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Understanding the Effects of Reservation Systems and Online Transaction Capacity on the Competitiveness of Travel Agencies

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Abstract: The purpose of this study is to determine the effect of travel agencies' reservation systems and online transaction capacities on their competitiveness. With the developments in technology and the integration of these developments in all business areas, travel agencies have also had to benefit from information and communication technologies. In the research, the primary data were used, and the data were collected by the questionnaire method. The convenience sampling method was used, and data were collected from a total of 566 travel agency managers in Istanbul. According to the results of the research, reservation systems and online transactions capacities of travel agencies affect their competitiveness. Reservation systems and online transactions capacities of travel agencies affect their competitiveness in specific issues such as cost, service quality and market share. Although appropriate and enlightening results were obtained regarding travel agencies technological capacity and competitiveness, research was carried out on the perceptions and evaluations of the managers in this study. In this context, in future studies, studies can be conducted on the relationships between measurable quantitative variables such as the online transactions of travel agencies and the capacity and transaction volume of reservation systems and competition structures. The study reveals that the traditional office travel agencies should be more successful than their competitors in terms of reservation systems and online transaction capacities to gain affordable cost, quality service and more market share.

Keywords: Reservation Systems, Online Transactions, Travel Agencies, Competitiveness.

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1 Introduction

In the information age, in which globalisation and technological development gained momentum, economic, cultural, and social changes have occurred in social life (Castells, 1997). As a result of this change, an "information society" has emerged, which can easily access the most up-to-date information, use the most up-to-date technology, and achieve success more easily (Yüksek, 2013b). Information is now the product itself sold and the fact that information is the subject of trading makes information more valuable (Özer et al., 2003). New approaches have been developed around the world regarding the sustainable management of information and information society (Bauer, 2022). It is important for businesses to manage information using technology and to gain competitive advantage (Lyon & Ferrier, 2002).

With technology becoming a part of life, there have been changes in the supply and demand for tourism (Bojnec & Kribel, 2004). Developments in information and communication technologies since the end of the twentieth century have also changed people's wishes, needs, and expectations. Today's tourists, who are more knowledgeable, more willing, more educated, and more experienced, naturally seek better quality service (Hassan & Uşaklı, 2013). In the 21st century, people almost lead an "online life". People can conduct their legal transactions online, manage their money, access any information, shop, and socialise online. People can

even participate in tourism activities on online platforms. They can visit a museum, a hotel, or a city from wherever they are; can watch the view of the Earth from space. In short, almost everything used in daily life has adapted to new technology.

Competition power is the ability of a business to increase its market share in global markets by making the products or services offered more suitable than its competitors in terms of factors such as price, quality, attractiveness, innovation and reliability (Fernández et al., 2020). Competitiveness may be due to the low production costs of the enterprises, or it can be achieved by quality, which is a non-price element (Aiginger, 1997). According to Porter (1990), the ability of a business to provide its own competitiveness depends on the competency and strategies of the business. To ensure the continuity of the sector, businesses need to keep their competitive power, keep up with the age of technology and use their resources in this direction. Because the age we live in is the age of information technologies and technology has become an indispensable part of life beyond being a helper. The adoption and implementation of an innovative approach is the necessity of the age. Businesses that act with this awareness go to innovative searches to provide better service to consumers and to have higher value with their resources and expertise. In this sense, it is not possible for every business that wants to keep up with the times, to differentiate from its competitors and to maintain its existence, to stay away from the latest technologies.

In recent years, the use of information and communication technologies by travel businesses has frequently increased to scientific research (Dini et al., 2022; Girish et al., 2022; Labunska et al., 2022; Matešić et al., 2022). However, studies on the competitiveness of technological developments and travel businesses are limited. Yet, traditional office-based travel agencies face the danger of falling behind in the competition (Şengel et al., 2022). Academic studies (Sharma et al., 2020; Xue et al., 2022) say that travel agencies must use technology to maintain their competitive advantage. From this point of view, in this study, it is aimed to investigate the role of reservation systems and online transactions on the competitiveness of travel agencies. Developments in information and communication technologies and individualised social (online) platforms make direct marketing increasingly common. Thus, the technological capabilities of businesses that stand out with their intermediary features in the marketing system, such as travel agencies, are gaining importance. This study fills the gap regarding the determination of technology capabilities of travel agencies with the variables of reservation systems and online transactions.

2 Theoretical Background and Hypotheses

2.1 Online transactions and competitiveness

The spread of the Internet and its adoption by businesses, technology has become the most important source of sustainable competitive advantage in the tourism and travel sector (Buhalis & Main, 1998). Especially after the emergence of COVID-19 (World Health Organization, 2020) in Wuhan, China in December 2019, the use of digital technologies such as remote appointments, touch access technologies and online systems have increased in travel businesses; The role of in-store technologies has become more important (Silva et al., 2021; Dini et al., 2022).

Advances in technology, the websites of travel agencies have started to be used more and more in line with reservations and other online transactions. Studies show that internet-based systems are the most important resources for consumers to acquire information, make travel decisions, and exhibit purchasing behaviour (Ateş & Boz, 2015). In the tourism market, where the intensity of competition is increasing, travel businesses need to benefit from technology so that they can provide changing customer profiles, reach new markets, ensure their continuity in the market, gain competitive advantage, and increase their profitability (Yüksek, 2013b; Gökdemir & Erdem, 2017; Lin, 2017; Zeylan & Öztürk, 2019). However, if businesses do not realise the electronic transformation, which is the necessity of the age, they will lose their competitive advantages (Sarı & Kozak, 2005; Tseng et al., 2008).

Despite the positive developments, the reliability of online comments, their perceptions and online travel reviews have begun to gain importance, especially in recent times when tourists have become content producers. Guo et al. (2021) emphasise that technological developments manifest themselves through online comments of travellers and reveal that these comments can play a role in the competitiveness of destinations and travel businesses. Zhou et al. (2022) state that online content directly affects travel behaviour by causing major changes in consumer perceptions. There is also a considerable amount of literature on online travel reviews on this situation (Ling et al., 2015; Fazzolari & Petrocchi, 2018; Su et al., 2022).

Information and communication technologies (ICT) in tourism marketing and management serve the development of tourism destinations, tourism businesses and tourism products and support their competitiveness by offering new tools (Buhalis & Law, 2008; Buhalis, 2019). In

such a new order in which wearable technologies (Kalantari, 2017), artificial intelligence (Solakis et al., 2022), smart systems (Atembe, 2015) and virtual reality applications (Oncioiu & Priescu, 2022) are used in the tourism industry, maintaining only traditional ways to provide services means not keeping up with the times and not being able to respond to the demands and expectations of the consumers. In this sense, businesses need to go beyond having computers, faxes, and printers. Travel businesses, which are part of the service sector, must keep up with the information age in order not to lag behind their competitors. It is inevitable for these enterprises to use technological tools to survive in the fiercely competitive market of the globalising world. Potential customers exhibit online purchasing behaviour without ever leaving their homes; it is necessary to be able to respond to their behaviour with online transactions. In the context of the theoretical background discussed here, the following hypotheses were developed and tested within the scope of the study:

H_1: The online transaction capacity of travel agencies has a positive impact on their service quality.

H_2: The online transaction capacity of travel agencies has a positive impact on their costs.

H_3: The online transaction capacity of travel agencies has a positive impact on their market shares.

2.2 Reservation systems and competitiveness

In this era where technology is at the centre of life, accessing, utilising, and processing information is essential for the tourism industry, as well as for other industries. Recent global economic dynamics, coupled with the pervasive influence of the Internet, have brought about profound changes in information-intensive sectors such as tourism (Xie et al., 2020). The tourism industry has transformed into a 'highly knowledge-based industry' (Hallin & Marnburg, 2008). This transformation has heightened the multifaceted competitive environment in the tourism industry (Bahar & Kozak, 2005; Buhalis, 1998; Tseng et al., 2008; Gursoy et al., 2009).

The most significant factor intensifying competition within tourism enterprises is the implementation of various innovations (Bilgihan & Nejad, 2015). To thrive in this fiercely competitive environment, tourism enterprises must effectively and efficiently harness technology. In other words, businesses can stay competitive in this new landscape by staying open to and adopting new developments.

In the tourism industry, information technologies are frequently used especially in accommodation, travel and food and beverage businesses, providing great convenience in the areas they serve. There are three important developments in the use of information technologies in tourism: computerised reservation systems (CRS) in the 1970s, global distribution systems (GDS) in the 1980s, and the use of the internet in the tourism sector from the 1990s (Buhalis, 1998; Şengel, 2021). However, the point reached today is much more than that. Information and communication technologies enable increased efficiency (Yolal, 2003), reduce costs (Gürbüz & İnce, 2016), and provide information flow (Sharma et al., 2020) in management, production, and quality processes. With smart systems, which is one of the latest examples of information technologies in tourism, various operations such as planning, reservations, and payments can be carried out (Glushkova et al., 2018); It can reach its customers without restriction of space (Ansen & Fırat, 2009). The fact that consumers can make price comparisons and make reservations more easily on the internet directs them to digital channels (Malik & Sharma, 2019). Companies strive to provide the best service to their customers by using technology to their advantage. In this way, they can expand their markets and gain an advantage over their competitors. In the context of the theoretical background discussed here, the following hypotheses were developed and tested within the scope of the study:

H_4: The reservation system capacity of travel agencies has a positive impact on their service quality.

H_5: The reservation system capacity of travel agencies has a positive impact on their costs.

H_6: The reservation system capacity of travel agencies has a positive impact on their market shares.

3 Methodology

3.1 Research design and model

Within the scope of this research, a model that reveals the relationship between the level of information and communication technologies usage of traditional office travel agencies and their competitiveness is tested. In this context, online transactions and reservation systems, which enable travel agencies to gain competitive advantage by facilitating their activities, were included as independent variables in the research design. The dependent

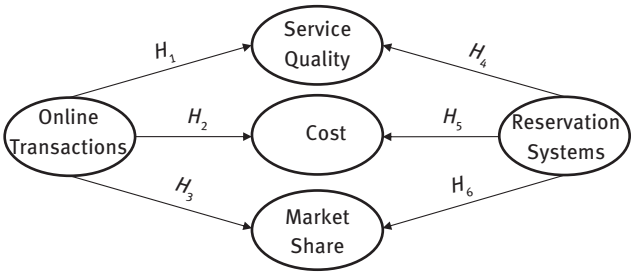

Figure 1. Research Model

variables of the research design are the variables that affect the competitive power such as service quality, cost and market share. These variables are related to the factors that reflect the demand, cost and competitor-oriented perspective that affect the pricing policies of travel agencies. In the light of this information, the model to be tested within the scope of the study is given in Figure 1.

3.2 Questionnaire, sampling, and data collection

In the study, data were collected through field research, wherein researchers were directly involved in the data collection process to obtain primary data. A survey, the most suitable tool among quantitative research methods for primary data sources, was employed to gather data. The questionnaire form used in the research consists of three sections: demographic information, information and communication technologies, and competitiveness. The measurement tools used for information and communication technologies and competitiveness variables were designed to receive answers rated with a 5-point Likert type (Strongly Disagree-Strongly Agree). The questions constituting the dimensions of online transactions and reservation systems related to the scale of information and communication technologies taken from the study conducted by Tatar (2012). The competitiveness scale was obtained from the study carried out by Coşar (2006). Managers of travel agencies operating in Istanbul made evaluations regarding their level of use of information and communication technologies and their competitiveness.

While the general population of the study are travel agency businesses, the research population are travel agencies operating in Istanbul. There are three legal classifications regarding travel agencies in Turkey according to their operating capacity. These are A, B, and C. The authority to organise both national and international tours belongs only to Group A travel agencies. Group B travel agencies provide reservation and ticket sales services for transportation vehicles and the sale of tickets for tours organised by other agencies. Group C agencies organise and market domestic tours for Turkish citizens. In study, since national and international tour organisation authorisation is sought, Group A travel agencies, which are a legally classified agency group authorised to make these tours in Turkey, were included in the study. Relevant institutions were consulted while making sampling calculations. However, due to the "Personal Data Protection Law", the current data of the number of agencies operating in Istanbul, which is the research universe, were not shared by the authorised units in Istanbul and Turkey. In this context, two different strategies were used. First, it was aimed to reach 290 participants, which is 10 times the number of expressions (29X10), which is the minimum sample required by the Smart-PLS program where the data will be analysed. However, there are generally many travel agencies in Turkey. It is known that Istanbul has an important share among these agencies. For this reason, in the study, a plan was made to reach the number of 384 samples sought for an infinite number of research universes. The offices of group A travel agencies were visited, and data were collected from their managers. Generally, senior managers were reluctant to participate in the data collection process and made referrals to middle or lower-level managers. The data collected were between March 1 and September 1, 2022. Data were collected by the convenience sampling method and from 566 participants in total.

3.3 Data Analysis

The Smart-PLS program, which is a PLS-Sem statistical program, was used in the analysis of the data. Smart-PLS is frequently preferred in SEM studies due to some of its features and benefits. Although the program is strong in model estimation, it is frequently preferred because it is not sensitive to the normality condition, extends a flexible understanding, and works in small samples (Hair et al., 2012).

4 Results and Findings

4.1 Descriptive Statistics

A significant participation was ensured in the data collection process and the demographic information of the participating agency managers is given with the help of Table 1. It was concluded that the participants were mostly male and middle-aged. According to agency ownership

type data, Table 1 shows that the majority of the participants (83.9%) work in group A travel agencies and they have experience in the sector for more than 5 years (76.9%). The fact that there are many participants in group A agencies, this type of agency has national and international organisation authority, and the fact that most of the agencies in Turkey in this group have an important role.

Although the duties of the participating agency managers in the management level are generally close to a balanced distribution, it is seen that the Junior administrative officer are more (43.6%). The most important reason here is the attitudes of travel agencies in the data collection process. Even if the businesses are middle and top-level managers, it has ensured that Junior administrative officer managers participate in the data collection process. Almost half (50.5%) of the enterprises that participated in the data collection process at the managerial level consist of domestic independent enterprises. Finally, it was determined that the participants generally received education at associate and undergraduate levels (64.0%). While 20.0% of the participants have a high school or equivalent education level, those with postgraduate education make up only 6% of the participants. It is surprising that there were so many people with a high school or equivalent education level and so few with a postgraduate education level. However, it is thought that the gradual increase in educational institutions in this field in Turkey may lead to positive developments in this regard.

Table 1. Descriptive Statistics of Participants

Variables	N	%
Gender	,--	--
Female	265	46,8
Male	301	53,2
Age groups	--	--
30 age and below	157	27,7
31–45 age	339	59,9
46 age and above	70	12,4
Agency Ownership Type	--	--
Family Business	175	30,9
Domestic Independent Business	286	50,5
Franchise Business	105	18,6
Administrative Level	--	--
Top executive	170	30,0
Mid-level director	149	26,4
Junior administrative officer	247	43,6
Educational Status	--	--
High schools and their equivalents	113	20,0
Associate degree	196	34,6
Undergraduate/degree	223	39,4
Postgraduate	34	6,0
Agency Type	--	--
Group A	475	83,9
Group B	36	6,4
Group C	55	9,7
Period of service	--	--
less than 4 years	133	23,5
5–9 Years	197	34,8
10–19 Years	156	27,6
More than 20 Years	80	14,1

4.2 Measurement Model

In the test of the measurement model, evaluations were made on certain criteria. One of these evaluations is the Confirmatory Factor Analysis given in Table 2. CFA is one of the most important criteria used in SEM studies (Kim & Hall, 2019). The study was evaluated over a five-dimensional structure. Three of the five dimensions are related to competitiveness and two of them are related to technology use. The factor loads of these five structures formed by 26 statements are above 0.60 for three statements, and factor loads of 23 statements are above 0.70. While Smart-PLS finds factor loads above 0.70 sufficient (Hair et al., 2010), it states that factor loads above 0.60 can also be accepted in social sciences. VIF value for all expressions is below 3 which Smart-PLS program accepts for reference. T-values were found to be above 1.96 for all the expressions. These values show that the DFA result measurement model produces compatible results (Doğan, 2019). Table 2 describes the arithmetic mean and standard deviation values for each expression.

Another criterion examined in testing the measurement model is validity and reliability tests. For reliability, all three of the Composite Relability, Cronbach Alpha, and Rho-A tests were examined. According to the results of the three reliability analyses at the bottom of Table 3, the reliability coefficients vary between 0.737 and 0.909. Evaluations of the social sciences and Smart-PLS program indicate that these coefficients are above 0.700 (Campbell & Fiske, 1959; Nunnally & Bernstein, 1994). Under these conditions, the reliability coefficients of the study show that the fit was achieved in testing the measurement model.

The validity tests examined for the measurement model of the study are also given in Table 3. The validity to the first examined within the scope of the study is convergent validity. The mean variance (AVE) extracted for all items within each construct is used as an important indicator of convergent validity. The AVE value is expected to be 0.50 or higher for each construct tested in each model (Hair et al., 2019). This value shows that each construct explains at least 50% of the variances of the

Table 2. Confirmatory Factor Analysis

Dimensions (Structures)	Mean	Std. Deviation	VIF	t-value	Factor Load
Online Transactions					
The online sales system is used effectively by our agency.	3.774	0.962	1.150	7.367	0.611
Collection of the product price in online sales is hassle-free.	3.680	1.049	1.743	50.721	0.906
The refund of the product price in the cancellation of online sales is hassle-free.	3.579	1.028	1.591	13.623	0.785
Reservation Systems					
The use of central reservation system increases competitiveness.	3.754	1.026	1.322	20.032	0.799
Global distribution systems (GDS) (Amadeus, Galileo, Sabre etc.) are required for agents.	3.637	1.039	1.276	14.973	0.750
The use of GDS in our travel agency is sufficient.	3.538	0.99	1.059	8.530	0.612
Service Quality					
It is important to increase the quality of staff.	4.391	0.787	2.270	32.130	0.811
It is important to improve sales and after-sales services.	4.391	0.861	1.857	19.135	0.765
It is important to ensure stability and continuity.	4.431	0.717	1.771	18.925	0.729
It is important that the product or service provided is done on time.	4.404	0.795	2.432	31.044	0.816
It is important to improve the quality of products and services.	4.406	0.839	2.660	28.037	0.823
It is important to provide products and services that comply with standards.	4.345	0.805	1.883	16.921	0.738
It is important to focus on R&D studies.	4.132	0.911	1.710	18.504	0.684
Cost					
Reducing costs is important.	4.213	0.98	2.287	17.836	0.845
It is important to keep production and inventory costs at the lowest level.	4.076	0.992	1.278	13.109	0.746
It is important to create financial opportunities to make new investments.	4.256	0.922	2.257	30.954	0.895
Market Share					
It is important that the production time is short compared to the competitors.	4.360	0.832	1.732	16.533	0.746
It is important to analyse competitor products.	4.266	0.842	1.879	20.973	0.758
It is important to increase product diversity.	4.327	0.85	1.953	20.021	0.769
It is important to improve the brand and company image.	4.510	0.797	1.816	26.714	0.786
It is important that capacity is flexible in the face of supply and demand flexibility.	4.175	0.85	1.648	11.238	0.673
It is important to provide technology transfer.	4.162	0.915	1.410	13.315	0.662

expressions that make up it. AVE values for the 5 structures in this study ranged from 0.525 to 0.690, and these values are in line with the expected criteria. These results show that convergent validity was achieved in the study and the measurement model was compatible in terms of AVE value. Another type of validity examined in testing the measurement model is discriminant validity. First, the Fornell-Larcker Criterion value was examined. For the validity condition, all diagonal values written in bold in the Fornell-Larcker Criterion section in Table 3 are expected to be the highest values in the row and column they are in. Because the correlation of a structure with itself should be greater than its correlation with other structures (Fornell & Larcker, 1981). This criterion was met in the study. Another distinguishing validity value is the Heterotrait-Monotrait (HTMT) correlation ratio. This value is expected to be below 0.90 (Hair et al., 2017). It is seen that all values are below 0.90 for all of the structures in the study. Therefore, the HTMT value also supports that the discriminant validity condition was met in the study. Validity tests also revealed that there is a compatibility in testing the measurement model.

Table 3: Reliability and Validity

	Fornell-Larcker Criterion					*Heterotrait-Monotrait Ratio*				
Variables	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
Service Quality (1)	**0.868**					-				
Cost (2)	0.711	**0.831**				0.846				
Online Transactions (3)	0.379	0.225	**0.777**			0.479	0.285			
Market Share (4)	0.648	0.663	0.306	**0.734**		0.892	0.822	0.395		
Reservation Systems (5)	0.358	0.223	0.417	0.345	**0.725**	0.519	0.335	0.730	0.513	-
Cronbach's Alpha	*0.883*	*0.776*	*0.763*	*0.828*	*0.737*					
Reliability Coefficient (Rho_A)	*0.887*	*0.815*	*0.749*	*0.837*	*0.746*					
Composite Reliability	*0.909*	*0.869*	*0.816*	*0.875*	*0.766*					
AVE	*0.590*	*0.690*	*0.603*	*0.539*	*0.525*					

Table 4: Path coefficients and hypotheses

Hypothesis	**Path Coefficients**	**t-value**	**p-value**	**Supported**	**SRMR**	**NFI**
Online Transactions > Service Quality	0,278	6,048	0,000**	Yes	0.075	0.845
Online Transactions > Cost	0,160	2,937	0,003**	Yes		
Online Transactions > Market Share	0,195	3,818	0,000**	Yes		
Reservation Systems > Service Quality	0,242	4,347	0,000*	Yes		
Reservation Systems > Cost	0,157	2,426	0,015*	Yes		
Reservation Systems > Market Share	0,264	4,463	0,000**	Yes		

*** Significant at the p<0.01 level*

** Significant at the p<0.05 level*

Dependent Variables: Service Quality, Cost, Market and Competitors*; Independent Variables:* Online Transactions, Reservation Systems

4.3 Structural Model

Information on the measurement of the structural model is given in Table 4. Modelfit results were examined for the fit values of the structural model. In this context, the SRMR (RMSEA) and NFI values given with the help of the Smart-PSL program were examined. It is desired that the SRMR value be below 0.08 and the NFI value be above 0.80 (Karagöz, 2017). In this study, the SRMR was determined as 0.075 and the NFI value as 00845. Modelfit values show that the structural results of the model tested in the study are suitable.

The predictive accuracy of the model and the explanatory status between the dependent variables and the independent are obtained by calculating the R2 values. R2 values for the dependent variables in the model, Service Quality, Cost and Market, are 0.192, 0.071, and 0.151, respectively. According to hypothesis tests, all three dependent variables are explained by the independent variables in the model. The dimensions that make up the competitiveness are explained by online transactions and reservation systems, which are independent variables, at the levels of 19%, 7%, and 15%. Even though they have low R2 values, independent variables affect dependent variables (Chin, 1998). It was concluded that although the independent variables in the model were low, they had the ability to predict the dependent variables. The summary results of the measurement and structural model developed within the scope of the study are shown in Figure 2.

5 Hypothesis Results and Discussion

Within the scope of the study, six hypotheses measuring direct impact were developed and tested. Three of the hypotheses test the impact on the competitiveness factors of online transactions, while the other three test the impact on the competitiveness factors of reservation systems. H1 testing the impact of online transactions on competitiveness factors: "Online transaction capacities of travel agencies positively affect their service quality." (β: 0.278, t: 6.227, p: 0.000), H2: "Online transaction capacity of travel agencies positively affect their costs." (β: 0.160, t: 3.059, p: 0.003), and H3: "Online transaction capacities of travel agencies positively affect their market shares." (β: 0.195, t: 3.932, p: 0.000) were supported in the light of statistical data. Similarly, H4, which tests the effect of reservation systems on competitiveness factors: "The reserva-

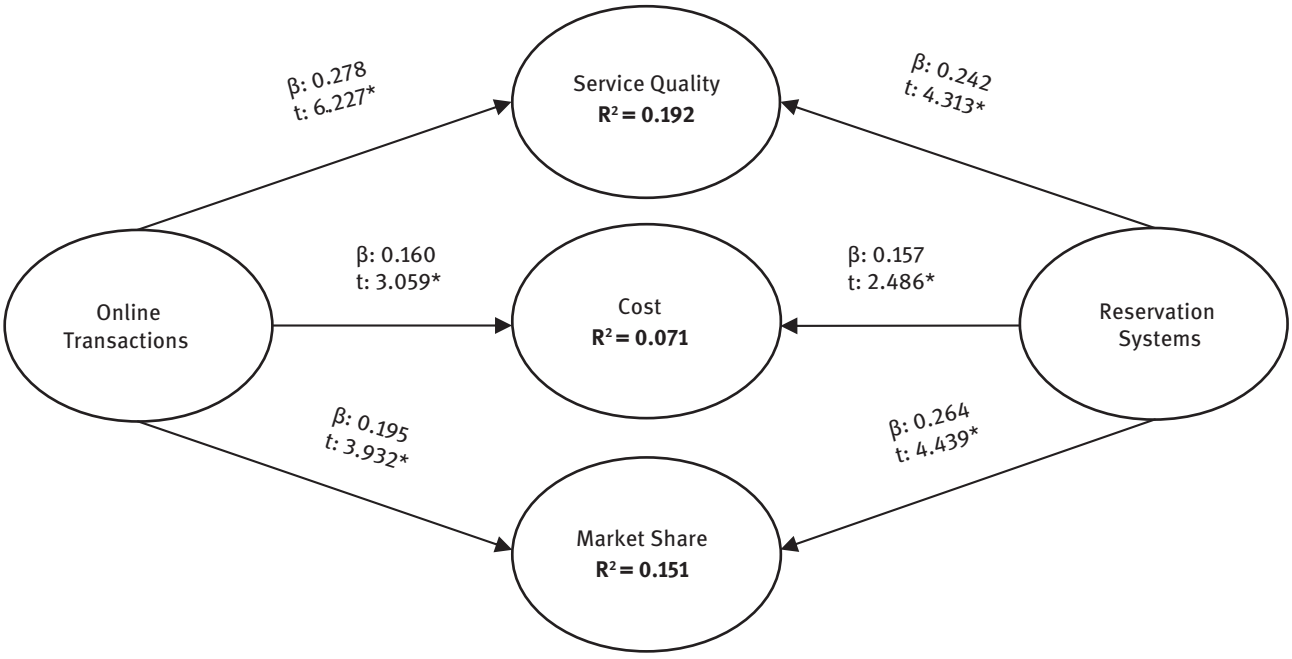

Figure 2. PLS-SEM Results of Measurement and Structural Model

tion system capacities of travel agencies positively affect their service quality." (β: 0.242, t: 4.313, p: 0.000), H5: "The capacity of the reservation system of travel agencies positively affects their costs." (β: 0.242, t: 4.313, p: 0.000), and H6: "Reservation system capacities of travel agencies positively affect their market shares." (β: 0.242, t: 4.313, p: 0.000) were supported in the light of statistical data.

The results of this study revealed that the use of Technology in tourism and travel movements are factors that can determine service quality in the context of online transactions and reservation systems. Albayrak et al. (2020) make similar evaluations and emphasise that the use of technology can be a source of service quality, especially in the context of online transactions. This situation leads to customer satisfaction and re-purchase behaviour. Porumbescu (2016) states that online transactions contribute to competitiveness in terms of service quality, as they provide strong communication opportunities. In this sense, the increase in the use of technology reservation systems and online processing by travel agencies has a positive effect on their service quality. The fact that technology creates an environment suitable for communication is among the important reasons for this situation. Online transactions and reservation systems can contribute to the instant solution of problems during or after the service by making communication strong. It can be said that the use of technology, which provides strong communication skills to human relations, will accelerate the competitiveness of travel agencies (Dickinger & Bauernfeind, 2009). Because the current situation means directly contributing to the increase of service quality and accordingly to customer relations (Maggon & Chaudhry, 2019).

According to the results of the study, online transactions and reservation systems of travel agencies affect their costs in terms of competitiveness as important technological capabilities. As these capabilities of agencies increase, their costs also increase (Christodoulidou, et al., 2010). However, the level of relationship here is less than other factors that create competitive power. Especially in developing countries, since technology transfer is higher than technology production, it is expected that the increase in the use of technology will also increase the costs (Lam & Cheung, 2009; Lin, 2017). Despite this cost increase, businesses are making an effort to integrate technology into their activities as the returns are high.

The online transaction capability of travel agencies and the use of reservation systems also affect their position in the market and according to their competitors. Travel businesses shape their position in the market against their competitors by increasing their technology capabilities. There are studies in the literature showing similar results. Chang et al. (2019) reveal that the use of technology with a large transaction capacity, including online transactions and reservation services, can contribute significantly to the market share of businesses. In this way, travel agencies that increase their market share and, accordingly, their

sales power, gain competitive power and gain an advantageous position compared to their competitors (Sukthankar et al., 2020). As conclusion, it can be said that the success of travel agencies' technological capabilities in the context of reservation systems and other online transactions will affect service quality, market share, and costs.

6 Conclusions

According to the results of the research, technological capabilities affect the competitiveness potential of travel agencies. This shows consistent results with the theories explaining the relationship between technology and competitiveness (Clemons & Row, 1991; Roger-Monzó et al., 2015; Hsu et al., 2014). For travel agencies to make their competitiveness sustainable, they should continue to use technology in a way that follows all innovations (Xiang et al., 2015). This is of critical importance, especially for travel agencies that also provide traditional office services where all their activities are not online.

To understand the place of technology in the competition of businesses, meaningful results have emerged for both online transactions and reservation systems from the technological capabilities discussed. Evaluations of the interaction between the technological capabilities of travel agencies and their competitiveness are frequently discussed in the literature (Limanto et al., 2015; Kozel et al., 2017). While Song and Zahedi (2001) state that online transactions, one of the technological elements, have a very important place in the competitiveness of travel agencies, San Martín and Herrero (2012) state that reservation systems technology contributes positively to the competitiveness of tourism enterprises. The holistic success of online transactions is important for travel agencies to have a corporate identity in terms of communication and sales transactions (Milano et al., 2011). The results of this research revealed that these two technological capabilities (online transactions and reservation systems) for travel agencies can affect the competitiveness of travel agencies in terms of service quality, costs, and market share, and made an important theoretical contribution to the literature.

In a world where developments in technology are getting more intense day by day, businesses that produce goods or services in different fields need to act in accordance with technological developments in order to survive (Şengel et al., 2022). The results of this study reveal that travel agencies need to use technology successfully in order to maintain their existence. Khalifa and Fawzy (2017) make similar evaluations for sustainable competition and state that travel agencies should care about technology. The study is about travel agencies in Istanbul and Turkey. Since technology transfer is more than technology production in Turkey, the costs are high. Kar and Tatlısöz (2008) discuss the issue in the context of input costs and state that the costs are high. In this sense, the public authorities should take steps to increase technology production. Otherwise, it is necessary to provide cost-effective technological opportunities to many travel agencies and businesses that produce different goods and services by transferring technology at affordable costs. There are many studies on the regulatory role of the state and its mission to ensure that it supports this proposal (Somel, 1996; Kaya, 2004; Schilling & Esmundo, 2009; Sivarajah et al., 2015; Sharafutdinov et al., 2020). Despite the studies that produce optimistic results and the phenomenon of globalisation, it must be said that not all countries are at the same level in terms of the application of technology in the travel industry. Moreover, many businesses in the travel industry are unaware of the impact technology use has on their work. At this point, the results of the study reveal the impact of travel agencies' technological capabilities on their competitiveness and provide practical sectoral solutions.

Since technology imports are higher in Turkey, it is necessary to pay attention to the cost factor if travel agencies want to increase their technological capabilities (Ay, 2009). Businesses should increase their transaction capacities by making appropriate agreements with the global reservation and distribution systems that are revised according to current developments (Yüksek, 2013a). The increase in cost-effective technologies makes it possible for more traditional office-type travel agencies to compete with online travel agencies and increase their competitiveness in the market (Şengel et al., 2022).

Travel agencies in Turkey need to produce politics that will increase the capacity of online transaction and reservation systems. Because the technology capabilities of these agencies affect their service quality, market shares and their positions against their competitors. Wang et al. (2015) highlights the market share among these factors and reveals that technology-based marketing activities provide visual evidence to the consumer, thus providing significant advantages for businesses to gain market share. Similarly, Fu Tsang et al. (2010) found that technological capability is the strongest factor in predicting customer satisfaction and repurchase intention. At this point, the capacity of online transactions and reservation systems has an important function. Tsai et al. (2005) states that this is even more important for office agencies that have traditional formats

where all their activities are not online. For this reason, this study is important in terms of guiding these types of agencies based on the data obtained.

7 Limitations and Future Studies

During the research process, some limitations were encountered that made the data collection process difficult. The first of these limitations are time and cost constraints. The fact that researchers live outside the region where research population is located is one of the constraints based on time and cost. Another important limitation of the study is about sampling. Although the desired sample size was reached during the data collection process, the number of senior executives remained low, contrary to what was planned. Because while some of the enterprises hesitated to contribute to data collection, some enterprises wanted their lower-level managers to participate in the data collection process.

Although the study is a destination where most travel agencies in Turkey are located, it can be expressed as a limitation that it is limited to Istanbul. Although appropriate and enlightening results were obtained regarding the research problem, research was carried out on the perceptions and evaluations of the managers in this study. In this context, future studies can be conducted on the relationships between measurable quantitative variables such as the online transactions of travel agencies and the capacity and transaction volume of reservation systems and competition structures. In addition, with the current measurement tools of this study, studies can be carried out in tourism destinations that compete with Turkey and the results can be compared.

In addition, although it was realised that there were mediating and moderating variables that would improve the research model established in the context of the variables in the study, these could not be done due to research constraints. Studies that use moderating variables that show the market power of businesses, such as the transaction capacity of agencies, can be recommended.

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