




# “Success model of online food delivery system: The role of brand image in customer responses”

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# SUCCESS MODEL OF ONLINE FOOD DELIVERY SYSTEM: THE ROLE OF BRAND IMAGE IN CUSTOMER RESPONSES

## Abstract

There is a growing interest in understanding the factors affecting the success of online food delivery (OFD) systems because online food ordering has increased considerably in recent years. Hence, the purpose of this study is to investigate the effect of brand image on customer satisfaction and purchase intention based on the stimulus-organism-response (S-O-R) framework by adopting DeLone and McLean IS success model. A convenience sample of 251 respondents, who use the most popular OFD applications in 3 largest cities of Turkey, was surveyed by an online self-administered structured questionnaire. The results were first organized as descriptive statistics for observed variables and frequencies of demographic variables. In the second phase, confirmatory factor analysis (CFA) followed by structural equation modeling (SEM) was used to test the measurement and structural model. The results reveal that among OFD system success factors, only the system and service quality positively influence brand image, accounting for 46% of the variance. On the other hand, this study could not validate the proposed positive effect of information quality on brand image. For the role of brand image in customer responses, the findings evidence a significant positive effect of brand image on both customer satisfaction and intention to use. The variable explains 34% and 22% of the variance in satisfaction and purchase intention, respectively. In line with these results, this paper concludes that brand image can be introduced into the e-commerce success model as a new variable due to its partial mediating role and significant effects on customer responses.

## Keywords

OFD systems, brand image, e-commerce success,  
customer satisfaction, usage intention

## JEL Classification

M15, M30, M31

## INTRODUCTION

Starting from the 1990s, information and communication technologies (ICTs) have had a crucial impact on the hospitality industry (Buhalis & Law, 2008) and substantially affected the way firms operate their businesses (Kozak, 2007). That is, ICTs have given rise to the development of e-business, which also influences consumer behavior. As is the case for the world, e-business is one of the fastest-growing sectors in Turkey. According to the statistics, Turkey represents a great opportunity for e-business with an urbanization rate of 75% and penetration rate of 74% of internet users (Ikas, 2020). Moreover, while the volume of e-commerce increased by 64.7% in 2020, it was the food industry that has experienced the highest rate of 434% growth among all other sectors. Similarly, according to the forecasts of Statista (2020), the global online food delivery market is projected to reach \$151,526m in 2021 and is expected to have an annual growth rate of 6.36% between 2021 and 2024. Hence, with these recent developments in e-business, online food delivery systems (OFDs) enabling a customer to place an order via a website or mobile-based application have become a crucial part of the restaurant distribution system (Muller, 2018).

Although previous studies have identified several factors that explain customer's behavioral intention to use OFD services, the suggested frameworks do not contain brand experience. Since brand experiences are shaped during the customer decision-making process, including information search, purchase, receiving, and consumption (Schmitt & Rogers, 2008), the concept is also relevant to online settings (Brakus et al., 2009). Morgan-Thomas and Veloutsou (2013, p. 22) defined online brand experience as an individual's internal subjective response to the contact with the online brand. Therefore, for an online purchase, it is the website that delivers the brand experience (Ha & Perks, 2005), which, in turn develops the online brand image. More specifically, customers' online brand image is formed by website attributes during their interaction with the website (Da Silva & Alwi, 2008). As such, a positive website-based brand experience is more likely to lead to a strong brand image in customers' minds.

Furthermore, Ha and Perks (2005) argue that customers usually prefer using websites that deliver positive experiences. However, current research on understanding the antecedents of intention to use OFD systems is still in its early stages. Furthermore, even though there are previous studies built on the technology adoption perspectives to understand possible antecedents of purchase intention, the suggested frameworks do not contain brand experience.

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## 1. LITERATURE REVIEW

The Stimulus-Organism-Response (SOR) framework, developed by Mehrabian and Russell (1974), forms the basis of the theoretical framework developed as the research model of this study. The SOR model addresses how people's internal and behavioral states are affected by their physical surroundings. When the framework is applied to the context of consumer behavior (Jacoby, 2002), factors that can affect an individual's internal state are referred to as stimuli. On the other hand, organisms are considered internal mechanisms that serve as mediators between individual and final stimuli. Lastly, a response is the outcome of individuals' reactions like intentions and behaviors. Built upon the SOR framework, the current study also employed DeLone and McLean's Information System Success Model, which assesses information system usage by looking at the effects of quality on customer satisfaction and usage (DeLone & McLean, 2003). More specifically, this study has adopted and focused on three dimensions of e-commerce system success: information quality, system quality, and service quality (Wang, 2008), with the SOR paradigm acting as the overarching framework. That is, DeLone and McLean's model is integrated into the proposed model to investigate if the overall quality of e-commerce system positively influences brand image. Hence, the "stimulus" in the context studied here is represented by overall system quality (information, system, and service quality). "Organism" is represented by

brand image, and the "response" is represented by purchase intention and customer satisfaction.

First of all, OFD system success factors acting as stimuli enable cognitive and affective functions of customers. In other terms, DeLone and McLean's Information System Success Model was structured to combine facets of customer experience that involved individualization, integrity, adequacy, and ease of understanding the quality of system and information (DeLone & McLean, 2003). Numerous subsequent analytical website content research shows that the quality of e-commerce system is the multi-dynamic structure consisting of various features that reflect system, information, and service quality to support the rigorous conceptual ISS model of DeLone and McLean. For instance, Wang et al. (2019) adopted the model to investigate the impact of success factors on online-food ordering. Similarly, another study conceptualized website quality as information, system, and service quality to understand online wine purchasing intentions of consumers (Cho et al., 2014). As a result, the proposed model has also been built on the tri-dimensional e-commerce system success measurement (DeLone & McLean, 2003).

Information and system quality is assessed from a technical standpoint, whereas service quality is assessed from a customer standpoint. Information quality, in particular, is an indicator of a customer's assessment of the performance of a website's

output. For example, Cho et al. (2014) proposed accurate, detailed, and timely information as important factors in decreasing perceived risk and increasing online purchase intentions. Likewise, Hsu et al. (2018) argued that information quality predicts customer satisfaction and conceptualized website information quality as information being accurate, timely, complete, and understandable. On the other hand, the system quality can be shown in the total efficiency of a website system. It can be calculated by the level of usability that is experienced by the consumer when shopping online (Bai et al., 2008). User-friendly interface requirements can help online retailers and their customers to develop a positive relationship (Ali, 2016). In a similar vein, Ahn et al. (2007) hypothesized that system quality affects customer interest in online ordering, lowering perceived risk associated with online shopping. Thus, the quality of system and information relates to accessibility, correct information, and protection of transactions (Kim et al., 2008).

Lastly, service quality is described as a comprehensive consumer assessment and an overview of the quality of online service delivery (Bai et al., 2008). Therefore, the quality of service concerns custom marketing services that make websites capable of attracting and retaining customers. Thus, the quality of the service for the websites has been suggested to influence consumers' intention to make online purchases (Ahn et al., 2007). As such, these previous findings provide further support for the use of the ISS model of DeLone and McLean (2003), which considers customer satisfaction as a function of three dimensions and influences purchase intention.

Since OFD success factors are proposed to influence cognitive responses of consumers and individuals' inner mental processes are referred to as cognitive states (Eroglu et al., 2001), brand image is assumed to be one of the cognitive states in this study. The term "brand image" refers to a collection of expectations about a brand expressed in the brand relationships that customers remember (Jin et al., 2012). Regardless of conceptual differences, marketing practices, qualitative factors, and the attributes of each consumer directly influence and shape brand image. Thus, brand image is critical, particu-

larly when distinguishing goods or services focused on tangible quality measures is difficult (Yi et al., 2018). Furthermore, since a restaurant's brand image is often beyond measurable or observable considerations, a good brand image is critical to the growth of foodservice businesses, as it helps consumers in visualizing and thereby forming favorable feelings about services prior to purchase (Jin et al., 2012). Brand image has become a key topic in customer behavior analysis since it influences individuals' emotional expectations and consumers' senses of meaning, happiness, and subsequent behavior (Manhas & Tukamushaba, 2015). For instance, restaurant image has been found to positively affect customer responses that are perceived value, satisfaction, and purchase intention (Ryu et al., 2012). In addition, as a part of brand equity, brand image is further proposed to be essential factors in understanding customer trust and loyalty (Surucu et al., 2019).

Since this study employs DeLone and McLean's Information System Success Model, with the SOR paradigm, the paper should address the relationship between three dimensions of e-commerce system quality (information quality, system quality, service quality) in the sense of brand image in order to develop hypotheses. A core aspect of consumer purchasing behavior is the evaluation of expectations about the information quality on the internet. Once consumers perceive the information that suits their desires and needs, they will verify the value of any goods or services according to their purchasing criteria. Wu and Wang (2011) suggest that information content will create a brand perception of consumers. If the message is adversely affected, it will minimize and reverse the attitude toward brands. Likewise, Atika et al. (2016) revealed that quality of information has a positive and significant influence on brand image.

In addition to information quality, poor system features like lack of response, usability, and suitability prevent customers from using a website and lead to a decrease in sales (DeLone & McLean, 2003). Furthermore, since online purchases are perceived to be risky processes, system quality is suggested to be an essential factor to positively influencing customers' perceptions (Cho et al., 2014). Moreover, system quality also has the potential to

result in favorable senses and intuitions about online service providers (Lim, 2003). Thus, the role of system quality is critical, especially in food ordering, because restaurants' reputations can suffer if they cannot perform or provide suitable system quality to their customers. Likewise, this study assumes that a well-designed system quality may lead to a favorable brand image in the eyes of customers, which is a significant task to accomplish to achieve operational success.

Lastly, according to DeLone and McLean (2003), service quality is a key to e-commerce performance. In a traditional commerce setting, many researchers found that quality of service had a substantial positive effect on the image, and a positive image had a positive impact on customer satisfaction. While Manhas and Tukamushaba (2015) revealed that service quality has an effect on brand image in the hospitality sector, Park et al. (2005) provided further support for the positive influence of brand image on behavioral intentions in the airline industry. Similarly, Ryu et al. (2012) suggested that foodservice quality dimensions impact restaurant image. In addition, Slack et al. (2021) specified that restaurant service quality could affect image, and, therefore, customer satisfaction. For the e-commerce setting, service quality is more about communication with customers as well as services provided during online purchase transactions (Ahn et al., 2007). Even though no previous research reported on the relation between service quality and brand image in an online setting, Wang et al. (2019) validated the significant impact of service quality on the value derived by customers using online food ordering systems. Hence, increased perceived value may also lead to a favorable image of the online system.

Consistent with the SOR paradigm, consumer responses refer to actions that occur as a result of affective and cognitive states. Actually, these consumer responses are proposed to be approach behaviors such as purchase intentions and satisfaction (Eroglu et al., 2001). Since brand image is also formed due to cognitive processes, this study assumes that customer responses may be a function of brand image. More specifically, positively assessed brand image may improve customers' motivation to purchase, their satisfaction, and loyalty (Jani & Han, 2011).

Purchase intention refers to the likelihood that customers may intend to buy a specific good or service in the future (Bagozzi & Burnkrant, 1979). A rise in purchase intention indicates an increase in the likelihood of making a purchase. Therefore, purchase intention may be a critical proxy for predicting customer behavior. When customers have a strong purchasing intention, they develop positive brand loyalty, which motivates them to make an actual purchase (Wen, 2012). In a similar vein, Sohn et al. (2020) suggest that the brand image has a favorable effect on buying behavior, and brand image has an influence on the online purchase intentions.

In addition to purchase intention, consumer satisfaction indicates how well a company's goods and services match or exceed customer expectations (Myers, 1991). Hence, satisfaction is a retrospective assessment of a product's success related to the customers' expectations, and consumer satisfaction exists as long as their experience exceeds expectations. Based on a post-evaluation of the customers' encounter with a product or service, customers' satisfaction levels can be captured as positive, negative, or indifferent (Suhartanto et al., 2018).

In addition to purchase intention, many academics believe that brand image is a major indicator of consumer satisfaction. For example, Giebelhausen et al. (2016) provided empirical support that brand image results in positive evaluations of restaurant service. In addition, in a coffee-shop setting, a more favorable brand image results in higher customer satisfaction (Kim & Jeon, 2015). Moreover, Song et al. (2019) evidenced a significant effect of brand image on satisfaction and trust. In addition to these previous findings in the food and beverage industry, as a part of the hospitality sector, brand image is further proposed to be a predictor of customer satisfaction in hotels (Lahap et al., 2016).

Similarly, Ko and Lee (2011) revealed that brand image has an important impact on customer satisfaction, while customer satisfaction substantially impacts repurchase motive. This finding is also supported by another study, which argues that perceived restaurant brand quality and image influence customer satisfaction and loyalty (Axala, 2020). That is, customers who have a positive



brand image are more likely to be satisfied as well as to patronize the service provider. Hence, customer satisfaction can be a crucial factor in understanding customer behavioral intentions and can be extended to online settings.

## 2. AIM AND HYPOTHESES

The purpose of the current study is to understand the role of online food ordering experience on brand image, which, in turn, affects customer satisfaction and purchase intention. Specifically, first, this study aims to investigate how experience with OFD services translate into brand image. Second, it seeks to understand the role of brand image in explaining customer satisfaction and behavioral intention. As a result, built on the stimulus-organism-response (S-O-R) framework (Mehrabian & Russell, 1974) as well as Update Success Model of DeLone and McLean's Information Systems (DeLone & McLean, 2003), the study proposed the following hypotheses and research model:

- H1: Information quality of OFD systems is positively related to brand image.*
- H2: System quality of OFD systems is positively related to brand image.*
- H3: Service quality of OFD systems is positively related to brand image.*
- H4: Brand image positively influences purchase intention for OFD systems.*
- H5: Brand image positively influences customer satisfaction with OFD systems.*

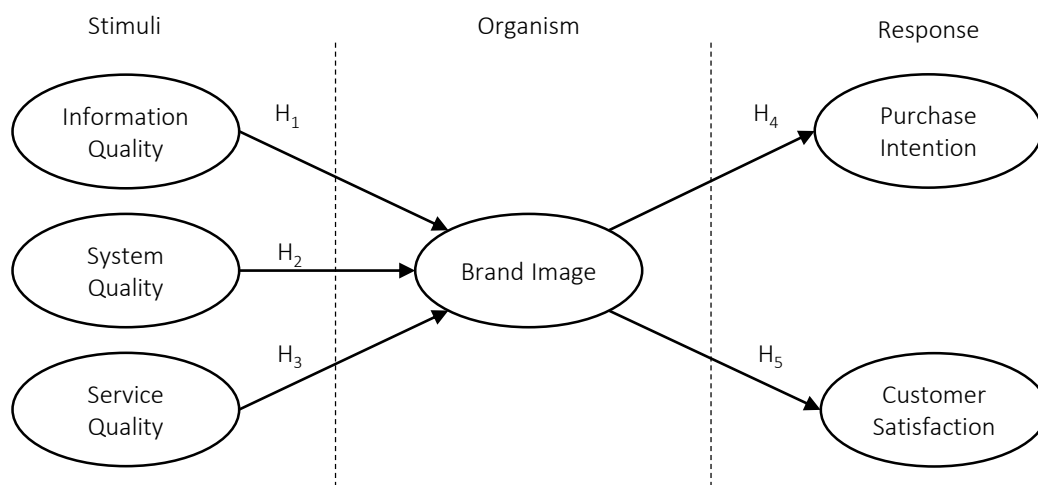
*H5: Brand image positively influences customer satisfaction with OFD systems.*

## 3. METHODS

The current study conducted an online self-administered questionnaire built on the Google survey platform for the data collection phase. Since the purpose is to understand the effect of OFD system experience, only those who already use OFD systems for their meal purchases are included in the survey. Therefore, the survey first included a qualifying question, which asked respondents whether they had used any online food ordering system within the last month. Moreover, the questions are translated into Turkish using the back-translation method because the questionnaire is administered in Turkey. The survey instrument included 5 different sections.

The items from sections 1 to 4 were measured on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Respondents were asked to indicate their level of agreement for each item from strongly disagree to strongly agree. For the last section, the survey included questions to understand the demographic profile of the study sample.

In the first section, participants were asked about their perceptions regarding information quality, system quality, and service quality of the food delivery system. The measurement items for these three variables were adopted from Wang et al.



**Figure 1.** Proposed research model

(2019). The second section included three items to measure brand image (Yang & Ha, 2014). The third and the fourth sections asked participants to evaluate their satisfaction with OFD system as well as to indicate their intention to use respectively. The measurement items for these two variables were adopted from Wang (2008). Lastly, the fifth section included demographic questions including gender, age, marital status, level of education, and income.

For the sampling, this study targets the consumers who had experience with online food delivery systems before. Since the sampling frame is not available, a web-based survey is conducted to customers using convenience sampling as a non-probability sampling method. The sample included respondents who use the OFD applications in Turkey. In addition, participants were selected from the three largest cities of Turkey, namely İstanbul, Ankara, and İzmir. The reason for choosing these three cities is that they are the most crowded cities in Turkey, and in line with their population, they count for the highest number of online food orders. In total, 506 questionnaires were distributed to potential participants. In the end, 318 surveys were returned from study participants.

Regarding the data analysis, data were first checked for non-response bias to deal with missing values. The study employed a list-wise deletion method to deal with missing values in the surveys. Even though it is sometimes argued that the method may cause loss of information, other methods are not superior to list-wise deletion (Allison, 2002). In the end, 251 questionnaires are identified as usable for further data analysis.

In the preliminary data analysis stage, univariate analysis was performed to calculate the descriptive statistics of observed variables and get the respondents' demographic profile. To assess the reliability and validity of the measurement model, confirmatory factor analysis (CFA) using the estimation method of maximum likelihood with robust standard errors (MLR) was applied. Lastly, the study conducted structural equation modeling to test the proposed research model and hypotheses. Precisely, the MLR estimation method was followed to verify the structural

model. For the data analysis phase, data were processed with the statistical package SPSS 25.0 for descriptive analysis. The study also used Mplus7 to analyze measurement and structural models.

## 4. RESULTS

This section reports the demographic profile of the respondents, results of the measurement model, and the structural model. First of all, Table 1 shows that females represent 43% and males represent 57% of the study sample. Furthermore, more than half of the participants are between the ages of 18 and 35 (62.2%), followed by groups of 36-45 (20.3%), and 46 or above (17.5%). For marital status, 52.6% of the respondents are married, and 47.4% are single. Most of the participants hold bachelor's degrees (53.8%), followed by people who have high school (20.7%), graduate (18.3), and pre-college degrees (7.6%). Lastly, for the income level, 42.2% of the respondents have a monthly income level between 1,000 TL and 3,000 TL. Respondents with a monthly income level between 3,001 TL and 6,000 TL, as well as 6,001 TL and 9,000 TL account for 42.2 % of the sample. Moreover, 15.6% of the participants reported their monthly income of more than 9,000 TL.

**Table 1.** Demographic profile of respondents

Variable	Categories	N	%
Gender	Male	143	57.0
	Female	108	43.0
	Total	251	100
Age	18-25	74	29.5
	26-35	82	32.7
	36-45	51	20.3
	46 or above	44	17.5
	Total	251	100
Marital Status	Single	119	47.4
	Married	132	52.6
	Total	251	100
Education Level	High School	52	20.7
	Pre-College	19	7.6
	Bachelor	134	53.4
	Graduate	46	18.3
	Total	251	100
Income (TL)	1001-3000	106	42.2
	3001-6000	52	20.7
	6001-9000	54	21.5
	9001 or above	39	15.6
	Total	251	100

This study followed a two-step method to test the conceptual model and hypothesized relationships (Anderson & Gerbing, 1988). The first step was to conduct a confirmatory factor analysis (CFA) on the variables of the study to check the reliability and validity of the measurement model. The results of CFA displayed a good fit of the model to the data based on the model-fit indexes of  $\chi^2$  (df = 137) = 270.815,  $p < .001$ ; comparative fit index (CFI) = .954; Tucker-Lewis index (TLI) = .943; standardized root mean residual (SRMR) = .033; and root mean square error of approximation (RMSEA) = .032 (Hu & Bentler, 1999). The reliability and validity of the constructs were checked by factor loadings, composite reliability values, and average variance extracted (AVE). As reported in Table 3, all-composite reliability scores were between 0.83 and 0.93, representing the internal consistency of measurement items for each construct (Hair et al., 2010).

Furthermore, convergent validity was assessed by factor loadings and average variance extracted. The standardized factor loadings of measurement items depicted in Table 3 were higher than 0.50, which meets the criteria of the cut-off level for acceptable factor loadings (Chen & Tsai, 2007). Likewise, as indicated in Table 2, the AVE values of all constructs were also higher than the recommended level of 0.50. Lastly, the discriminant validity is assessed by comparing the square root of the AVE value against the correlations of each construct in Table 2 (Fornell & Larcker, 1981).

**Table 2.** Composite variable – construct correlations and average variance extracted (AVE)

Correlations between latent constructs							
Constructs	1	2	3	4	5	6	AVE
Information Quality	1.00						0.72
System Quality	.77	1.00					0.64
Service Quality	.66	.71	1.00				0.83
Brand Image	.58	.63	.60	1.00			0.63
Customer Satisfaction	.30	.33	.31	.52	1.00		0.78
Purchase Intention	.39	.43	.40	.67	.55	1.00	0.63

**Table 3.** Measurement model results

Construct	Composite Reliability	Standardized Factor Loadings
<b>Information Quality</b>	<b>.88</b>	
The OFD system provides precise information you need		.849
The OFD system provides sufficient information		.899
The OFD system provides up-to-date information		.803
<b>System Quality</b>	<b>.87</b>	
The OFD system is user-friendly		.812
The OFD system is easy to use		.866
The OFD system has reliability without errors		.674
The OFD system has high efficiency		.845
<b>Service Quality</b>	<b>.93</b>	
When I have a problem, the OFD system service shows a sincere interest in solving it		.884
I feel safe in my transaction with this OFD service in terms of security and privacy protection		.924
The OFD service gives you individual attention		.927
<b>Brand Image</b>	<b>.83</b>	
I always have a good impression of the OFD system		.831
The OFD system has a good image in the minds of consumers		.762
I believe that the OFD system has a better image than its competitors		.798
<b>Customer Satisfaction</b>	<b>.91</b>	
I am satisfied with the OFD system		.885
The OFD system meets my expectations		.897
Overall, I am satisfied with the products/services of the OFD system		.865
<b>Purchase Intention</b>	<b>.84</b>	
Assuming I want to order meals, I intend to reuse the OFD system		.758
I will reuse the OFD system in the future		.824
I will continue to use the OFD system to order meals in the future		.814

After performing CFA, the study tested the structural model as the second step. To estimate the model, this study adopted Satorra-Bentler procedure in Mplus (Satorra & Bentler, 2001) since the procedure is robust against non-normality and multicollinearity. According to cut-off values suggested by Hu and Bentler (1999), the proposed structural model repre-



sented a good fit to the empirical data ( $\chi^2 = 278.871$ ,  $df = 416$ ,  $p < .001$ ; CFI = 0.954; TLI = 0.944; RMSEA = 0.039; SRMR = .033). The results of path coefficients and their significance are all reported in Table 4. The findings indicated that path coefficients from system quality and service quality to brand image were all significant supporting H2 and H3 (H2,  $\gamma_{12} = .329$ ,  $t = 3.480$ ,  $p < .01$ ; H3,  $\gamma_{13} = .304$ ,  $t = 2.316$ ,  $p < .01$ ). That is, system quality and service quality of OFD system have a positive influence on brand image of consumers. On the other hand, this study could not find a significant relationship between information quality and brand image (H1,  $\gamma_{11} = .172$ ,  $t = 1.943$ ,  $p > .05$ ). Hence, two constructs, namely the system and service quality explained 46% of the variance in brand image ( $R^2 = 0.459$ ). Lastly, for the effect of brand image on customer satisfaction and purchase intention, all path coefficients were found to be statistically significant, which supported H4 and H5 (H4,  $\beta_{21} = .554$ ,  $t = 7.944$ ,  $p < .01$ ; H5,  $\beta_{31} = .493$ ,  $t = 7.460$ ,  $p < .01$ ). As such, the results suggested that if consumers have a more favorable brand image of OFD system, then their satisfaction and purchase intention will also be increased. Brand image explained 34% of customer satisfaction ( $R^2 = .338$ ) and 22% ( $R^2 = 0.216$ ) of purchase intention.

In addition to testing the proposed conceptual model, this study further analyzed the mediating effect

of brand image between OFD system success factors and customer satisfaction as well as purchase intention. Mplus was used to perform the bootstrapping analysis by setting bootstrap samples at 1,000 with a confidence level of 95%. As Table 4 presents, the indirect effects from system quality and service quality to customer satisfaction and purchase intention were found to be significant through brand image. However, the results could not provide support for the mediating effect of brand image between information quality and customer satisfaction as well as purchase intention. Hence, this result can be interpreted as follows. Brand image mediated the effect of both system quality and service quality on satisfaction as well as on purchase intentions of customers for OFD system.

## 5. DISCUSSION

Empirical findings of this study validate the argument that online brand experience is vital in an online purchase setting. To the best knowledge, even though no previous research has investigated the role of OFD system success factors in explaining brand image, there is a general agreement among researchers on the importance of brand experience in an online environment. For instance, Ha and Perks (2005) posit that consumers will be more willing to use websites delivering a positive brand

**Table 4.** Results of path analysis

Path to	Path from	H <sub>0</sub>	Std. Coeff.	t-value
<b>Direct Effects</b>				
Brand Image	Information Quality	H1: Not Supported	.172	1.943
Customer Satisfaction			.095	1.912
Purchase Intention			.107	1.940
Brand Image	System Quality	H2: Supported	.329	3.480**
Customer Satisfaction			.182	3.116**
Purchase Intention			.205	3.176**
Brand Image	Service Quality	H3: Supported	.304	3.316**
Customer Satisfaction			.168	2.962**
Purchase Intention			.189	3.108**
Customer Satisfaction	Brand Image	H4: Supported	.554	7.944**
Purchase Intention		H5: Supported	.493	7.460**
<b>Indirect Effects</b>				
Customer Satisfaction	Information Quality		.056	1.692
	System Quality		.106	2.320*
	Service Quality		.098	2.335*
Purchase Intention	Information Quality		.043	1.727
	System Quality		.083	2.618**
	Service Quality		.077	2.660**

Note:  $p^* < .05$ ,  $p^{**} < .01$ .

experience, which could be defined as positive navigations using website functions. Similarly, in their research on online-offline brand image congruity, Lee and Jeong (2014) acknowledged the importance of both two types of images for brand experience. Additionally, Ali (2016) reported that hotel website quality positively influences customers' perceived flow, contributing to satisfaction and purchase intention. Considering the conceptualization of perceived flow, it is defined as "the state occurring during network navigation which is: characterized by a seamless sequence of responses facilitated by machine-interactivity; intrinsically enjoyable; accompanied by a loss of self-consciousness; and self-reinforcing the holistic experience that people feel when they act with total involvement" (Hoffman & Novak, 1996, p. 57). The positive impact of OFD system success factors on brand image could be explained through customers' positive experience while using the system. This argument could be further supported by the influence of customer's buying decision process on brand experience. Thus, information search, evaluating alternatives, and purchasing during the buying process help form the brand experience for consumers (Schmitt & Rogers, 2008).

Moreover, emotional connections between customers and brands are the function of positive interactions with a brand (Fournier, 1998). Hence, the positive experience resulting from the use of OFD system attributes might also be the reason for the effect of OFD system on brand image. However, regarding OFD system success factors, only two of them, namely the service and system quality, are found to have a significant impact on brand image. That is, one could not assess any relationship between information quality and brand experience.

Similarly, this study could not provide any support for the effect of information quality on both satisfaction and purchase intention of consumers. On the one hand, these findings contradict the results of a stream of research proposing information quality as an essential factor in website or system success. For example, in their study of website quality evaluation, Sun et al. (2016) determined information quality as the most crucial attribute. Likewise, information quality is further suggested to positively influence satisfaction, which, in turn, affects purchase intentions (Zheng et al., 2013).

On the other hand, these findings are also consistent with another stream of past studies indicating that information quality had no significant effect on satisfaction. For instance, Hsu et al. (2018) evidenced the positive influences of only system and service quality on customer responses for social shopping. Specifically, for online food ordering, Wang et al. (2019) could not find a significant effect of information quality on customer satisfaction. One possible explanation suggested by previous studies for the insignificant influence of information quality is the context of the IS used for online purchases (Wang et al., 2019). Zheng et al. (2013) researched the travel market, which highly depends on the quality of information. Hence, the insignificant role of information quality for brand image, satisfaction, and purchase intention could be explained around the concept of familiarity with service offerings. As indicated by Gefen (2000), in an online-shopping setting, customers will be more trusting to the vendors they are familiar with. As such, information quality may not be so important for online food ordering since customers would be more likely to have familiarity with the foodservice providers in their neighborhood.

Concerning the effect of brand image on customer satisfaction and purchase intention, this study evidenced that brand image is a significant predictor of customer satisfaction and purchase intention. Even though no previous research has investigated the effect of brand image on satisfaction and usage intention in an online setting, this finding is consistent with the results of prior studies to some extent. For instance, Morgan-Thomas and Veloutsou (2013) found that online brand experience positively influences satisfaction and usage intention. Similarly, Ha and Perks (2005) reported that online brand experience positively contributes to the satisfaction of customers. Since the brand experience is the result of positive navigations with the online system (Ha & Perks, 2005), brand image evolved around a positive experience with OFD system attributes could result in satisfaction as well as purchase intention of consumers. Taken together, the results imply that brand building in online food delivery environment is crucial for OFD firms. As suggested by Christodoulides (2009), strong brands could serve as assets for companies in an unknown and rapidly changing online business settings.

## CONCLUSION

To sum up, the primary purpose of this study was to investigate how OFD system experience of customers affects their brand image and to evaluate the influence of brand image on customer satisfaction and purchase intention. Therefore, this study developed and tested an online delivery system success model built on the stimulus-organism-response (S-O-R) framework to extend Update Success Model of DeLone and McLean's Information Systems by introducing brand image. The empirical results show that while system and service quality positively contribute to brand image, information quality does not have any significant effect on brand image of consumers.

Moreover, as expected, brand image positively influences satisfaction and purchase intention. Lastly, the findings also provide partial evidence for the mediating role of brand image. That is, this study confirms the mediating role of brand image as the organism in affecting customer responses. Thus, one may further argue that brand image represents the emotional reaction developed by a positive evaluation of OFD system success factors.

The findings of this study further indicate that OFD systems first need to focus on service quality and system quality issues. As such, OFD systems should ensure that the system is easy to use, efficient, reliable, and user-friendly. The results also indicate that OFD companies should devote their efforts to build a strong brand image to increase the reuse of online food delivery systems. Moreover, this study suggests that OFD systems should pay more attention to emotional benefits rather than functional aspects.

Lastly, this study also offers implications for restaurant firms. That is, restaurateurs should choose food delivery service firms that have a strong brand image in the food delivery markets. Hence, restaurant firms need to check the food delivery system factors by focusing on service and system quality attributes of OFD companies.

## AUTHOR CONTRIBUTIONS

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Methodology: Ezgi Erkmen.

Project administration: Ezgi Erkmen.

Resources: Ezgi Erkmen, Nida Turegun.

Software: Ezgi Erkmen.

Supervision: Ezgi Erkmen.

Validation: Ezgi Erkmen.

Visualization: Nida Turegun.

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