselves as the stakeholder of an easy-to-learn process rather than a complex technology

when they use a system. In that case, they accept that technology much faster and include it in their lives (Nasri & Charfeddine, 2012). The ease of use that firms will encounter when they use any technology or system positively affects their adaptation and adaptation abilities for social media marketing (Kuo & Yen, 2009).

## **2.2. Perceived Usefulness**

Perceived usefulness is another variable in the Technology Acceptance Model, such as perceived ease of use (Davis et al., 1989). Perceived usefulness is a user's belief about what benefit he/she will receive using technology or a system. Before the consumers or users adopt a technology, they evaluate all the benefits they will get from that technology (Shankar & Datta, 2018). For example, when firms know that they will get a positive result about their performance when they use technology or system, they do not back down from using that technology or system (Park, 2009). There is a direct effect of perceived usefulness on the attitude towards using any innovation (Revels et al., 2010).

## **2.3. Compatibility**

Compatibility is the comparison of the old and the new structures when firms use any technology in terms of the effect current business process and the application process (Rogers, 1983). When there is a technology-based change related to the work done, if the new situation is significantly advantageous and efficient, suitability comes to the fore as one of the primary evaluation criteria (Brown & Russell, 2007). The firm is concerned with choosing the technology or system that will best adapt to its business process, not disrupt the workflow, and ensure adaptation within the business. Similarly, the concept of compatibility also affects consumers in their purchasing processes. Consumers act by testing the suitability of the technology offered to them to save time and compare their purchasing processes (Hung et al., 2014). In addition, the suitability of the service by firms affects loyalty positively (Kaura et al., 2015).

## **2.4. Cost**

Cost is one of the most critical issues in selecting a technology that can contribute to the growth of a business (Ernst & Young, 2011). For example, firms use this technology because the barrier to entry is low, the cost is low, and it does not require very high technological competencies (Derham et al., 2011). In other words, cost effects are decisive in using and adapting a technology (Hassani et al., 2018).

## **2.5. Facilitating Conditions**

Facilitating conditions are the degree to which an individual believes that the appropriate technical infrastructure and senior management support are available to use a new system (Venkatesh et al., 2003). If the conditions for using and adopting new technology are designed to support the process, that innovative technology is adopted much more quickly. The higher consumers' perception that the facilitating conditions offered for

technology are increased, the higher their intention to use that technology will be similarly (Hew et al., 2015). For example, when the facilitating conditions perceived by users regarding mobile payment with QR codes are increased, users are more willing to use it (Eren, 2021).

## **2.6. Social Media Marketing**

Social media are online channels that allow firms or individuals to share at any time via computers and smart devices by making use of the opportunities of technology in the digital environment (Mangold & Faulds, 2009; Kotler & Keller, 2018). Digital areas that come to the fore as social media networks are Facebook, Youtube, Twitter, Instagram, Pinterest, and LinkedIn. Most firms consider creating accounts in social networks that will benefit their fields of activity as a marketing mix process (Kotler & Armstrong, 2018).

Social media marketing is applying marketing strategies in internet-based applications to increase the performance of firms, promote their products and services, and gain new customers (Todua & Jashi, 2015). Social media marketing is the commercial marketing activities of firms that want to sell their products or services to positively affect the purchasing behaviour of consumers (Chen & Lin, 2019).

Most firms have started to strengthen themselves and make innovations in social media marketing because it is possible to interact with followers on social networks, increase their satisfaction and loyalty, and reach new customers on social media (Neti, 2011). In addition, firms use social media marketing to increase brand awareness, increase sales, create a strong brand image, provide user interaction with the content, and reach more audiences (Gedik, 2020).

## **2.7. Innovation**

Innovation is a tool firms notice to gain and maintain an advantage in the competitive market (Standing & Kiniti, 2011). Innovation is actions that incorporate new processes and technologies as a way and method of doing business and provide a competitive advantage (Porter, 1990). Trott (1998) explained the concept of innovation as the transformation of new ideas into technology by considering them in a product's production and marketing process. Another researcher, based on the definition of innovation in the declaration published by the European Commission, defined innovation as testing new production methods, expanding, renewing markets, and improving and changing conditions within the firm (Akın & Reyhanoğlu, 2014). Innovation is a concept that has a vital role in many areas, such as increasing profits, responding quickly to changes in the market, increasing product and service quality, developing new products and services, testing new models, and increasing market shares (Çiçek & Onat, 2012). Innovation also creates an advantage in creating innovation and social value, managing processes more efficiently, and being ahead of the competition (Damanpour & Wischnevsky, 2006). In this respect, firms enable their employees to find new ideas regarding processes, procedures, products, or services, apply

them to the workflow, and provide opportunities to achieve better performance results (West & Wallace, 1991).

## **2.8. Firm Performance**

Firm performance is the evaluation process of an organisation's success in line with its goals and objectives and to what extent it achieves its goals (Atan & Tuncer, 2019). Evaluation processes can be qualitative (organisational culture, loyalty, etc.) or quantitative (profitability, sales amount, etc.) (Pohl & Forstl, 2011). Processes such as supporting innovation in an institution, working in harmony with technology, cultural management based on shared values, and supporting intellectual capital affect firm performance positively (Wu et al., 2008). In addition, production capabilities, production and competitive strategy also affect firm performance (Amoako-Gyampah & Acquah, 2008).

The studies of Lööf and Heshmati (2006) and Bigliardi (2013) show that the innovations of small and medium-sized firms positively affect financial performance and productivity. Similarly, Rhee et al. (2010) also showed that innovation significantly affects firm performance. The research conducted by Çiçek (2019) indicates that innovative activities positively affect firm performance.

The research conducted by Ethem et al. (2020) show that the active involvement of firms in social media and the promotion of their products and services positively impact their financial performance. Establishing and activating social media centred on customer relationship management enables firms to get positive results in terms of their customer relations performance (Chang et al., 2010; Tuleu, 2015).

## **3. Literature**

### **3.1. Technology Acceptance Model and Social Media Marketing**

Pentina et al. (2012) examined the effect of perceived usefulness on social media marketing through SMEs. Survey data were obtained from 110 managers in total. As a result of the analysis, it was seen that perceived usefulness had a positive effect on social media marketing. In the study of Rauniar et al. (2014), which examines the relationship between the technology acceptance model and social media use, an online survey on 398 Facebook users has conducted. The result of the study shows that both perceived ease of use and perceived usefulness affect social media use. Ainin et al. (2015) examined the effect of compatibility and cost variables on SMEs' use of social media through the example of Facebook. They collected data from 259 business managers through questionnaires. As a result of the study, it was concluded that compatibility and cost-effectiveness were effective in the use of social media. Chatterjee and Kar (2020) examined influencers for the use of social media marketing by small and medium-sized businesses in India. As a result of the data collected from 310 companies, perceived usefulness and perceived ease of use and compatibility positively affected social media marketing, while the cost effect was not. Biswas (2016) found that perceived ease of use and usefulness, among the variables of the

technology acceptance model, positively affect social media. Arı et al. (2016) examined the behaviours related to social network use and the technology acceptance model. Data collected from 354 students through questionnaires were analysed. As a result of the study, they concluded that the perceived usefulness and perceived ease of use affect the attitude towards the behaviour positively. In the study by Lee et al. (2016), the adaptation process of institutions to social media was examined within the framework of the technology acceptance model, based on the data collected from 648 hotel employees in Korea. As a result of the study, it has been seen that the perceived ease of use and perceived usefulness of companies in using social media have a significant effect. Odoom et al. (2017) examined the impact of compatibility and cost on SMEs' use of social media. Data were collected from 2010 business managers based on a questionnaire. As a result of the analysis, it was concluded that cost and compatibility affect the use of social media positively.

Karabulut and Bulut (2017) examined the perspective of small and medium-sized businesses on social media marketing. Data were collected from 400 business managers. SMEs participating in the research generally think that social media marketing is effective in the promotion of their businesses, provides their businesses with a competitive advantage, increases the number of customers, is a low-cost and interactive communication tool in communicating with customers, increases their profitability, expands their market areas, and reduces marketing costs. Alkaya and Şahin (2018) examined information sharing over the Facebook social network through the technology acceptance model. Within the scope of the research, data were collected from 420 people. As a result of the analysis, perceived ease of use and perceived usefulness affect the attitude towards the social media network. Sugandini et al. (2019) examined the effects of some variables on the adaptation of SMEs operating in the tourism sector to social media within the framework of the technology acceptance model. In this context, they collected data based on questionnaires from 200 managers. As a result of the analysis, it has been seen that perceived usefulness and perceived ease of use influence social media marketing. Orel and Arık (2020) examined the effect of social media marketing on purchase intention within the framework of the technology acceptance model. Within the scope of the research, data were collected from 510 users. The analysis showed that while perceived usefulness mediated the effect of social media marketing on purchase intention, perceived ease of use did not. Pramuki and Ayu (2020) examined social media marketing within the framework of the technology acceptance model. A questionnaire was applied to 390 managers; the collected data were analysed. As a result of the study, it was concluded that the perceived ease of use affects social media marketing positively. Taşdelen and Aydın (2021) examined the purchasing behaviour of social media advertisements with the technology acceptance model. As a result of the study, it was seen that the perceived ease of use positively affects the attitude towards social media advertisements.

### **3.2. Social Media Marketing and Performance**

In his study examining the effect of social media marketing on the performance of companies in Kenya, Nyambu (2013) found that social media marketing improves company performance, increases the company's competitive power, and contributes to increasing

customer loyalty. In the study by Musa et al. (2016), in which they examined the effect of social media marketing practices on business performance over SMEs, they concluded that social media marketing positively affects business performance. In their study, Wang and Kim (2017) analysed the data of 232 companies between 2004 and 2014 using Facebook, COMPUSTAT North America and Global Fundamentals annual databases. As a result of the study, it was seen that the use of social media positively strengthened the effect of customer relations on firm performance. In the study by Kamboj et al. (2017), they found that social media marketing positively affects businesses' financial and market performance. Güzel et al. (2018) showed that social media and innovation positively affect firm performance. Tarsakoo and Charoensukmongkol (2019) examined the effect of social media marketing on the business performance of firms in Thailand. They concluded that social media marketing's product development, planning, and implementation ability positively affect financial performance. Özdemir et al. (2020) found a positive relationship between firms' use of social media and their market values and sales or income. In the study of Syaifullah et al. (2021), in which they examined the performance of social media marketing on micro, small and medium-sized businesses, they collected data from 254 companies using Facebook, Instagram and Whatsapp. According to the findings obtained from the study, it was seen that the use of social media increased business sales, customer relations, productivity, and creativity. In other words, it has been found to affect business performance positively. In addition, it has been found that marketing works on branding and innovation play a mediating role in this relationship. Tajvidi and Karami (2021) surveyed 384 hotels in England to examine how social media use affects hotel performance. As a result of the study, it was concluded that social media use positively affects the firm's performance.

### **3.3. Innovation and Performance**

In their study, in which they examined the relationship between innovation and performance in small and medium-sized enterprises, Rosenbusch et al. (2011) stated that the type of innovation, age and culture of the firm played a role in the effect of innovation on firm performance. As a result of the survey conducted by Murat et al. (2011) with the senior managers of 113 companies operating in the automotive supply industry, which is one of the most innovative sectors in Turkey, they found that technological innovation (product and process innovation) has a significant and positive effect on firm performance. Magnier-Watanabe and Benton (2016) examined the impact of management innovation on firm performance in Japanese firms. As a result of the research, management innovation did not directly impact firm performance but aligning management innovation programs with knowledge management initiatives improved performance. Atalay et al. (2017) examined the relationship between innovation and firm performance in a sample of 143 yacht building firms in Turkey. As a result of the study, a positive and significant relationship was found between innovation and firm performance. Serkan et al. (2018) examined the relationship between innovation, firm performance, and exports based on the data they collected from 310 manufacturers from 5 different cities in Turkey. As a result of the study, they concluded that innovation does not affect firm performance and exports. Durmuş-Özdemir and Abdulkhoshimov (2018) examined the mediating role of innovation in the effect of

knowledge management on firm performance. As a result of the surveys conducted with the senior managers of the companies operating in the Turkish telecommunications sector, it has been found that marketing, product, and process innovation have a mediating role in the effect of the information management process on the company performance. Kiveu et al. (2019) examined the impact of innovation on the firm's competitiveness through the data they collected from 284 firms. As a result of the study, it was seen that process, marketing, and organisational innovations have a positive and significant effect on competitiveness. Ismanu and Kusmintarti (2019) emphasised that innovation is a very important tool for high performance and superior competition in their study examining innovation's effect on SMEs' performance in Indonesia. In his research, Gupta (2021) collected data from the middle and senior managers of 250 companies in India operating in different categories through questionnaires. The results showed that product and marketing innovation significantly and positively impact firm performance.

In general, when the literature above is examined, it is seen that the studies on the use of social media marketing by SMEs in Turkey are limited. No survey in Turkey examines the relationship between SMEs' social media marketing process and innovation and business performance within the framework of the Technology Acceptance Model. In addition, the effects of cost and facilitating conditions variables were also examined in the study. In the literature, these variables have been studied individually or together in different studies. However, in terms of developing countries (for example, a country like Turkey), there is no study examining all the variables together. In this context, it is thought that the study will contribute to both national and international literature.

## **4. Methodology**

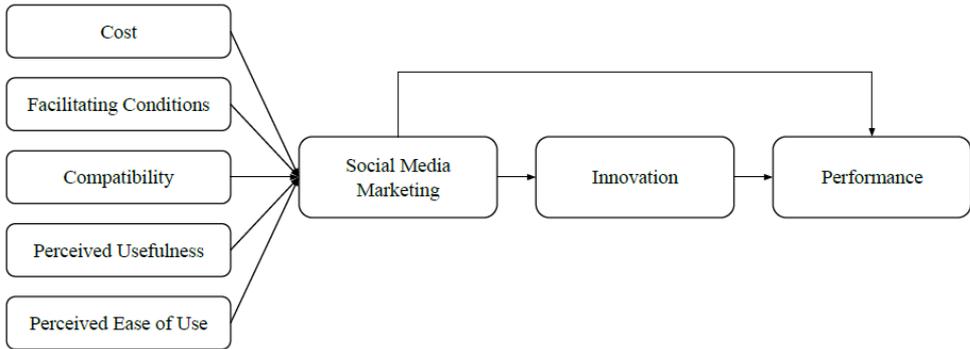
### **4.1. Purpose of the Study**

This study aims to examine the effect of social media marketing and innovation on the performance of food and beverage firms with the Technology Acceptance Model. In this context, the impact of cost, facilitating conditions, compatibility, perceived usefulness, and perceived ease of use on social media marketing were investigated. In addition, the impact of social media marketing on innovation and firm performance and the effect of innovation on firm performance were also examined.

### **4.2. The Proposed Model and Hypotheses**

The studies of Chatterjee and Kar (2020) and Nguyen et al. (2015) were used in determining the research model. Figure 1 shows the conceptual model of our study.

**Figure: 1**  
**Research Model**



In terms of the above research model, the following hypotheses are postulated:

- H1: Cost has a negative impact on the firms to use social media marketing.
- H2: Facilitating conditions have a positive impact on the firms to use social media marketing.
- H3: Compatibility positively impacts the firms using social media marketing.
- H4: Perceived usefulness positively impacts the firms to use social media marketing.
- H5: Perceived ease of use positively impacts the firms using social media marketing.
- H6: Social media marketing has a positive impact on innovation.
- H7: Social media marketing has a positive impact on firm performance.
- H8: Innovation has a positive impact on firm performance.

### 4.3. Data Collection

In structural equation analysis studies, one of the most frequently used methods for determining the sample size is to reach a sample size between 4 and 10 times the number of items for the scales in the questionnaire (Deb & David, 2014). There are 36 items in the questionnaire of this study. In this context, it is suitable for the sample size to be between 144 and 360. The survey was applied to food and beverage firms in Erzurum. Data were collected from a total of 171 firms using the total population sampling method. After eliminating the erroneous and unsuitable questionnaires, a total of 163 questionnaires remained.

We measured cost using four items based on the research of Kaplan and Haenlein (2010), facilitating conditions six items based on the analysis of Venkatesh et al. (2003), compatibility four items based on the analysis of Dwivedi et al. (2015), perceived usefulness five items based on the research of Chung et al. (2017), perceived ease of using five items

based on the analysis of Ware (2018), social media marketing three items based on the research of Shareef et al. (2019), innovation four items based on the study of Cheng and Shiu (2008), performance five items based on the research of Aral et al. (2019).

## 5. Data Analysis and Findings

The data from the survey were analysed in the AMOS program. Structural equation analysis was used to test the hypotheses. The firm characteristics, factor loadings for the measurement model, reliability analysis results, CR and AVE values, discriminant analysis results, model fit values and hypothesis results are shown below, respectively.

### 5.1. Firm Characteristics

The firm characteristics are shown in Table 1.

**Table: 1**  
**Firm Characteristics**

	Frequency	%
<b>Firm Type</b>		
Restaurant	42	0,26
Eating House	54	0,33
Cafe	67	0,41
<b>Number of Employees</b>		
1-9	115	0,71
10-49	48	0,29
<b>Annual Sales</b>		
120.000 TL and below	2	0,01
120.000-240.000 TL	5	0,03
240.000-400.000 TL	9	0,06
400.000-750.000 TL	17	0,10
750.000-1.000.000 TL	49	0,30
1.000.000 TL and above	81	0,50
<b>Customer Type</b>		
Individual customers	121	0,74
Commercial firms	0	0,00
Both	42	0,26
<b>Operating Period of Firm</b>		
1-5 years	64	0,39
6-10 years	54	0,33
11 years and above	45	0,28
<b>Position</b>		
Founder-Partner	62	0,38
Manager	76	0,47
Employees	25	0,15

When the characteristics of the firms which participated in the survey were examined, it was observed that 14% were in the cafe category, 33% were in the restaurant category, and 26% were in the eating house category. The number of employees of 71% is between 1-9 and 29% is between 10-49. Half of the firms have an annual turnover of 1 million TL or more. The customer type of most of the firms (74%) is individual customers. Regarding the operational period, 39% are 1-5 years, 33% are 6-10 years, and 28% are 11 years or more. Of the people who participated in the survey, 47% are managers, 38% are founders or partners, and 15% are employees.

## 5.2. Reliability and Validity

In this study, we measured eight variables in total. We analysed the data using AMOS and SPSS. The results of factor analysis and reliability analysis are shown in Table 2.

**Table: 2**  
**Factor Analysis and Reliability**

Variable	Code	Factor Loadings	$\alpha$	CR	AVE
Cost	C1	0.742	0.878	0.926	0.759
	C2	0.911			
	C3	0.922			
	C4	0.898			
Facilitating Conditions	FC1	0.803	0.943	0.957	0.787
	FC2	0.904			
	FC3	0.911			
	FC4	0.877			
	FC5	0.891			
	FC6	0.931			
Compatibility	COM1	0.862	0.873	0.907	0.709
	COM2	0.876			
	COM3	0.833			
	COM4	0.795			
Perceived Usefulness	PU1	0.767	0.952	0.923	0.707
	PU2	0.857			
	PU3	0.895			
	PU4	0.873			
	PU5	0.806			
Perceived Ease of Use	PEU1	0.885	0.903	0.955	0.811
	PEU2	0.913			
	PEU3	0.898			
	PEU4	0.906			
	PEU5	0.900			
Social Media Marketing	SMM1	0.923	0.867	0.933	0.824
	SMM2	0.924			
	SMM3	0.875			
Innovation	I1	0.857	0.906	0.938	0.791
	I2	0.939			
	I3	0.845			
	I4	0.913			
Performance	P1	0.924	0.875	0.955	0.808
	P2	0.913			
	P3	0.857			
	P4	0.906			
	P5	0.893			

In determining the reliability of the scales, Cronbach's alpha value is expected to be 0.6 and above (Hair et al., 2010). In our study, Cronbach's alpha values of the scales are suitable. The CR value should be 0.6, and the AVE value should be above 0.5 (Urbach & Ahlemann, 2010; Hair et al., 2010). In our study, CR and AVE values are above these. In this respect, it is possible to say that the scales that we used in this study are reliable and valid.

## 5.3. Discriminant Validity

The discriminant validity results for determining the scales' distinctiveness within their groups are shown in Table 3.

**Table: 3**  
**Discriminant Validity**

	C	FC	COM	PU	PEU	SMM	I	P
C	<b>0.83</b>							0.759
FC	0.46	<b>0.90</b>						0.787
COM	0.43	0.44	<b>0.85</b>					0.709
PU	0.42	0.42	0.43	<b>0.92</b>				0.707
PEU	0.45	0.45	0.44	0.41	<b>0.86</b>			0.811
SMM	0.43	0.45	0.41	0.42	0.42	<b>0.85</b>		0.824
I	0.48	0.43	0.47	0.46	0.45	0.43	<b>0.87</b>	0.791
P	0.44	0.48	0.45	0.43	0.43	0.42	0.44	0.808

The scales' discrimination is verified if the AVE value is higher than the scales' correlation coefficient. As shown in Table 3, the AVE values of the scales are higher than the relevant correlation coefficients. These results confirmed the validity of discrimination.

#### 5.4. Structural Equation Modelling

For testing the hypotheses, structural equation analysis was performed. Model fit values were obtained after three modifications in total. Model fit summary and hypotheses results are shown in Table 4 and Table 5.

**Table: 4**  
**Model Fit Summary**

Fit Index	Recommended Value	Measurement Model Result
CMIN/DF	$3 \leq \text{CMIN/DF} \leq 5$	4,312
RMR	$0,05 \leq \text{RMR} \leq 0,10$	0,082
GFI	$\geq 0,80$	0,912
AGFI	$0,80 \leq \text{AGFI} \leq 0,95$	0,901
NFI	$\geq 0,80$	0,875
CFI	$0,80 \leq \text{CFI} \leq 0,90$	0,908
RMSEA	$0,05 \leq \text{RMSEA} \leq 0,08$	0,076

Source: Simon et al., 2010.

As a result of the structural equation analysis, it was seen that the model fit values are acceptable. The path coefficients and p values for the hypothesis results are shown in Table 5.

**Table: 5**  
**Structural Equation Modelling Results**

Path	Hypothesis	Path Coefficient	p-Value	Remarks
C→SMM	H <sub>1</sub>	0.029	ns (p>0.05)	Not Supported
FC→SMM	H <sub>2</sub>	0.457	*** (p<0.001)	Supported
COM→SMM	H <sub>3</sub>	0.422	*** (p<0.001)	Supported
PU→SMM	H <sub>4</sub>	0.557	*** (p<0.001)	Supported
PEU→SMM	H <sub>5</sub>	0.535	*** (p<0.001)	Supported
SMM→I	H <sub>6</sub>	0.642	*** (p<0.001)	Supported
SMM→P	H <sub>7</sub>	0.543	*** (p<0.001)	Supported
I→P	H <sub>8</sub>	0.675	*** (p<0.001)	Supported

Structural equation analysis results show that the effect of perceived ease of use ( $\beta$ : 0.535;  $p<0.001$ ), facilitating conditions ( $\beta$ : 0.457;  $p<0.001$ ), convenience ( $\beta$ : 0.422;  $p<0.001$ ), perceived usefulness ( $\beta$ : 0.557;  $p<0.001$ ) have a positive and significant effect on

social media marketing, while for the cost ( $\beta$ : 0.029;  $p > 0.05$ ) has no significant impact. According to these results, when the perceptions of participants about perceived ease of use, facilitating conditions, convenience, and perceived usefulness increase, the perceptions of participants towards social media marketing increase. The effect of social media marketing has a positive impact on innovation ( $\beta$ : 0.642;  $p < 0.001$ ) and firm performance ( $\beta$ : 0.543;  $p < 0.001$ ). In this case, when participants' perceptions about social media marketing increase positively, the perceptions of participants towards innovation and firm performance increase. In addition, the results of the analysis show that innovation has a positive effect on firm performance ( $\beta$ : 0.675;  $p < 0.001$ ). It means that when participants' perceptions about innovation increase, the perceptions of participants toward firm performance also increase.

## 6. Results and Implications

This study examined the effect of social media marketing on innovation and firm performance with the technology acceptance model. The survey was applied to food and beverage firms in Erzurum. Structural equation analysis was conducted to test the hypotheses on the total data collected from 163 firms. The results show that seven of the eight hypotheses were accepted, and one was rejected.

The results show that facilitating conditions, compatibility, usefulness, and ease of use positively affect social media marketing. In addition, it has been seen that social media marketing positively affects firm performance. These results support research by Chatterjee and Kar (2020) and Syaifullah et al. (2021). The results also show that social media marketing positively affects innovation. The results support research conducted by Nguyen et al. (2015).

Generally, these study results are consistent with the studies conducted in different contexts. Past studies have shown compatibility (Hsu et al., 2007; Wang et al., 2010; Ainin et al., 2015; Chatterjee & Kar, 2020) and facilitating conditions (Chatterjee & Kar, 2020) affect the use of social media marketing. In addition, many studies show that perceived usefulness and ease of use affect social media marketing (Pentina et al., 2012; Rauniar et al., 2014; Biswas, 2016; Lee et al., 2016; Sugandini et al., 2019; Pramuki & Ayu, 2020). In this context, the results obtained in this study support the literature.

In this study, the results that social media marketing (Nyambu, 2013; Wang & Kim, 2017; Tarsakoo & Charoensukmongkol, 2019; Tajvidi & Karami, 2021) and innovation (Rosenbusch et al., 2011; Murat et al., 2011; Magnier-Watanabe & Benton, 2016; Durmuş-Özdemir & Abdukhoshimov, 2018; Gupta, 2021) effects on business performance are like the results of previous studies in the literature.

Since the variables examined in this study examine social media marketing and innovation and business performance within the scope of the technology acceptance model, it is thought to contribute to the marketing literature. Especially in developing countries, the study's results will fill the gap in the field. On the other hand, examining the effects of

compatibility and cost concepts in the study also increased the originality of the study. The role of social media marketing and innovation, which are among the determinants of performance in enterprises, in Erzurum will contribute to the national literature.

As a result of this study, it has been seen that there is an increase in productivity, firm performance, and customer satisfaction when they use social media marketing effectively. It has been determined that the firm works on brand innovation in social media and differentiates them according to competitors. Primarily, it has been seen that customer needs are easily determined, and customer awareness is increased through social media marketing.

Most firms have stated that social media is a valuable and helpful tool, adding benefits to business management. They emphasised that it is easy to use and learn from social media, acquire new customers, predict demand for new customers, get information about customers, to promote products and services.

Based on the results of this study, it has been observed that the social media infrastructures of the firms are at a reasonable level. Still, they are not at the desired levels in creative work, and the social media channels are managed by people who are in the position of manager or co-founder-partner within the enterprise rather than a specially trained person. It has been determined that they make announcements about events and discounts on social media, follow their competitors on social media, and try to differentiate strategically from time to time.

Firms should use social media frequently for many reasons, such as the ease of use of social media, cost advantage in contributing positively to company performance, usefulness in acquiring new customers and increasing customer awareness, and desired level of performance with innovation-oriented works. When firms frequently use social media, they will get more effective results.

## References

- Ainin, S. et al. (2015), "Factors Influencing the Use of Social Media by SMEs and Its Performance Outcomes", *Industrial Management & Data Systems*, 115(3), 570-588.
- Akın, . & M. Reyhanođlu (2014), "İřletme Byklkleri Bađlamında Trkiye'nin İnovasyon Portresi (2002-2008 Dnemi)", *Dokuz Eyll niversitesi Sosyal Bilimler Enstits Dergisi*, 16(1), 23-51.
- Alkaya, A. & F. řahin (2018), "Bilgi Paylaşımının Teknoloji Kabul Modeli zerinden İncelenmesi; Bir Sosyal Ađ Uygulaması", *Uřak niversitesi Sosyal Bilimler Dergisi*, 11(C-IASOS zel Sayısı), 11-21.
- Altuntas, S. et al. (2018), "Relationships Among Advanced Manufacturing Technology, Innovation, Export, and Firm Performance: Empirical Evidence from Turkish Manufacturing Companies", *Kybernetes*, 47(9), 1836-1856.
- Amoako-Gyampah, K. & M. Acquah (2008), "Manufacturing Strategy, Competitive Strategy and Firm Performance: An Empirical Study in a Developing Economy Environment", *Int. J. Production Economics*, 111, 575-592.

- Aral, S. et al. (2013), "Introduction to The Special Issue -Social Media and Business Transformation: A Framework for Research", *Information Systems Research*, 24(1), 3-13.
- Ari, E. et al. (2016), "niversite rencilerinin Sosyal Ađ Kullanımına İliřkin Davranıřlarının Teknoloji Kabul Modeli İle Arařtırılması", *International Journal of Management Economics & Business*, 12(27), 67-81.
- Atalay, M. et al. (2013), "The Relationship Between Innovation and Firm Performance: An Empirical Evidence from Turkish Automotive Supplier Industry", *Procedia-Social and Behavioral Sciences*, 75, 226-235.
- Atalay, M. et al. (2017), "Impact of Multilevel Strategic Alliances on Innovation and Firm Performance: Evidence from The Yacht-Building Industry in Turkey", *International Journal of Innovation Science*, 9(1), 53-80.
- Barnes, N.G. (2008), "Society for New Communications Research Study: Exploring the Link Between Customer Care and Brand Reputation in the Age of Social Media", *Journal of New Communications Research*, 3(1), 86-91.
- Bigliardi, B. (2013), "The Effect of Innovation on Financial Performance: A Research Study Involving SMEs", *Innovation*, 15(2), 245-255.
- Biswas, A. (2016), "Impact of Social Media Usage Factors on Green Consumption Behavior Based on Technology Acceptance Model", *Journal of Advanced Management Science*, 4(2), 92-97.
- Brown, I. & J. Russell (2007), "Radio Frequency Identification Technology: An Exploratory Study on Adoption in The South African Retail Sectors", *International Journal of Information Management*, 27(4), 250-265.
- Chang, W. et al. (2010), "How Does CRM Technology Transform into Organizational Performance? A Mediating Role of Marketing Capability", *Journal of Business Research*, 63(8), 849-855.
- Chatterjee, S. & A.K. Kar (2020), "Why Do Small and Medium Enterprises Use Social Media Marketing and What Is the Impact: Empirical Insights from India", *International Journal of Information Management*, 53, 1-13.
- Chen, S.C. & C.-P. Lin (2019), "Understanding the Effect of Social Media Marketing Activities: The Mediation of Social Identification, Perceived Value and Satisfaction", *Technological Forecasting & Social Change*, (140), 22-32.
- Cheng, C.J. & E.C.C. Shiu (2008), "Re-Innovation: The Construct, Measurement, And Validation", *Technovation*, 28(10), 658-666.
- Chung, A.Q.H. et al. (2017), "Managing an Organization's Social Media Presence: An Empirical Stages of Growth Model", *International Journal of Information Management*, 37(1), 1405-1417.
- iek, H. & O.K. Onat (2012), "İnovasyon Odaklı Faaliyetlerin Firma Performansına Etkisinin Veri Zarflama Analizi İle Belirlenmesi; İMKB zerine Bir Arařtırma", *Mehmet Akif Ersoy niversitesi Sosyal Bilimler Enstits Dergisi*, 4(7), 46-53.
- iekli, İ. (2019), "Kobi'lerde Ar-Ge ve İnovasyon Faaliyetlerinin İřletme Performansı zerine Etkileri: Mersin İli zelinde Bir İnceleme", *Yksek Lisans Tezi*, Mersin niversitesi, Sosyal Bilimler Enstits, Mersin.

- Damanpour, F. & J.D. Wischnevsky (2006), "Research on Innovation in Organizations: Distinguishing Innovation-Generating from Innovation-Adopting Organizations", *Journal of Engineering Technology Management*, 23(4), 269-291.
- Davis, F. et al. (1989), "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models", *Management Science*, 35(8), 982-1003.
- Deb, M. & E.L. David (2014), "An Empirical Examination of Customer's Adoption of Banking in India", *Marketing Intelligence & Planning*, 32(4), 475-494.
- Derham, R. et al. (2011), "Creating Value: An SME and Social Media", *PACIS 2011 Proceedings*.
- Durmuş-Özdemir, E. & K. Abdukhoshimov (2018), "Exploring The Mediating Role of Innovation in The Effect of The Knowledge Management Process on Performance", *Technology Analysis & Strategic Management*, 30(5), 596-608.
- Dwivedi, Y.K. et al. (2015), "Social Media Marketing and Advertising", *The Marketing Review*, 15(3), 289-309.
- Eren, B.A. (2021), "Nakitsiz Ödeme: QR Kodla m-Ödeme Kullanım Niyeti Üzerine Bir Araştırma", *Pazarlama Kongresi*.
- Ernst and Young (2001), *Advancing with e-commerce*, Commissioned by the National Office for the Information Economy (NOIE) of Australia.
- Esen, E. et al. (2020), "Borsa İstanbul 100 Endeksinde Yer Alan Şirketlerin Sosyal Medya Kullanımı ve Finansal Performans İlişkisi", *Uluslararası Yönetim İktisat ve İşletme Dergisi*, 16(1), 150-159.
- Gedik, Y. (2020), "Pazarlamada Yeni Bir Çereve: Sosyal Medya ve Web 2.0", *Uluslararası Yönetim Akademisi Dergisi*, 3(1), 252-269.
- Gupta, A.K. (2021), "Innovation Dimensions and Firm Performance Synergy in The Emerging Market: A Perspective from Dynamic Capability Theory & Signaling Theory", *Technology in Society*, 64, 101512.
- Gzel, D. et al. (2018), "Sosyal Medyanın Firma Performansı Üzerindeki Etkisi", *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 22(4), 2237-2247.
- Hair, J. et al. (2010), *Multivariate Data Analysis* (7<sup>th</sup> ed.), Upper Saddle River, NJ: Prentice Hall.
- Hassani, H. et al. (2018), "Banking with Blockchain-ed Big Data", *Journal of Management Analytics*, 5(4), 256-275.
- Hew, J. et al. (2015), "What Catalyses Mobile Apps Usage Intention: An Empirical Analysis", *Industrial Management & Data Systems*, 115(7), 1269-1291.
- Hsu, C. et al. (2007), "Adoption Of the Mobile Internet: An Empirical Study of Multimedia Message Services (MMS)", *The International Journal of Management Science*, 35(6), 715-726.
- Hung, S.Y. et al. (2014), "An Integrative Approach to Understanding Customer Satisfaction with E-Service of Online Stores", *Journal of Electronic Commerce Research*, 15(1), 40-57.
- Ismanu, S. & A. Kusmintarti (2019), "Innovation and Firm Performance of Small and Medium Enterprises", *Review of Integrative Business and Economics Research*, 8(2), 312-323.
- Kamboj, S. et al. (2017), "Social Media Usage and Firm Performance: The Mediating Role of Social Capital", *Social Network Analysis and Mining*, 7(1), 1-14.
- Kaplan, A.M. & M. Haenlein (2010), "Users of The World, Unite! The Challenges and Opportunities of Social Media", *Business Horizons*, 53(1), 59-68.

- Karabulut, M.Ş. & E. Bulut (2017), "Küçük Ve Orta Büyüklükteki İşletmelerin Sosyal Medya Pazarlamasına Bakışı: Sinop İlinde Bir Araştırma", *Karabük Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 7(1), 70-88.
- Kaura, V. et al. (2015), "Service Quality, Service Convenience, Price and Fairness, Customer Loyalty, and the Mediating Role of Customer Satisfaction", *Int. J. Bank Mark.*, 33(4), 404-422.
- Kiveu, M.N. et al. (2019), "Effect of Innovation on Firm Competitiveness: The Case of Manufacturing SMEs in Nairobi County, Kenya", *International Journal of Business Innovation and Research*, 18(3), 307-327.
- Kotler, P. & G. Armstrong (2018), *Pazarlama İlkeleri*, (Çev. A.E. Gegez) Ankara: Beta Basım Yayım Dağıtım A.Ş.
- Kotler, P. & K.L. Keller (2018), *Pazarlama Yönetimi*, (Çev. İ. Kırcova) Ankara: Beta Basım Yayım Dağıtım A.Ş.
- Kuo, Y.-F. & S.-N. Yen (2009), "Towards an Understanding of the Behavioral Intention to Use 3G Mobile Value-Added Services", *Computers in Human Behavior*, 25(1), 103-110.
- Lee, J.W. et al. (2016), "Antecedents of Corporate Adoption of Social Media and The Role of The Technology Acceptance Model in The Path", *Journal of Asian Finance, Economics and Business*, 3(2), 67-76.
- Lin, H. (2011), "An Empirical Investigation of Mobile Banking Adoption: The Effect of Innovation Attributes and Knowledge-Based Trust", *International Journal of Information Management*, 31(3), 252-260.
- Löf, H. & A. Heshmati (2006), "On the Relationship Between Innovation and Performance: A Sensitivity Analysis", *Economics of Innovation and New Technology*, 15(4/5), 317-344.
- Magnier-Watanabe, R. & C. Benton (2017), "Management Innovation and Firm Performance: The Mediating Effects of Tacit and Explicit Knowledge", *Knowledge Management Research & Practice*, 15(3), 325-335.
- Mangold, W.G. & D.J. Faulds (2009), "Social Media: The New Hybrid Element of The Promotion Mix", *Business Horizons*, 52(4), 357-365.
- Mukherjee, D. (2011), "Banking 2.0: Social Media Security Policies: Guidelines for Organizations", *Infosys Socialedge*, December 1-8.
- Musa, H. et al. (2016), "Social Media Marketing and Online Small and Medium Enterprises Performance: Perspective of Malaysian Small and Medium Enterprises", *International Review of Management and Marketing*, 6 (7S), 1-5.
- Nasri, W. & L. Charfeddine (2012), "Factors Affecting the Adoption of Internet Banking in Tunisia: An Integration Theory of Acceptance Model and Theory of Planned Behavior", *The Journal of High Technology Management Research*, 23(1), 1-14.
- Neti, N. (2011), "Social Media and Its Role in Marketing", *International Journal of Enterprise Computing and Business Systems*, 1(2), 1-15.
- Nguyen, B. et al. (2015), "Brand Innovation and Social Media: Knowledge Acquisition from Social Media, Market Orientation, And the Moderating Role of Social Media Strategic Capability", *Industrial Marketing Management*, 51, 11-25.

- Nyambu, E.M. (2013), "Influence of Social Media Marketing on Performance of Telecommunication Firms in Kenya", *International Journal of Innovative Research and Development*, 2(9), 184-190.
- Odoom, R. et al. (2017), "Antecedents of Social Media Usage and Performance Benefits in Small- and Medium-Sized Enterprises (SMEs)", *Journal of Enterprise Information Management*, 30(3), 383-399.
- Orel, F.D. & A. Arık (2020), "Sosyal Medya Pazarlamasının Tüketici Satın Alma Niyetine Etkisinin Teknoloji Kabul Modeli Aracılığıyla İncelenmesi", *Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, (57), 205-232.
- Özdemir, A. et al. (2020), "Holding Şirketlerinde Sosyal Medya Kullanımı", *Anadolu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 21(1), 38-47.
- Özlem, A. & A. Tunçer (2019), "Entelektüel Sermayenin İşletme Performansına Etkileri Üzerine Bir Araştırma", *Haliç Üniversitesi Sosyal Bilimleri Dergisi*, 2(1), 71-100.
- Park, S. (2009), "An Analysis of The Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use E-Learning", *Educational Technology & Society*, 12(3), 150-162.
- Pentina, I. et al. (2012), "Adoption of Social Networks Marketing by SMEs: Exploring the Role of Social Influences and Experience in Technology Acceptance", *International Journal of Internet Marketing and Advertising*, 7(1), 65-82.
- Pohl, M. & K. Forstl (2011), "Achieving Purchasing Competence through Purchasing Performance Measurement System Design: A Multiple-Case Study Analysis", *Journal of Purchasing & Supply Management*, 17, 231-245.
- Porter, M. (1990), *The Competitive Advantage of Nations*, London: MacMillan.
- Pramuki, N.M.W.A. & P.C. Ayu (2020), "Antecedents of the Use of MSME Social Media: In the Perspective of Technology Acceptance Model Theory", *International Journal of Contemporary Research and Review*, 11(04), 21776-21786.
- Rauniar, R. et al. (2014), "Technology Acceptance Model (TAM) and Social Media Usage: An Empirical Study on Facebook", *Journal of Enterprise Information Management*, 27(1), 6-30.
- Revels, J. et al. (2010), "Understanding Consumer Intention to Use Mobile Services", *Australasian Marketing Journal (AMJ)*, 18(2), 74-80.
- Rhee, J. et al. (2010), "Drivers of Innovativeness and Performance for Innovative SMEs in South Korea: Mediation of Learning Orientation", *Technovation*, 30, 65-75.
- Rogers, E.M. (1983), *Diffusion of innovations*, New York, NY: Free Press.
- Rosenbusch, N. et al. (2011), "Is Innovation Always Beneficial? A Meta-Analysis of The Relationship Between Innovation and Performance in SMEs", *Journal of Business Venturing*, 26(4), 441-457.
- Shankar, A. & B. Datta (2018), "Factors Affecting Mobile Payment Adoption Intention: An Indian Perspective", *Global Business Review*, 19(3), 72-89.
- Shareef, M.A. et al. (2019), "Social Media Marketing: Comparative Effect of Advertisement Sources", *Journal of Retailing and Consumer Services*, 46, 58-69.
- Simon, D. et al. (2010), "Confirmatory Factor Analysis and Recommendations for Improvement of the Autonomy-Preference-Index (API)", *Health Expectations*, 13, 234-243.

- Standing, C. & S. Kiniti (2011), "How Can Organizations Use Wikis for Innovation?", *Technovation*, 31, 287-295.
- Sugandini, D. et al. (2019), "Technology-Organization-Environment Model and Technology Acceptance Model in Adoption of Social Media Marketing on SMEs Tourism", *Journal of Environmental Management & Tourism*, 10(4), 878-885.
- Syaifulallah, J. et al. (2021), "Social Media Marketing and Business Performance of MSMEs During The COVID-19 Pandemic", *The Journal of Asian Finance, Economics, and Business*, 8(2), 523-531.
- Syarfullah, J. et al. (2021), "Social Media Marketing and Business Performance of MSMEs During the COVID-19 Pandemic", *The Journal of Asian Finance, Economics, and Business*, 8(2), 523-531.
- Tajvidi, R. & A. Karami (2021), "The Effect of Social Media on Firm Performance", *Computers in Human Behavior*, 115, 105174.
- Tarsakoo, P. & P. Charoensukmongkol (2019), "Dimensions of Social Media Marketing Capabilities and Their Contribution to Business Performance of Firms in Thailand", *Journal of Asia Business Studies*, 14(4), 441-461.
- Taşdelen, B. & C. Aydın (2021), "Genç Tüketicilerin Sosyal Medya Reklamlarına Yönelik Satın Alma Davranışlarının Teknoloji Kabul Modeli İle İncelenmesi: Gümüşhane Üniversitesi Örneği", *Gaziantep University Journal of Social Sciences*, 20(4), 1741-1756.
- Todua, N. & C. Jashi (2015), "Some Aspects of Social Media Marketing (Georgian Case)", *International Journal of Social, Behavioral, Educational, Economic and Management Engineering*, 9(4), 1160-1163.
- Trott, P. (1998), *Innovation Management & New Product Development*, Financial Times Pitman Publishing.
- Tuleu, D. (2015), "Antecedents of Customer Relationship Management Capabilities", *The Annals of the University of Oradea, Economic Science Series*, 24(1), 1285-1294.
- Urbach, N. & F. Ahlemann (2010), "Structural Equation Modeling in Information System Research Using Partial Least Squares", *Journal of Information Technology Theory and Application*, 11(2), 5-40.
- Venkatesh, V. et al. (2003), "User Acceptance of Information Technology: Toward A Unified View", *MIS Quarterly*, 27(3), 425-478.
- Wang, Y.M. et al. (2010), "Understanding The Determinants of RFID Adoption in The Manufacturing Industry", *Technological Forecasting and Social Change*, 77(5), 803-815.
- Wang, Z. & H.G. Kim (2017), "Can Social Media Marketing Improve Customer Relationship Capabilities and Firm Performance? Dynamic Capability Perspective", *Journal of Interactive Marketing*, 39, 15-26.
- Ware, J. (2018), "Wearable Technologies and Journalism Ethics: Students' Perceptions of Google Glass", *Teaching Journalism & Mass Communication*, 8(1), 17-24.
- West, M.A. & M. Wallace (1991), "Innovation in Health Care Teams", *European Journal of Social Psychology*, 21, 303-315.
- Wu, W.Y. et al. (2008), "Promoting Innovation Through the Accumulation of Intellectual Capital, Social Capital, And Entrepreneurial Orientation", *R&D Management*, 38(3), 265-277.

Kurnu, M. & D. Gzel (2022), "An Investigation of The Effect of Social Media Marketing and Innovation on Firm Performance with The Technology Acceptance Model", *Sosyoekonomi*, 30(54), 145-163.