EFFECTS OF WEBSITE QUALITY DIMENSIONS ON REPURCHASE INTENTION IN AIRLINE INDUSTRY

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ABSTRACT

This study aimed to investigate the effects of website quality dimensions (efficiency, system quality, service quality and privacy) on repurchase intention. Survey technique was used to collect data among 134 participants. The results offered that service quality, system quality and efficiency significantly affect repurchase intention of online airline customers.

***Keywords*:** website quality, airline industry, repurchase intentions, Turkey

INTRODUCTION

With the growing of internet usage, the way of consumers' shopping style and companies' doing business have been changed radically. Internet brought into different types of businesses called e-commerce, such as; B2C, B2B, C2C etc. E-commerce is a business type that brings together seller and buyer over the web (Lin, 2007). Moreover, buying and selling via smartphones on the rise (www.statista.com).

The recent statistics show that there are more than 46 million internet users in Turkey (www.internetlivestats.com). Based on TUIK (Turkish Statistical Institute) research, 24.8% of people aged between 16 to 74 in Turkey bought goods/services online (www.ecommercenews.eu). Therefore, it is sure that websites are not only a part of advertisement but also a platform which people can easily shop (Güreş *et al.,* 2013).

Due to interactive characteristic of website and providing information continuously, websites play vital role in developing long term relationship (Bauer *et al.,* 2002). Internet is widely used by airline companies and it helps them operating efficiently and provides competitive advantage (Hanke and Teo, 2003). Accordingly, instead of bearing the costs of ticket agency establishments, using the website as a distribution channel is generally accepted as the most cost effective option for airline companies (Elkhani *et al.,* 2013). Thus, airline companies reduce costs and increase income by creating their own websites and bypassing the mediators (Diaz and Martin-Consuegra, 2016). As a result, website quality shows up as a critical factor for attracting online customers (Nafchi *et al.,* 2014). Airline companies need to consider their visitors' perceptions regarding their website quality to increase customer satisfaction levels and create repurchase intention (Elkhani *et al.,* 2013).

Since website quality is accepted as an important factor on customers' behavioral intentions, there are many studies focused on this topic (e.g. Jeon and Jeong, 2016; Abou-Shouk and Khalifa, 2016). However, there is still a lack of empirical researches that examine how successful website quality is in the airline industry (Diaz and Martin-Consuegra, 2016). Moreover, to the best of authors'

knowledge, there is a dearth of studies that focus on the effects of website quality dimensions on repurchase intention in the airline industry. Therefore, the study aims to contribute to gaps in the literature, on the other hand, to analyze website quality dimensions of airline companies and their effects on repurchase intention.

AIRLINE INDUSTRY

Airline is one of the most e-commerce adapted industry (Shchiglik and Barnes, 2004). Accordingly, many airline companies have established their websites and started to use online reservation systems. As a result, airline companies increasingly focus their attention on online communication, information and transactions. Thus, providing high website quality becomes crucial for their business and plays a vital role in customer retention (Xi and Barnes, 2009; Nafchi *et al.,* 2014).

Tsai *et al.* (2011) suggested that websites are not only serving to airlines as a distribution channel, but also help them to understand customer needs and to gain information about their buying patterns. Airline companies can use this information for developing high value-added products and services. Additionally, an efficient website can also support the airline company to increase its capabilities to build and maintain long term customer relationships based on their expectations (Llach *et al.,* 2013). Llach *et al.* (2013) emphasized the importance of hedonics while designing and updating airline companies' e-business tools to be in harmony with customers' needs and expectations. They suggested that hedonic aspects of a website can create enjoyable experiences which in turn play a critical role for building loyalty.

Much of the literature on website quality focused on airline industry. Some of them interested in developing new measurement tools/models specified for airline companies. For instance; Shchiglik and Barnes (2004) developed Perceived Airline Website Quality Instrument (PAWQI) to evaluate airline website quality based on customers' perceptions. Their instrument contains four dimensions, namely; site quality, information quality, interaction quality and airline-specific quality. Nafchi *et al.* (2014) also proposed a website quality model for airline websites. Their model comprises three

quality factors; ease of use (e.g. user friendly, easy to perform), quality of information (e.g. usefulness, reliability), security and privacy (e.g. feel safe in online purchasing on the site, feel secure providing sensitive information). Similarly, Elkhani *et al.* (2013) proposed a model that comprise Expectancy Disconfirmation Theory, a three-level framework and E-SERVQUAL for evaluating airline websites' effectiveness considering the impact of e-quality on customer satisfaction and the retention of loyal customers in airline e-ticketing websites. In their study, researchers divided website quality into three dimensions: website performance, website information and website online service.

Some studies regarding airline website quality focused on the functionalities of website quality dimensions. For instance, Xie and Barnes (2009) conducted a research on UK airline industry and focused on five website quality dimensions (usability, web site design, service quality, information quality and enjoyment) based on their literature review. They suggested that different airline companies have different paths to pursue regarding their website quality approaches. Further, Tsai *et al.* (2011) conducted a study comprising five airline companies in Taiwan and the results showed that all five websites have weaknesses on price negotiation, low price, responsiveness and communication. They emphasized that an effective web based marketing can be applied by improving on-line price negotiation features and pricing strategies on airline websites.

Moving beyond, some studies have shown the relationship between website quality dimensions and behavioral intentions/satisfaction levels in airline context. For instance, Sam and Tahir (2009) employed a study on airline website quality and examined six website quality dimensions: usability, website design, information quality, trust, perceived risk and empathy as determinants of online purchase intention of air ticket. The findings of their research demonstrated that empathy and trust are the most influential factors on online purchase intention. Byambaa and Chang (2012) further conducted a study among three airlines websites in Mongolia and used the Technology Acceptance Model (TAM) for defining Mongolian customers' satisfaction with online purchasing experience.

Their study examines five website quality dimensions: ease of use, information quality, website design, payment security and interactivity. The results of their study showed that interactivity, payment security and ease of use significantly affect satisfaction with the e-ticketing experience. More recently, Llach *et al.* (2013) conducted a study concerning the impact of website quality on customer loyalty in airline industry. The researchers examined website quality dimensions under two topics: functional quality (based on E-S-QUAL model) and hedonic quality. Their findings demonstrated that both functional and hedonic quality are significantly affect loyalty through perceived value.

To the best of authors' knowledge, there is a dearth of studies that focus on the relationship between website quality and repurchase intention in the airline industry. However, in another industries, many studies have examined the relationship between website quality dimensions and repurchase intention (e.g. Shin *et al.,* 2013; Kim *et al.,* 2012; Hsu and Tsou, 2011; Zhou *et al.,* 2009). For instance, Shin *et al.* (2013) employed a study to explore the influence of website quality on repurchase intention in South Korea. The findings of their study showed that website quality can affect repurchase intention by enhancing mediating variables (customer satisfaction, customer trust, and customer commitment). They concluded that, website quality was found as a vital factor for enhancing repurchase intention of online customers. Similarly, Zhou *et al.* (2009) conducted a study to examine the importance of website design and service quality on online repurchase intentions. They demonstrated that service quality is the main factor that influence consumers' trust and satisfaction that lead to their repurchase intention.

Given these findings, the authors propose that;

H1: Efficiency significantly affects repurchase intention.

H2: System quality significantly affects repurchase intention.

H3: Service quality significantly affects repurchase intention.

H4: Privacy significantly affects repurchase intention.

Figure 1 represents the proposed model of the study.

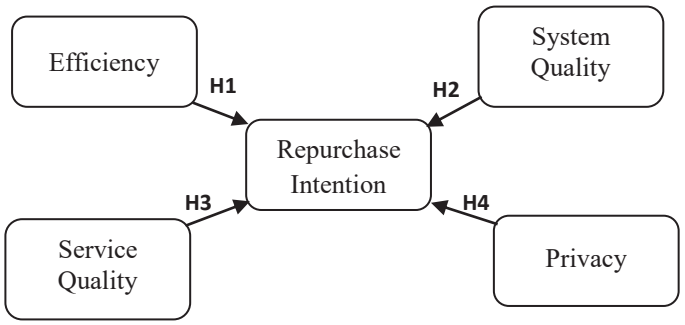

Fig 1. Proposed model

METHODOLOGY

Sample of Study and Data Collection

The sample of this study consist of participants who had purchased flight ticket from any airline companies' websites in last twelve months. Data was collected by using web-based survey and self-administered survey techniques between 1st and 20th April, 2017 in Turkey. Participants were asked to fill in the questionnaire by their willingness. Thus, sampling of this study was based on convenient sampling method. In this context, 134 usable responses were received.

The study was carried out in two stages. In the first stage, the questionnaire was translated from English into Turkish by professional translators. The questionnaire also retranslated into English to assure accuracy. After this stage, a pilot study was conducted with 35 participants in order to avoid any translation mistakes and misunderstanding. Jayaram *et al.* (2004) suggest that when the normal distribution exists, the sample size of a study should be at least ten times more than the number of variables. However, in case of the absence of normal distribution, at least five times more than the number of variables for the sample size to be sufficient. Thus, it can be stated that the sample size is adequate for this study.

Measures

The questionnaire used in this study was adapted from studies carried out by Hsu *et al.* (2012) and Llach *et al.* (2013). Efficiency and privacy adapted from Llach *et al.* (2013) were measured using five and three items respectively. System quality was measured using five items, service quality was measured by using three items and finally repurchase intention was measured by using two items, which were adapted from Hsu *et al.* (2012). Accordingly, this questionnaire included four website quality dimensions which are efficiency, system quality, service quality, privacy and one behavioral intention variable regarding repurchase intention.

The questionnaire consists of two sections. In the first section of the questionnaire the demographic characteristics of the participants identified by multiple choice questions such as gender, age, monthly income and marital status etc. In the second section, 16 items used to explore the website quality dimensions that are measured by 5-point Likert type of scale where 1: strongly disagree; and 5: strongly agree.

Reliability of the questionnaire was obtained by calculating Cronbach's Alpha coefficients. In this context, Cronbach's Alpha coefficient was calculated by using the data obtained from 18 statements constituting the scale, and the general Cronbach's Alpha coefficient of the scale is $\alpha = 0.898$. This value shows that the questionnaire is reliable (Hair *et al.,* 1998).

RESULTS

Demographics of the Participants

Main demographics of the participants are shown in Table 1. Of the 134 participants, 55.2% were male and 46.3% were in 26 and above age group. Education level is high (university, 67.2%) and monthly income is at lower scale (1-1500 TL, 43.3%). Many of the participants purchase online flight ticket 5 times and above during a year (36.6%).

Table 1. Demographics of the Participants

		f	*%*
Gender	Female	60	44.8
	Male	74	55.2
Age	20 and less	13	9.7
	21-25	59	44.0
	26 and above	62	46.3
Education Level	High School	11	8.1
	University	90	67.2
	Graduate	33	24.6
Marital Status	Married	28	20.9
	Bachelor	106	79.1
Occupation	Salaried Worker	48	35.8
	Business Owner	6	4.5
	Student	71	53.0
	Other	9	6.7
Monthly Income	1-1500 TL	58	43.3
	1501-3000 TL	33	24.6
	3001-4500 TL	25	18.7
	4501-6000 TL	13	9.7
	6001 TL and above	5	3.7
Purchase Flight Ticket Over Internet in a year	1 time	18	13.4
	2 times	34	25.4
	3 times	23	17.2
	4 times	10	7.5
	5 times and above	49	36.6

Factor Analysis

Factor analysis was used in order to determine the factor structure of the questionnaire. Varimax rotation was used. Kaiser-Meyer-Olkin value was 0.880 and Barttlett test (0.000, Chi-Square: 1048.378, df: 0.153). This results indicate that the sample is suitable for factor analysis. In this context, four factors were obtained and these factors are explaining 57% of the total variance which is above the acceptable value (Nakip, 2003). The Cronbach's Alpha values of the factors that range from 0.608 to 0.827 indicate that the questionnaire is reliable (Hair *et. al.*, 1998).

Table 2. Results of Factor Analysis

Factors	Factor loadings	% variance	Cronbach Alpha
Factor 1: Efficiency		17.594	.825
The airline company's website produces the most current information.	.763		
Information at the airline company's website is helpful.	.640		
The airline company's website provides me with all the information I need.	.615		
The information provided by the airline company's website is accurate.	.558		
In general, the airline company's website provides me with high-quality information.	.702		
Factor 2: System Quality		16.582	.739
The airline company's website enables me to complete a transaction quickly.	.575		
The airline company's website performs reliably.	.614		
The airline company's website can be adapted to meet a variety of needs.	.700		
The airline company's website makes it easy to get anywhere on the site.	.707		
The airline company's website loads its pages fast.	.695		
Factor 3: Service Quality		11.761	.608
The airline company's website is prompt in responding to my queries.	.775		
The airline company's website understands the needs of their customers.	.676		
The airline company's website changes and guarantees commitment to an amendment or cancellation of reservations.	.559		
Factor 4: Privacy		11.325	.827
The airline company's website protects information about my web-shopping behavior.	.782		
The airline company's website does not share my personal information with other sites.	.846		
The airline company's website protects information about my credit card.	.764		
Total variance (%): 57.262 Kaiser-Meyer-Olkin: .880 df: .153 Bartlett significance value: .000 Chi-Square: 1048.378			

Regression analysis was carried out by using repurchase intention as dependent variable and website quality dimensions as independent variables. The obtained regression model is significant (F: 24.283, p:.000). The model explains 43% of the dependent variable. When the non-standardized

beta coefficients are examined in Table 3, it can be stated that service quality is the most important factor affecting the repurchase intention. This was followed by system quality and efficiency.

Table 3. Regression Analysis

	β	t	p
Constant	1.309	4.186	.000*
Efficiency	.340	3.755	.000*
System Quality	.419	2.003	.047*
Service Quality	.467	3.850	.000*
Privacy	.108	1.782	.077

Dependent Variable: Repurchase Intention
R^2: 0.43 F: 24.283 p:.000 *p<0.01

According to the results of regression analysis, H1, H2 and H3 hypothesis were supported, but H4 was not. Thus, privacy wasn't found as an important dimension affecting repurchase intention of airline customers.

DISCUSSION AND CONCLUSIONS

This study examined the effects of website quality dimensions (efficiency, system quality, service quality and privacy) on repurchase intention. Website visitors' perception of website quality is a crucial issue in e-shopping environment (Zhou *et al.,* 2009). There are many empirical studies that explored the relationship between website quality dimensions and repurchase intention in different online shopping environments (e.g. Shin *et al.,* 2013; Kim *et al.,* 2012; Hsu and Tsou, 2011; Zhou *et al.,* 2009). This study differs from the previous studies with its contribution to the gap of airline industry literature.

Our hypotheses are largely supported and suggest that website quality has a significant effect on repurchase intention. According to the findings of this study, service quality dimension was found as the most important dimension that affects repurchase intention of airline customers. This is consistent with previous studies identifying the effect of service quality dimension on repurchase intention (Bauer *et al.,* 2006; Zhou *et al.,* 2009). Second important dimension which affects repurchase intention is system quality. Similarly, Hsu *et al.* (2012) explored service quality and

system quality dimensions as most important factors that affect purchase intention. Their findings showed an indirect effect that mediated by different variables (e.g. perceived flow, perceived playfulness etc.). Another important dimension effects repurchase intention is efficiency. Accordingly, Llach *et al.* (2013) suggested that efficiency can ameliorate the capabilities of the companies to build and maintain long-term relationships with their customers, in other words customer retention.

Privacy wasn't found as an important dimension affecting repurchase intention of airline customers. Conversely, the results of Es-haghi *et al.*'s (2015) study, conducted among Iranian and Malaysian participants, showed that perceived website privacy has a strong impact on online purchase intention. This can be explained by cultural and/or sectoral differences between their study and ours.

Like any other study, this study is not without its limitations. Firstly, this study explores four website quality dimensions. Other website quality dimensions may yield different results. Secondly, we didn't focus on a specific airline company website. Since this study involves many airline companies websites, when generalizing the results care should be taken.

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