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Effects of Online Purchase e-CRM activities and e-Customer Satisfaction on e-Loyalty during COVID-19: The Mediating Effects of e-Customer Satisfaction

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ABSTRACT

Purpose: The purpose of this study is to investigate the influence between online purchase e-CRM activities and e-customer satisfaction on e-loyalty. In particular, it focuses on the mediating effect of e-customer satisfaction in the relationship between online purchase e-CRM activities and e-loyalty.

Design/methodology/approach: The data was collected from customers who have purchased online products in South Korea for a week. The study used 1307 questionnaires in the quantitative analysis and the proposed research model and a set of hypotheses were tested using a structural equation model (SEM).

Findings: The findings of this study indicate that online purchase e-CRM activities (including e-Marketing, e-Sales, e-Support and e-System) have a significant positive impact on e-customer satisfaction. E-Marketing and e-Sales were found to have a statistically significant positive influence on e-loyalty, but e-Support and e-System did not have a statistically significant effect on e-loyalty. This study also found that e-customer satisfaction significantly mediated the link between online purchase e-CRM activities (including e-Marketing, e-Sales, e-Support and e-System) and e-loyalty.

Research limitations/implications: The limitation of this study is that since the data only targets customers in their 20s and 40s, it is difficult to say that it represents customers of all ages. Therefore, it is necessary to carry out research on e-CRM activities for customers of different ages who have experience in online purchasing in the future. Moreover, as the e-commerce market using digital technology grows, companies need to preemptively respond to the expansion of "untact" (non-face-to-face) services in the post-COVID-19 era. Therefore, the results of this study presented theoretical and practical implications for improving online purchase e-CRM activities, e-customer satisfaction, and e-loyalty to e-commerce companies.

Originality/value: The recent COVID-19 pandemic has caused great losses and considerable difficulties in various industries around the world, but to overcome this, the e-commerce market has expanded and has led to the advancement of the digital transformation era. Therefore, the originality of this study suggested the importance of e-CRM activities reflecting the purchasing trend of the online market in line with the trend of the Fourth Industrial Revolution and IT era, and it is significant in that it provides theoretical and managerial marketing and strategic implications for better recognition and utilization of these e-CRM activities from corporate and customer perspectives.

Keywords: Online purchase e-CRM activities, E-customer satisfaction, E-loyalty, Mediating Effects, COVID-19

I. Introduction

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Due to the recent prolonged COVID-19 pandemic, online purchasing and online shopping markets are

continuously growing, and e-commerce customers familiar with Internet use, sensitive to modern trends, and influential in the online distribution market are purchasing various products online (Mekkamol, Piewdang & Untachai, 2013; Statistics Korea, 2021). As the ratio of online shopping among customers increases, companies are making efforts to innovate in new business operations to make the transition to online e-commerce companies. (Singh, Ramakrishna & Prakash, 2020). In particular, e-commerce companies are trying to communicate with customers online and improve their innovation capabilities such as products, services, and marketing activities by analyzing basic customer information registered on the company's website, click flow to identify customers' main interests, and complaints. (Hyun & Perdue, 2017; Law, 2019; Migdadi, 2020; Nguyen, 2021).

In addition, with Internet electronic Customer Relationship Management (e-CRM) activities that were introduced to companies in 2000 and are currently in the maturity stage, companies are actively providing customers with core products and additional services (Nguyen, 2021). Moreover, in this era of increasing online shopping that can always be done conveniently regardless of time and place, customers are naturally quite familiar with e-CRM activities, including e-Marketing, e-Sales, e-Support and e-System, so e-commerce companies should consider e-CRM activities more important and continue to make efforts to develop programs that can increase corporate innovation capabilities (Chatterjee, Ghosh & Chaudhuri, 2020; Migdadi, 2020; Nguyen, 2021; Sivaraks, Krairit & Tang, 2011).

In particular, in the era COVID-19, it is a remarkable phenomenon for customers to purchase various products online, and according to Statistics Korea's "Online shopping trends in August 2021," the number of online shopping transactions in Korea increased 16.8% compared to the same month of the previous year. This was the highest number since statistics were compiled in 2001, and by age, online shoppers in their 20s increased significantly to 75%, followed by 59% and 47% for those in their 40s. E-CRM activities are currently in an active maturity stage in the industry,

and research on e-CRM is being conducted by experts in companies (Feinberg, Kadam, Hokama, & Kim, 2002; Sigala, 2011; Mekkamol et al., 2013; Law, 2019), but despite the significant growth of e-commerce such as online shopping, research on e-CRM activities recognized by customers is still insufficient. In particular, with the recent trend of the increasing number of customers with experience in purchasing products online, more research on e-CRM activities that they recognize needs to be performed. Accordingly, the degree of awareness of customers about e-CRM activities is also increasing. In particular, customers' perceptions of the attributes of e-CRM activities and research on e-customer satisfaction and e-loyalty will need to be conducted.

Therefore, the detailed research goals of this study are as follows. First, this study aims to find out the awareness of customers about the detailed factors of e-CRM activities for online purchases, and the influence relationship between e-customer satisfaction and e-loyalty. Finally, we attempt to verify the mediating effect of e-customer satisfaction in the relationship between the detailed factors of e-CRM activities and e-loyalty. This study will provide theoretical and practical strategic marketing implications so that e-CRM activities, which will play an important role in the online market, can be more recognized and utilized by customers ahead of the leap forward in the post-COVID-19 era and the Fourth Industrial Revolution.

II. Literature Review and Hypothesis Development

A. Online Purchase e-CRM Activities

E-CRM activities are an essential strategy for e-commerce companies to collect and analyze customer data, to operate companies more efficiently and maximize their effectiveness through long-term customer relationship management by increasing online purchase, e-customer satisfaction, customer service, website development, e-loyalty and corporate innovation

capabilities (Adebanjo, 2003; Chatterjee et al., 2020; Debnath, Datta & Mukhopadhyay, 2016; Feinberg et al., 2002; Migdadi, 2020; Nguyen, 2021; Sigala, 2011). These e-CRM activities are used on the Internet, so they have the great advantages of providing services faster than CRM, responding to customers' voices, freely serving customers anytime, anywhere, and, above all, enabling two-way conversations, interactions between customers and companies.

E-CRM activities using IT technology can be seen as cross-functional strategies that increases the value and customer satisfaction of various stakeholders who make up a company by improving customer relationships (Frow & Payne, 2019). Moreover, e-CRM activities are an important strategy for the success of e-commerce companies with high quality and service, long-term customer relationships, and corporate profits (Melovic, Rondovic, Mitrovic-Veljkovic, Ocovaj & Dabic, 2020). In recent years, due to social phenomena such as virus transmission, companies have recognized that e-CRM activities play an important role in forming and improving long-term relationships with customers in the online environment, and have been making more efforts for them (Chatterjee et al., 2020; Debnath et al., 2016). However, research on e-CRM activities recognized by customers who prefer online purchases, not from a corporate perspective, is insufficient.

Existing theories on the degree of customer perception of e-CRM activities divided CRM into technical, business, and customer perspectives, particularly (1) delivering the right products and services to customers at the desired time and channel, (2) providing feedback channels for customers, and (3) providing devices for customers (Pan, 2005). Sivaraks et al. (2011) identified e-CRM activities as being more advanced than CRM and classified them into 30 categories, including online marketing, technology promotion, multi-channel communication, automation process, digital channel utilization, electronic channel utilization, Internet data extraction, e-business environment, interaction, customerization, and online purchase activities. Mekkamol et al. (2013) identified young customers' perceptions of e-CRM activities as 16 elements including fast ordering ability, member

benefits, fast downloads, and billing information, and classified them into four attributes: "interest and service," "website characteristics," "two-way website contact" and "shopping convenience." Cao & Yang (2016)'s study on the degree of customer perception of e-CRM activities of Chinese websites selling products classified them into 11 elements such as customer analysis surveys and inconvenience handling, and the execution rate of e-CRM activities was analyzed for each website.

Guerola-nabarro, Oltra-Badenes, Gil-Gomez & Fernandez (2021) recently studied methods for improving corporate performance by dividing CRM based on IT technology into information sharing, customer commitment, long-term partnership, joint problem solving, and technology-based customer relationship management. Nguyen (2021) classified e-CRM activities into the knowledge management of customer orientation and technology-based customer relationship management, and conducted a study on the influence relationship between e-CRM activities, innovation capabilities and long-term relationships. Therefore, at this point in the maturity stage of e-CRM activities, this study aims to investigate the degree of perception of e-CRM activities by customers. In addition, the degree of perception of e-CRM activities for online purchase customers will be called "online purchase e-CRM activities."

B. Online Purchase e-CRM Activities, e-customer Satisfaction and eE-loyalty

Research on the influence between e-CRM activities and e-customer satisfaction and e-loyalty has been carried out to some extent. E-CRM activities were classified into marketing, sales, conversation channel and service automation factor, and the influence relationship between e-CRM activities and service attributes, customer satisfaction, reliability, and loyalty was revealed. Furthermore, e-CRM activities were found to have a positive effect on e-customer satisfaction and e-loyalty (Sivaraks et al., 2011). Belanche, Casalo, Flavian & Schepers (2014) found

that the government's e-tax system e-CRM activities affected e-customer satisfaction and e-loyalty such as revisit intention, and the quality of e-CRM activities had an effect on e-customer satisfaction and e-loyalty in the online environment (Liébana-Cabanillas, Munoz-Leiva & Rejón-Guardia, 2013; Kingshott, Sharma & Chung, 2018)).

In particular, a study on the detailed attributes of e-CRM activities and the influence relationship on e-customer satisfaction and e-loyalty is as follows. E-Marketing and e-Sales of e-CRM activities increased the company's innovation in selling and marketing e-commerce products and services in the online environment (Migdadi, 2020). Additionally, online shopping customers' awareness of e-CRM activities, including e-Marketing and e-Sales, had an influence on e-customer satisfaction and e-loyalty (Bizarrias, Cucato, Strehlau, Ferreira & Silva, 2019; Migdadi, 2020). Moreover, e-Marketing increased e-loyalty by improving customer relationships, providing competitive high-quality products to customers (Al-Hazmi, 2022), and had an effect on e-loyalty, which revisited a company's websites (Wibisurya, 2018).

In the case of e-Sales, the ones formed in transaction experiences between customers and companies affected e-customer satisfaction (Srivastava & Kaul, 2014; Román & Martín, 2014), and in recent research, e-Sales experienced by customers had an impact on e-customer satisfaction and e-loyalty according to the different customer segmentations of companies (Human, Ferreira, Robertson & Whitterspoon, 2020). By applying these research results to the online environment, it could be inferred that e-Sales influenced e-customer satisfaction and e-loyalty. Also, e-Support of the electronic information system for government agency decision making was found to have an effect on e-customer satisfaction and e-loyalty (Šadić, Puška & Beganović, 2016).

Moreover, among e-CRM activities, e-System was found to affect e-customer satisfaction and e-loyalty (Wang, Wang & Liu, 2016), and for e-System recognized by electronic digital library users, there was an influence relationship between e-System and their e-customer satisfaction and e-loyalty (Xu & Du,

2018). Therefore, the framework of the concept of the influence relationship between e-CRM activities and e-customer satisfaction and e-loyalty of the existing study will be applicable to online purchasing activities, and based on this, this study will conduct research on e-CRM activities and e-customer satisfaction and e-loyalty. Thus, based on these studies, the following hypotheses are proposed:

Hypothesis 1: Online purchase e-CRM activities (H₁₋₁: e-Marketing, H₁₋₂: e-Sales, H₁₋₃: e-Support, H₁₋₄: e-System) have a significant positive impact on e-customer satisfaction.

H₁₋₁: Online purchase e-Marketing has a significant positive impact on e-customer satisfaction.

H₁₋₂: Online purchase e-Sales has a significant positive impact on e-customer satisfaction.

H₁₋₃: Online purchase e-Support has a significant positive impact on e-customer satisfaction.

H₁₋₄: Online purchase e-System has a significant positive impact on e-customer satisfaction.

Hypothesis 2: Online purchase e-CRM activities (H₂₋₁: e-Marketing, H₂₋₂: e-Sales, H₂₋₃: e-Support, H₂₋₄: e-System) have a significant positive influence on e-loyalty.

H₂₋₁: Online purchase e-Marketing has a significant positive influence on e-loyalty.

H₂₋₂: Online purchase e-Sales has a significant positive influence on e-loyalty.

H₂₋₃: Online purchase e-Support has a significant positive influence on e-loyalty.

H₂₋₄: Online purchase e-System has a significant positive influence on e-loyalty.

C. E-customer Satisfaction and E-loyalty

Customer satisfaction is generally defined as the difference between customer expectations and post-purchase evaluation for goods and services (Zeithaml, Berry & Parasuraman, 1993), which is one of the ultimate goals an entity pursues, and is an important concept in corporate operations that continuously

benefit the company by raising loyalty such as customer revisits and positive word of mouth (Liu & Jang, 2009). In line with recent trends, customer satisfaction is applicable to online environments, and so e-customer satisfaction can be defined as the difference between customer expectations and post-purchase evaluations for online purchases of goods and services. Customers who are satisfied with online purchases can be seen as an important factor in increasing the e-loyalty formed in an online environment, such as revisiting the online company's website (Li, Aham-Anyanwu, Tevrizci & Luo, 2015; Vijay, Prashar, & Sahay, 2019). According to research on e-customer satisfaction in the online environment conducted so far, customers who have experienced e-CRM activities not only have a high quality of core products, but also increase purchasing efficiency when the company's website is well designed, and e-customer satisfaction is further improved (Pereira, Salgueiro & Rita, 2016).

Furthermore, e-loyalty, such as customer revisit and repurchase, can enhance continuous corporate competitiveness, especially in retail, service marketing, and hospitality industries, so companies will need to make steady efforts to increase e-loyalty in the online environment, suitable for the rapidly increasing trend of e-commerce (Tanford, Raab & Kim, 2012; Pereira et al., 2016; El-Adly, 2019; Vijay et al., 2019). In more detail, looking at existing studies related to the relationship between e-customer satisfaction and e-loyalty, e-customer satisfaction is a very strong antecedent factor that causes e-loyalty, and higher e-customer satisfaction leads to higher e-loyalty. Therefore, like the relationship between customer satisfaction and loyalty offline, the relationship between e-customer satisfaction and e-loyalty is very important even in an online environment (Rust & Zahorik, 1993; Cronin, Brady, & Hult, 2000; Vijay et al., 2019).

In particular, the e-customer satisfaction of e-commerce customers has a positive effect on e-loyalty (Wang et al., 2016), and the e-customer satisfaction of e-tax system users positively affect e-loyalty, which is the intention to revisit (Belanche et al., 2014), and the e-customer satisfaction of electronic library users is also found to have a positive effect on e-loyalty

(Xu & Du, 2018). There is also an influence relationship between the e-customer satisfaction and e-loyalty of customers who purchased online products (Rodríguez, Villarreal, Valino & Blozis, 2020), as the e-customer satisfaction of users of mobile online shopping applications affects e-loyalty (Kim, Wang & Roh, 2021). Therefore, based on these studies, the hypothesis is established as follows.

Hypothesis 3: E-customer satisfaction exerts a significant positive effect on e-loyalty.

D. Mediating Effects of e-customer Satisfaction between e-CRM Activities and e-loyalty

Customer satisfaction is a research concept influenced by several preceding concepts in existing research (experience quality, corporate and product images, value, novelty seeking, customer orientation, e-information, e-service quality and factors forming an employee's service attitude including emotional intelligence, job satisfaction, role clarity etc.) (Albaity & Melhem, 2017; Kim et al., 2021; Kingshott et al., 2018; Rodríguez et al., 2020; Xin & Choi, 2020), and customer satisfaction, which has been positively affected by these concepts, consequently increases loyalty. It can be inferred that e-customer satisfaction might mediate the relationship between the preceding research concepts and e-loyalty. In other words, it has been further deepened and can be seen as a study of sequential, direct and indirect causality (mediation effect), such as "pre-research concept - customer satisfaction - loyalty" (Albaity & Melhem, 2017). Thus, this theoretical concept will be applicable to research on the mediating effects between online-related research concepts, e-customer satisfaction and e-loyalty. It is possible that e-customer satisfaction will mediate the link between online-related research concepts such as online purchase e-CRM activities and e-loyalty. In line with the current trend of online e-commerce development, it will be possible to connect causal research with a deeper structure between various research concepts.

In particular, the usefulness of online companies'

websites has a positive effect on e-customer satisfaction and e-loyalty, and the usefulness of online companies' websites increases e-loyalty through customer e-customer satisfaction (Flavián, Guinalíu & Gurrea, 2006). Moreover, e-customer satisfaction has a mediating effect between online shopping habits and e-loyalty (Khalifa & Liu, 2007).

According to a recent study, the e-service quality of e-CRM for e-retail companies exerts a positive influence on e-customer satisfaction and a greater level of e-customer satisfaction results in a higher level of e-loyalty (Rodríguez et al., 2020). The service quality and information of mobile online shopping applications exercise a significant influence on e-customer satisfaction, and e-customer satisfaction mediates the relationship between the service quality and information of mobile online shopping applications and e-loyalty, in that an increase in the service quality and information enhances the degree of e-customer satisfaction, which in turn contributes to increased customer e-loyalty (Kim et al., 2021). In another study, e-customer satisfaction mediated the relationship between the perceived quality of websites and e-loyalty (Xu & Choi, 2018), and e-service quality indirectly affected e-loyalty such as behavioral intentions through e-customer satisfaction (Tran & Vu, 2019).

Based on the theory above, it can be inferred that e-customer satisfaction significantly mediates the relationship between e-CRM activities and e-loyalty. In particular, a study on the mediating effect of e-customer satisfaction between the detailed attributes of e-CRM activities and e-loyalty is as follows. Online shopping customers' perception of e-CRM activities, including e-Marketing, was found to affect e-loyalty as a mediating effect of e-customer satisfaction (Bizarrias et al., 2019), and e-customer satisfaction significantly mediated the link between e-Sales for corporate strategies and e-loyalty (Human et al., 2020). By applying these research results to the online environment, it can be inferred that an e-commerce company's e-Sales affects e-loyalty as a mediating effect of e-customer satisfaction. Other studies found that the role of e-Support of the electronic information system for government agency decision making

affected e-customer satisfaction, and a higher level of e-customer satisfaction eventually resulted in a greater level of e-loyalty (Šadić et al., 2016). Therefore, in this study, the following hypothesis is established based on the above theory to find the mediating role of e-customer satisfaction between e-CRM activity and e-loyalty.

Hypothesis 4: There is a mediating effect of e-customer satisfaction in the relationship between the online purchase e-CRM activities (H₄₋₁: e-Marketing, H₄₋₂: e-Sales, H₄₋₃: e-Support, and H₄₋₄: e-System) and e-loyalty.

III. Research Methodology

A. Data Collection and Analysis Method

This research carried out a survey of customers in their 20s, 30s, and 40s who had purchased online products in South Korea for a week in early 2022. In addition, the questions about online purchase e-CRM activities, e-customer satisfaction and e-loyalty were faithfully answered, and this study used 1307 copies (85% of 1354 copies) in the quantitative analysis. In this research, frequency analysis was conducted to find out the demographic characteristics of respondents. Since this research used existing research concepts and scales that secured internal validity, confirmatory factor analysis was performed to verify the construct validity consisting of convergent and discriminant validity of the scales used in our study. Moreover, the model of this research was verified by implementing a structural equation model (SEM) that can simultaneously analyze the structural causal relationships between the hypothetical research concepts of this study. The SPSS and AMOS programs were used for analysis.

B. Organizing Research Models and Questionnaires

All question items in this research were drawn from the relevant related literature based on the framework of studies by Hwang (2009), Sivaraks et al. (2011) and Nguyen (2021), which identified four dimensions of online purchase e-CRM activities, namely e-Marketing, e-Sales, e-Support and e-System. These four factors used three items from these studies. E-customer satisfaction and e-loyalty were measured

using three items from Belanche et al. (2014), Kim et al. (2021), Kingshott et al.(2018), Pereira et al.(2016), Rodríguez et al. (2020), Sivaraks et al. (2011), Wang et al. (2016) and Xu & Du (2018). The responses to each question were recorded on a five-point Likert-type scale that ranged from 5 = "strongly agree" to 1="strongly disagree." The detailed measurement scale items for variables are shown in Table 1.

Based on the literature survey, the concepts of this research were defined as follows. E-Marketing

Table 1. Measurement-scale items for variables

Item code	Item description	Source
e-Marketing		
e-Marketing1	The company provides online membership for customers.	
e-Marketing2	The company actively promotes its products and services on its website (e.g., with advertisements, promotional activities and events, PR, etc.).	
e-Marketing3	The company website allows customers to take full advantage of their membership status and benefits (e.g., providing bonus points or mileage, additional discounts, etc.).	
e-Sales		
e-Sales1	The company website allows customers to view and order estimates on the prices of the company's products and services.	
e-Sales2	The company website allows customers to purchase services or products in real time.	Hwang(2009);
e-Sales3	The company website allows customers to make reservations or purchases using their bonuses (e.g., points, mileage, site money, etc.) in real time.	Sivaraks et al (2011);
e-Support		
e-Support1	The company operates an Internet-based customer service or response center.	Nguyen (2021)
e-Support2	The company website promptly provides answers to questions or complaints posted by customers.	
e-Support3	The company website provides information on how customers' complaints are being handled.	
e-System		
e-System1	The design (menu composition) of the company website is easy for customers to use.	
e-System2	The company website has adequate and appropriate visual aids (e.g., photos, videos, etc.).	
e-System3	The company website downloads quickly.	
e-Customer satisfaction		Belanche et al. (2014);
e-Customer satisfaction1	The company website for online purchases is satisfactory because it provides the information I need	Kim et al. (2021);
e-Customer satisfaction2	The company website for online purchases is satisfactory because I can purchase the products and services I need	Kingshott et al. (2018);
e-Customer satisfaction3	I'm more satisfied with buying online than the usual offline store	Pereira et al. (2016)
e-Loyalty		Rodriguez et al. (2020);
e-Loyalty1	I will revisit the website for online purchases	Sivaraks et al. (2011);
e-Loyalty2	I will talk positively to others about the company website for online purchases	Wang et al. (2016);
e-Loyalty3	I will positively recommend the company website for online purchases to others around me	Xu & Du (2018)

is defined as "all marketing activities over the Internet using individual customer information such as message delivery of online products and information, brand awareness, online membership and benefits provision, promotion activities, etc.." E-Sales is defined as "all sales activities over the Internet to sell products and services for online purchases of customers," and e-Support is defined as "all support activities over the internet to resolve and improve difficulties and complaints for online purchases of customers." e-System defined it as "all electronic activities that support and manage the system and provide e- CRM activities to facilitate online purchases of customers."

In addition, e-customer satisfaction and e-loyalty were defined based on existing theories on customer satisfaction and loyalty recognized through e-CRM activities. E-customer satisfaction is "an emotional and psychological comprehensive evaluation that reflects the difference between customers' pre-purchase expectations and post-purchase satisfaction," and e-loyalty is defined as "customer post-purchase behavior based on favorable feelings for products and services provided through online purchase, affection and commitment." The proposed research model is shown in Figure 1 as follows.

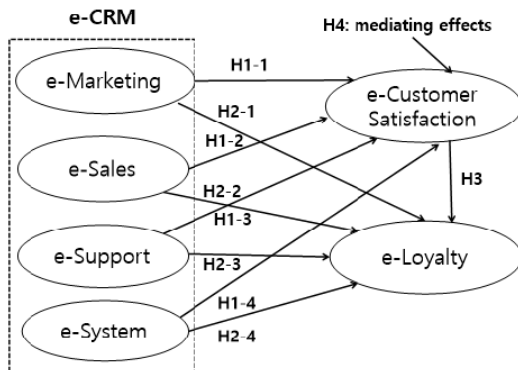


Figure 1. Research model

IV. Analysis Results

A. Demographic Characteristics of Respondents

Among the general characteristics of the respondents, the gender was 41.5% males and 58.5% females. The age was 33.4% in their 20s, 53.5% in their 30s, 13.3% in their 40s, and the highest rate in their 30s. Internet usage time was 23.3% for 1-2 hours a day, 46.0% for 3-4 hours a day, and 23.9% for 5-6 hours a day, and most used it for 3-4 hours a day. More details are shown in Table 2.

Table 2. Demographic characteristics of respondents

Demographic Profile		N (%)
Gender	male	543(41.5)
	female	764(58.5)
Age	20-29 years	437(33.4)
	30-39 years	696(53.3)
	40-49 years	174(13.3)
Occupation	company employee	738(56.5)
	Government employee	105(8.0)
	educator	51(3.9)
	private business	142(10.9)
	Student	181(13.8)
	homemaker	84(6.4)
	others	6(0.5)
Internet usage	1-2 hour a day	304(23.3)
	3-4 hours a day	601(46.0)
	5-6 hours a day	313(23.9)
	7-8 hours a day	61(4.7)
Using frequency for e-Commerce	more than 9-10 hours day	28(2.1)
	1-2 times a week	264(20.2)
	3-4 times a week	484(37.0)
	5-6 times a week	331(25.3)
	7-8 times a week	123(9.4)
	more than 9-10 times a week	105(8.0)
Total		1307(100)

B. Verification of Confirmatory Factor Analysis

Since the verified scale of the existing theory was used in this research, construct validity, including both the convergent validity and discriminant validity of each factor were verified through confirmatory factor analysis (CFA). It was confirmed that there were no questionnaire items that could hinder the suitability of the entire model with a factor loading of 0.70 or more, so three questions for e-Marketing, e-Sales, e-Support, and e-System, and three questions for e-customer satisfaction and e-loyalty were finally used. Table 3 shows the results of the CFA, and it demonstrates a good fit for the six-factor model ($\chi^2=851.784$, $df=126$, $p=.000$, $Q(\chi^2/df)=6.760$, $GFI=.941$, $AGFI=.920$, $IFI=.924$, $CFI=.924$, $TLI=.908$) and all standardized factor loadings exceed 0.70, and t-values indicate that these factor loadings are

significant at the 0.001 level.

The convergent validity of CFA is supported by composite or construct reliability (CCR) and average variance extracted (AVE). Hair, Anderson, Tatham & Black (2006) proposed that construct reliability estimates should be greater than 0.7, and in this study they ranged from 0.80 to 0.83. The average variance extracted measures the amount of variance explained by the construct and should be over 0.5 (Hair et al., 2006). The average variance extracted in this study is between 0.56 and 0.62, which indicates that the measurement items have moderate to high reliability and validity. The detailed CFA results are shown in Table 3.

Another method to evaluate the discriminant validity of a scale is to compare average variance extracted of the construct with the squared correlation between each pair of constructs together (Fornell and Larcker,

Table 3. Results of confirmatory factor analysis

Constructs & Variables	Confirmatory factors analysis					
	Standardized factor loading	Estimate	CR	p-value	AVE	CCR
e-Marketing1	.811	1				
e-Marketing2	.775	.974	31.634	.000**	.60	.82
e-Marketing3	.783	.983	32.082	.000**		
e-Sales1	.759	1				
e-Sales2	.769	1.022	29.240	.000**	.56	.80
e-Sales3	.768	1.055	29.197	.000**		
e-Support1	.849	1				
e-Support2	.779	.860	37.708	.000**	.59	.81
e-Support3	.769	.817	36.825	.000**		
e-System1	.806	1				
e-System2	.818	1.032	34.068	.000**	.60	.82
e-System3	.742	.906	29.825	.000**		
e-Customer satisfaction1	.840	1				
e-Customer satisfaction2	.823	.878	42.997	.000**	.62	.83
e-Customer satisfaction3	.797	.836	40.069	.000**		
e-Loyalty1	.857	1				
e-Loyalty2	.820	.885	42.486	.000**	.61	.83
e-Loyalty3	.785	.856	38.730	.000**		
Model-fit indices	$\chi^2=851.784$, $df=126$, $p=.000$, Q -value: 6.760, $GFI=.941$, $AGFI=.920$, $IFI=.924$, $CFI=.924$, $TLI=.908$, $RMSEA=.066$, $PNFI=.751$, $PCFI=.761$ $SRMR: 0.180$					

* $p<0.05$, ** $p<0.01$

1981). The scale achieves discriminant validity when the AVE of the construct is larger than the squared correlation of the relationship between the concept and other concepts in the research model. Table 4 reveals that the AVE values are greater than the squared inter-construct correlation between any pair of constructs, which supports the discriminant validity of the constructs.

C. Verification of Research Hypothesis

The results of verifying the final structural model fit of the research model are as follows.

The resulting χ^2 is 1735.151 with 125 degrees of freedom, ($p = .000$), CMIN/df=13.881, GFI= .913, AGFI= .881, IFI= .832, CFI= .832, RMSEA= .099, PNFI= .671, PCFI= .679, which suggests that the hypothesized model fits the data (see Table 5).

In addition, the results of verifying H1(H₁₋₁, H₁₋₂, H₁₋₃, and H₁₋₄) indicated that e-Marketing (t-value= 9.387, $p = .000$), e-Sales (t-value=7.454, $p = .000$), e-Support (t-value=11.789, $p = .000$), and e-System (t-value=6.630, $p = .000$) have a significant positive impact on e-customer satisfaction, so H₁₋₁, H₁₋₂, H₁₋₃, and H₁₋₄ were all supported.

Hypotheses 2-1 and 2-2 predicted an influence between e-Marketing and e-Sales and e-loyalty. The results suggested that e-Marketing (t-value=6.592,

$p = .000$) and e-Sales (t-value=3.339, $p = .000$) exerted a significant positive influence on e-loyalty, consequently accepting H₂₋₁ and H₂₋₂. On the other hand, e-Support (t-value=0.003, $p = .998$) and e-System (t-value=0.274, $p = .784$) did not appear to have a statistically significant impact on e-loyalty, so H₂₋₃ and H₂₋₄ were rejected. Hypothesis 3, e-customer satisfaction, was found to exert a significant positive effect on e-loyalty with t-value=11.930 and $p = .000$, and so H3 was supported.

Next, a bootstrapping procedure for verifying the mediating effect was used to test H4 (H₄₋₁, H₄₋₂, H₄₋₃, and H₄₋₄) and the results are as follows. Firstly, the indirect effect of e-Marketing on e-loyalty through e-customer satisfaction was significant at 0.090 (0.004, $p < 0.05$: determined by indirect effects-two tailed significance). Furthermore, the indirect effect of 0.090 (95% bootstrapped confidence intervals: Lower Limit=0.049, Upper Limit=0.135) did not straddle 0, denoting e-customer satisfaction partial mediators for the relationship between e-Marketing and e-loyalty. Hence, H₄₋₁ was adopted. Secondly, the results illustrated that the indirect effect of e-Sales on e-loyalty through e-customer satisfaction was significant at 0.060 (0.003, $p < 0.05$). Furthermore, the indirect effect of 0.060 (95% bootstrapped confidence intervals: Lower Limit=0.028, Upper Limit=0.100) did not straddle 0, denoting e-customer satisfaction partial mediators for the relationship

Table 4. Correlation matrix and discriminant validity

Factors	e-Marketing	e-Sales	e-Support	e-System	e-Customer satisfaction	e-Loyalty
e-Marketing	0.60*					
e-Sales	0.708** (0.501)	0.56*				
e-Support	0.591** (0.349)	0.599** (0.359)	0.59*			
e-System	0.613** (0.376)	0.680** (0.462)	0.638** (0.407)	0.60*		
e-Customer satisfaction	0.563** (0.317)	0.559** (0.312)	0.536** (0.287)	0.621** (0.386)	0.62*	
e-Loyalty	0.606** (0.367)	0.558** (0.311)	0.516** (0.266)	0.580** (0.336)	0.651** (0.424)	0.61*

1) * = Average Variance Extracted(AVE), ** $p = 0.000$

2) () = the square of its correlation coefficient (r^2)

between e-Sales and e-loyalty. Hence, H_{4-2} was accepted.

Thirdly, the results showed that the indirect effect of e-Support on e-loyalty through e-customer satisfaction was significant at 0.230 (0.003, $p < 0.05$). The indirect effect of 0.230 (95% bootstrapped confidence intervals: Lower Limit=0.128, Upper Limit=0.368) did not straddle 0, denoting e-customer satisfaction full mediators for the relationship between e-Support and e-loyalty, because this variable did not relate directly to e-loyalty, so H_{4-3} was supported. Finally, the results revealed that the indirect effect of e-System on e-loyalty through e-customer satisfaction was significant at 0.102 (0.002, $p < 0.05$). Moreover, indirect effect of 0.102 (95% bootstrapped confidence intervals: Lower Limit=0.065, Upper Limit=0.155) did not straddle 0, denoting e-customer satisfaction full mediators for the relationship between e-System and e-loyalty, because this variable did not relate directly to e-loyalty, so H_{4-4} was accepted. Table 5 summarizes the results of the test hypotheses.

V. Conclusions

This study attempted to find out the influence between online purchase e-CRM activities and e-customer satisfaction on e-loyalty, and the mediating effect of e-customer satisfaction in the relationship between e-CRM activities and e-loyalty for customers who are familiar with the Internet environment and are good at using electronic devices. First, looking at the results of hypothesis verification, the structural model fit of this study was statistically achieved, and the detailed statistical analysis results are as follows. First, H1 was adopted as a result of hypothesis verification that "H1: Online purchase e-CRM activities (H_{1-1} : e-Marketing, H_{1-2} : e-Sales, H_{1-3} : e-Support, H_{1-4} : e-System) will have a significant positive impact on e-customer satisfaction." This is consistent with existing theories such as Belanche et al. (2014), Bizarias et al. (2019), Human et al. (2020), Kingshott et al. (2018), Liébana-Cabanillas et al. (2013), Šadić et al. (2016), Sivaraks et al. (2011), Wang et al.

Table 5. Results of hypotheses test

	Relationship	Estimate	SE	t-value	Hypothesis
H1-1	e-Marketing → e-Customer satisfaction	.109	.012	9.387(.000)**	Accepted
H1-2	e-Sales → e-Customer satisfaction	.073	.010	7.454(.000)**	Accepted
H1-3	e-Support → e-Customer satisfaction	.278	.024	11.789(.000)**	Accepted
H1-4	e-System → e-Customer satisfaction	.124	.019	6.630(.000)**	Accepted
H2-1	e-Marketing → e-Loyalty	.086	.013	6.592(.000)**	Accepted
H2-2	e-Sales → e-Loyalty	.034	.010	3.339(.000)**	Accepted
H2-3	e-Support → e-Loyalty	.000	.030	.003(.998)	Rejected
H2-4	e-System → e-Loyalty	-.004	.016	-.274(.784)	Rejected
H3	e-Customer satisfaction → e-Loyalty	.827	.069	11.930(.000)**	Accepted
	Mediating Effects	Total effect	Direct effect	Indirect effect	
H4-1	e-Marketing → e-Customer satisfaction → e-Loyalty	.176	.086	.090(.004)** (.049 - .135)***	Accepted
H4-2	e-Sales → e-Customer satisfaction → e-Loyalty	.095	.034	.060(.003)** (.028 - .100)***	Accepted
H4-4	e-Support → e-Customer satisfaction → e-Loyalty	.230	.000	.230(.003)** (.128 - .368)***	Accepted
H4-4	e-System → e-Customer satisfaction → e-Loyalty	.098	-.004	.102(.002)** (.065 - .155)***	Accepted

* $p < 0.05$, ** $p < 0.01$

*** Indirect Effect 95% confidence interval from bootstrap: Lower Bounds-Upper Bounds

(2016), Xu & Du (2018) and others.

Second, since e-Marketing and e-Sales were found to have a statistically significant positive influence on e-loyalty, H_{2-1} and H_{2-2} were adopted, which is consistent with previous studies such as Belanche et al.(2014), Bizarrias et al. (2019), Human et al. (2020), Kingshott et al. (2018), Liébana-Cabanillas et al.(2013), Šadić et al. (2016), Sivaraks et al. (2011), Wang et al.(2016) and Xu & Du (2018). On the other hand, it was found that e-Support and e-System did not have a statistically significant effect on e-loyalty, and H_{2-3} and H_{2-4} were rejected. Third, H_3 , e-customer satisfaction appears to exert a statistically significant positive effect on e-loyalty, which supports the findings of other researchers such as Cronin et al. (2000), Kim et al. (2021), Rodríguez et al. (2020) and Vijay et al. (2019).

Finally, the results of a bootstrapping procedure to verify the mediating effect of e-customer satisfaction in the relationship between the online purchase e-CRM activities and e-loyalty are as follows. H_4 was adopted because e-customer satisfaction statistically significant mediated the link between e-Marketing (H_{4-1}), e-Sales (H_{4-2}), e-Support (H_{4-3}), and e-System (H_{4-4}) and e-loyalty. This conclusion is in line with studies by Albaity & Melhem (2017), Bizarrias et al. (2019), Human et al. (2020), Khalifa & Liu (2007), Kim et al. (2021), Rodríguez et al. (2020) and Šadić et al. (2016).

A. Implications of the Study Results

According to the above research results, the theoretical and managerial implications and marketing strategies can be presented as follows. First of all, e-Marketing provides online membership and promotional activities (sales promotions, advertising and PR, etc.) and offer discounts, points, and mileage to effectively use membership systems. Through e-Sales, customers can get the prices of a company's products and services in real time and can make reservations or purchases using their accumulated bonuses (site money, mileage, and points, etc.) through

the website. It was found that e-Marketing and e-Sales had a direct positive effect on e-customer satisfaction and e-loyalty, and also indirectly had a positive effect on e-loyalty through e-customer satisfaction.

This can be interpreted as follows. Customers are directly satisfied because they can visit online channel stores that are provided in real time through e-Marketing and e-Sales to obtain information on products without facing employees and purchase products conveniently and quickly. In addition, e-loyalty is indirectly increased through e-customer satisfaction. In particular, amid the COVID-19 pandemic that has continued for more than two years, online product purchases continue to increase, probably because e-commerce companies are providing convenient e-Marketing and e-Sales, such as many benefits, real-time simple payment, purchase services, and point accumulation.

Additionally, with e-Support, customers can use the Internet customer center (voice of the customer) or customer response center, receive immediate answers to inquiries or complaints, and improve and resolve complaints. Moreover, the company website is provided with an easy design (menu composition) and appropriate visual images for customers to use through e-System. It was found that e-Support and e-System did not directly have a positive effect on e-loyalty, but did have an indirect one. In other words, the relationship between e-Support and e-System and e-loyalty is fully mediated by e-customer satisfaction. This can be interpreted as online companies listening to customers' voices and resolving complaints well through e-Support and e-System to satisfy customers first, and then the overall positive customer satisfaction of these customers indirectly enhances e-loyalty such as continuous online repurchase, positive word of mouth and recommendation to acquaintances.

Therefore, in the era of COVID-19, online purchases of various products are expected to rise in the future due to increased consumption of single-person households, vaccinations, development of treatments and suppression of shopping psychology. Accordingly, in the post-COVID-19 era, where online purchases are becoming more familiar, e-commerce companies should prepare well for the changing trend of shopping

channels moving online more. In particular, it will be necessary to provide core products and supplementary services to customers through e-commerce companies' websites more actively and reliably with e-CRM activities. According to Statistics Korea's "2020 Economic Survey Results," retail e-commerce has been on the rise since 2020, the time of COVID-19, as new characteristic items such as digital platform transactions and the introduction of unmanned payment devices have been added in some industries. As the social and economic environment has recently changed due to the pandemic, offline purchasing is reflecting the trend of online digital platform-type transactions (Statistics Korea, 2022a), and online shopping transactions in the first half of 2022 increased by more than 10% compared to the same month of the previous year (Statistics Korea, 2022b).

This may be a result of the impact of the increase in external activities due to the lifting of social distancing, such as restrictions on private gatherings, and the continued increase in online shopping to purchase tangible and intangible products. In addition, the recent COVID-19 pandemic has caused large losses and significant difficulties in various industries around the world, but to overcome this, the e-commerce market has expanded and has led to the advancement of the digital transformation era. In particular, as the e-commerce market using digital technology and state-of-the-art information and communication grows, these companies should preemptively respond to the expansion of "untact" (non-face-to-face) services in the post-COVID-19 era. Accordingly, the role of e-CRM activities shown in the results of this study will be more important, and it is meaningful in presenting practical implications of marketing strategies to the industry in that it contributes to the expansion of the e-commerce market.

B. Limitations and Future Research

Since this research only targeted customers in their 20s and 40s, the limitation is that it cannot be said to represent customers of all ages who purchased

products online using e-CRM activities. Therefore, in the future, a study on e-CRM activities for customers of different ages who have experience in online purchasing using the Internet should be performed. Moreover, in line with the trend of the IT era of the Fourth Industrial Revolution, it will be imperative to study the e-Service aspects of tangible and intangible products, core products and supplementary products in addition to the four dimensions of e-CRM activities. It is also necessary to study the relationship between e-Service and e-customer satisfaction, e-trust, e-commitment, ease of use, and usability of online purchase products.

Also, in accordance with the tendency where customers are greatly affected by social network services (SNS) when purchasing online products, it is necessary to carry out research on corporate e-CRM strategies and utilization methods linked to online media such as SNS and live commerce Shopping Live. Furthermore, this study is meaningful in providing theoretical and managerial marketing and strategic implications so that e-CRM activities reflecting various online purchase trends can be recognized and better utilized from the corporate and customer perspectives of the online market.

References

- Adebanjo, D. (2003). Classifying and selecting e-CRM applications: An analysis based proposal. *Management Decision*, 41(6), 570-577.
- Albaity, M., & Melhem, S. B. (2017). Novelty seeking, image, and loyalty-The mediating role of satisfaction and moderating role of length of stay: International tourists' perspective. *Tourism Management Perspective*, 23, 30-37.
- Al-Hazmi, N. M. (2022). E-marketing by Mobile Apps for Tourism Products and Its Impact on the Performance of Travel and Tourism Organizations. *International Journal of Interactive Mobile Technologies*, 16(12), 145-153.
- Belanche, D., Casalo, L. V., Flavian, C., & Schepers, J. (2014). Trust transfer in the continued usage of public e-services. *Information & Management*, 51, 627-640.
- Bizarrias, F., Cucato, J., Strehlau, V., Ferreira, M., & Silva, J. (2019). Relationship and search for discounts, and their

- effects on loyalty and e-commerce, when mediated by satisfaction and trust. *Journal of Professional Business Review*, 4(2), 51-69.
- Cao, K., & Yang, Z. (2016). A Study of e-commerce adoption by tourism websites in China. *Journal of Destination Marketing & Management*, 5, 283-289.
- Chatterjee, S., Ghosh, S., & Chaudhuri, R. (2020). Adoption of ubiquitous customer relationship management (uCRM) in enterprise: Leadership support and technological competence as moderators. *Journal of Relationship Marketing*, 19(2), 75-92.
- Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Debnath, R., Datta, B., & Mukhopadhyay, S. (2016). Customer relationship management theory and research in the new millennium: Directions for future research. *Journal of Relationship Marketing*, 15(4), 299-325.
- El-Adly, M. I. (2019). Modelling the relationship between hotel perceived value, customer satisfaction, and customer loyalty. *Journal of Retailing and Consumer Services*, 50, 322-332.
- Feinberg, R. A., Kadam, R., Hokama, L., & Kim, L. H. (2002). The state of electronic customer relationship management in retailing. *International Journal of Retail & Distribution Management*, 30(10), 470-481.
- Flavián, C., Guinalíu, M., & Gurrea, R. (2006). The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information & Management*, 43(1), 1-14.
- Fomell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(2), 39-50.
- Frow, P. E., & Payne, A. F. (2019). Customer relationship management: A strategic perspective. *Journal of business market management*, 3(1), 7-27.
- Guerola-nabarro, V., Oltra-Badenes, R., Gil-Gomez, H., & Fernandez, A. I. (2021). Customer relationship management (CRM) and innovation: a qualitative comparative analysis (QCA) in the search for improvements on the firm performance in winery sector. *Technological Forecasting & Social Change*, 169(8), 120838.
- Hair, J. F., Anderson, R. E., Tatham, R. L. & Black, W. C. (2006). *Multivariate data analysis* (6th ed.). Englewood Cliffs, New Jersey: Pearson Prentice Hall.
- Human, G., Ferreira, C. C., Robertson, J., & Whitterspoon, M. (2020). Customer experience, satisfaction and loyalty in business-to-business markets: Does the chain hold across customer segments? *Independent Research Journal in the Management Sciences*, 20(1), 855. doi:10.4102/ac.v20i1.855
- Hwang, S. Y. (2009). The development of 'e-CRM activities scale in tourism industry' using a delphi method. *Journal of Tourism Sciences*, 33(5), 453-475.
- Hyun, S. S., & Perdue, R. R. (2017). Understanding the dimensions of customer relationships in the hotel and restaurant industries. *International Journal of Hospitality Management*, 64, 73-84.
- Khalifa, M., & Liu, V. (2007). Online consumer retention: Contingent effects of online shopping habit and online shopping experience. *European Journal of Information System*, 16(6), 780-792.
- Kim, Y., Wang, & Roh, T. (2021). Do information and service quality affect perceived privacy protection, satisfaction, and loyalty? Evidence from a Chinese O2O based mobile shopping application. *Telematics and Informatics*, 56(1), 56. doi:10.1016/j.tele.2020.101483
- Kingshott, R. P. J., Sharma, P., & Chung, H. F. L. (2018). The impact of relational versus technological resources on e-loyalty: A comparative study between local, national and foreign branded banks. *Industrial Marketing Management*, 72, 48-58.
- Law, R. (2019). Evaluation of hotel websites: progress and future developments (invited paper for 'luminaries' special issue of International Journal of Hospitality Management). *International Journal of Hospitality Management*, 76, 2-9.
- Li, H., Aham-Anyanwu, N., Tevriczi, C., & Luo, X. (2015). The interplay between value and service quality experience: E-loyalty development process through the eTailQ scale and value perception. *Electronic Commerce Research*, 15(4), 585-615.
- Liébana-Cabanillas, F., Munoz-Leiva, F., & Rejón-Guardia, F. (2013). The determinants of satisfaction with e-banking. *Industrial Management & Data Systems*, 113(5), 750-767.
- Liu, Y., & Jang, S. (2009). Perceptions of Chinese restaurants in the US: What affects customer satisfaction and behavioral intentions? *International Journal of Hospitality Management*, 28(3), 338-348.
- Mekkamol, P., Piewdang, S., & Untachai, S. (2013). Modeling e-CRM for community tourism in Upper Northeastern Thailand. *Procedia -Social and Behavioral Sciences*, 88, 108-117.
- Melovic, B., Rondovic, B., Mitrovic-Veljkovic, S., Ocovaj, S. B., & Dabic, M. (2020). Electronic customer relationship management assimilation in Southeastern European companies—Cluster Analysis. *IEEE Transactions on Engineering Management*, 69(4), 1081-1100.
- Migdadi, M. M. (2020). Knowledge management, customer relationship management and innovation capability. *Journal of Business & Industrial Marketing*, 36(1), 111-124.
- Nguyen, T. K. C. (2021). Innovation capability: The impact of e-CRM and COVID-19 risk perception. *Technology in Society*, 67. doi:10.1016/j.techsoc.2021.101725
- Pan, S. L. (2005). Customer perspective of CRM systems: A focus group study. *International Journal of Enterprise Information Systems*, 1, 65-88.
- Pereira, H. G., Salgueiro, M. F., & Rita, P. (2016). Online purchase determinants of loyalty: The mediating effect of satisfaction in tourism. *Journal of Retailing and Consumer Services*, 30, 279-291.
- Rodríguez, P. G., Villarreal, R., Valino, P. C., & Blozis, S. (2020). A PLS-SEM approach to understanding e-SQ,

- e-satisfaction and e-loyalty for fashion e-retailers in Spain. *Journal of Retailing and Consumer Services*, 57(11), 57. doi:10.1016/j.jretconser.2020.102201
- Román, S., & Martín, P. (2014). Does the hierarchical position of the buyer make a difference? The influence of perceived adaptive selling on customer satisfaction and loyalty in a business-to-business context. *Journal of Business & Industrial Marketing*, 29(5), 364-373.
- Rust, R., & Zahorik, A. (1993). Customer satisfaction, customer retention, and market share. *Journal of Retailing*, 69(2), 193-215.
- Šadić, S., Puška, A., & Beganović, A. (2016). Information support model and ITS impact on utility, satisfaction and loyalty of users. *The European Journal of Applied Economics*, 13(2), 30-44.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and non experimental studies: New procedures and recommendations. *Psychological Methods*, 7(4), 422-445.
- Sigala, M. (2011). eCRM 2.0 applications and trends: The use and perceptions of Greek tourism firms of social networks and intelligence. *Computers in Human Behavior*, 27, 655-661.
- Singh, S., Ramakrishna, S., & Prakash, C. (2020). Three-dimensional printing in the fight against novel virus COVID-19: Technology helping society during an infectious disease pandemic. *Technology in Society*, 62, 101305.
- Sivaraks, P., Krairit, D., & Tang, J. C. (2011). Effects of e-CRM on customer-bank relationship quality and outcomes: The case of Thailand. *The Journal of High Technology Management Research*, 22(2), 141-157.
- Srivastava, M., & Kaul, D. (2014). Social interaction, convenience and customer satisfaction: The mediating effect of customer experience. *Journal of Retailing and Consumer Services*, 21(6), 1028-1037.
- Statistics Korea (2021). Online shopping trends in August 2021.
- Statistics Korea (2022a). 2020 Economic Survey Results.
- Statistics Korea (2022b). Online shopping trends in May 2022.
- Tanford, S., Raab, C., & Kim, Y. S. (2012). Determinants of customer loyalty and purchasing behavior for full-service and limited-service hotels. *International Journal of Hospitality Management*, 31(2), 319-328.
- Tran, V. D., & Vu, Q. H. (2019). Inspecting the Relationship among E-service Quality, E-trust, E-customer Satisfaction and Behavioral Intentions of Online Shopping Customers. *Global Business & Finance Review*, 24(3), 29-42.
- Vijay, T. S., Prashar, S., Sahay, V. (2019). The influence of online shopping values and web atmospheric cues on e-loyalty: Mediating role of e-satisfaction. *Journal of Theoretical and Applied Electronic Commerce Research*, 14(1), 1-15.
- Wang, W. T., Wang, Y. S., & Liu, E. R. (2016). The stickiness intention of group-buying websites: The integration of the commitment-trust theory and e-commerce success model. *Information & Management*, 53, 625-642.
- Wibisurya, I. (2018). The effect of digital marketing implementation through location based advertising on customer's purchase intention. *Binus Business Review*, 9(2), 153-161.
- Xin, G., & Choi, J. G. (2020). The Impact of Factors Forming Employee Service Attitude on Service Quality, Customer Satisfaction and Loyalty in the Hotel Industry. *Global Business & Finance Review*, 25(3), 84-95.
- Xu, J., & Choi, C. (2018). The Effects of perceived quality on loyalty by mediating customer satisfaction and trust in websites: Moderating effect of customer innovativeness. *Journal of International Trade & Commerce*, 14(1), 547-569.
- Xu, F., & Du, J. T. (2018). Factors influencing users' satisfaction and loyalty to digital libraries in Chinese university. *Computers in Human Behavior*, 83, 64-72.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1993). The nature and determinants of customer expectation of service. *Journal of the Academy of Marketing Science*, 21(1), 1-12.