

# Impact of E-Services Quality on E-Loyalty in Paltel E-Satisfaction as a Mediating Variable

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## ABSTRACT

E-loyalty has received great interest from researchers as a key element for customer retention and the growth of firms as well as gaining new customers. This study aims to investigate the impact of the electronic website services quality on e-loyalty in the companies listed within Paltel using electronic satisfaction as a mediating variable. Seven dimensions of e-service quality are examined including content, structure, interaction, presentation, responsiveness, e-security, and reliability. The quantitative research approach is conducted on the returned 393 valid surveys. The findings revealed and emphasized the role played by e-satisfaction as a mediating variable between the independent variable's dimensions and the independent variable.

## KEYWORDS

E-Loyalty, E-Satisfaction, E-Service Quality Dimensions, Website Content, Website E-Security, Website Interaction, Website Presentation, Website Reliability, Website Responsiveness, Website Structure

## 1. INTRODUCTION

During the past two decades with the accelerating use of the internet, the way of communication and doing business has changed. E-commerce, e-business, and e-services became common forms of selling and buying products and services through internet websites. The most common form of online shopping is B2C e-commerce in developing countries (Turban et al., 2015). Despite the evolution in communication, wireless technology and the electronic value-added services, the rate of Palestinian customers who use online services is limited. According to the statistics published by the Palestinian Bureau of Statistics on its official website, the percentage of internet users in West Bank reached 51.4% of the population in 2014, though; only 7.5% used the internet for getting information about goods or services. Palestinian Telecommunication Group (Paltel) provides a variety of services in telecommunication sector including local and international fixed telephony services, internet, data communications, mobile services and next generation services.

Although that the common form of providing services to customers is the traditional approach in which customers go to the service providing centers and interact directly with the employees; Currently, Paltel as well as many service-providing companies are moving toward electronic service approach. In this approach, the context is different, customers interact with the service providers through a website, in which they have to fill electronic forms, ask for or cancel a specific service, enquiry about certain services, submit a complaint, or report about a fault in services.

The problem with online shopping and services is that customers are not committed to a particular website. Thus, the question is whether customers have loyalty to certain e-commerce websites or

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to a specific service provider and what factors may have influence on their loyalty to a specific electronic website. To answer these questions the researcher will conduct this study to investigate those factors related to website services quality of Palestinian telecommunication group and their potential impact on customers' e-loyalty with e-satisfaction as mediating variable particularly that the mediating role of e-satisfaction has been approved by several studies (Sugiharto, 2017; Al-dweeri et al., 2017; Shu-pei, 2017).

A repeated factor for not using online services among internet users is the lack of satisfaction in e-service provider's website (Kim et al, 2009). Customer satisfaction has been found to be a significant factor that has influence on customer loyalty (Caruana, 2002; Cyr, 2008; Kim et al., 2009; Eid, 2011). Similarly, Bashar & Wasiq (2013) revealed that customer satisfaction has a significant positive influence on the e-loyalty of cyber consumers.

Given the importance of e-loyalty for customers' retention and the growth of firms as well as gaining new customers; E-loyalty received a great interest from researchers. Unfortunately, research in e-loyalty in the Arab world are very limited (Eid, 2011). Several factors have an impact on customers' e-satisfaction and e-loyalty. Among the major factors that have been studied in a wide scale in the developed countries are website services quality dimensions (Al-Manasra et al., 2013; Eid, 2011; Kim et al., 2009; Cyr, 2008).

A website is the elementary mechanism through which any firm that conducts business on the Internet, advertises its products or services and attracts customers (Turban et al., 2015, 744). The quality of the offered services through the website is extremely important particularly that e-service quality is a vital factor influencing the online shopping experience (Turk et al, 2012).

People in Palestine are not familiar with online services as the statistics above showed. Familiarity with an Internet service provider and its processes influence the customers (Gefen, 2000). In addition, Many scholars emphasized the effect of culture on societies and individual. Palestinian society in general avoids uncertainty (Jaber, 2015). Therefore, due to the recency of the electronic services in Palestine compared to developed countries, and the absence of physical interactions between the customers and the service providers some ambiguity might be created, as a result, this may negatively affect their level of satisfaction. Ultimately, affecting the customers' e-loyalty to the service provider as many studies have shown that customer satisfaction influences purchase intentions and post-purchase attitudes toward the company Yi (1990, 104).

This paper is structured in nine sections as follows: the next section reviews the related literature; section three presents the methodology followed by constructs definitions; section five suggests the research model and hypotheses; section six provides data analysis; section seven tests the proposed hypotheses; section eight presents the discussion of findings; and finally section nine derives conclusions and suggests some recommendations.

## **2. LITERATURE REVIEW**

E-service quality (E-SQ) could be defined as the overall consumers' evaluation and judgment of the excellence and quality of the offered electronic service in the virtual marketplace (Santos, 2003).

A considerable amount of research have been conducted to examine the direct influence of e-service quality dimensions on e-loyalty, or the indirect influence through mediating variables such as e-satisfaction or e-trust. These studies included various e-service quality dimensions according to their relevance to the context of the study.

### **2.1 Relationship Between E-Service Quality and E-Loyalty**

The results of previous studies indicate that there is a positive and credible relationship between the quality of e-services and e-loyalty. Several studies have pointed to the existence of these relationships. One of the earliest of these studies is the study of Wolfinbarger & Gilly (2003), which used the e-TailQ scale to measure the determinants of e-loyalty. The study relied on four dimensions of e-service

quality: site design, reliability, and security / privacy. The study concluded that there is a strong and direct impact of all dimensions on e-loyalty, with site design as the most influencing factor. In another study by Swaid & Wigand (2009) six dimensions of e-service (website usability, information quality, reliability, responsiveness, personalization, assurance) were examined as determinants of three types of service loyalty (preference loyalty, price tolerance, complaining behavior). The findings revealed that the e-service quality dimensions are related to the different types of customer loyalty except for personalization. Reliability and assurance are the most important dimensions influencing favorable loyalty aspects such as communicating positive word-of-mouth, re-purchase intentions, and loyalty under increased pricing.

Tandon et al. (2017) study adopted nine dimensions as determinants of e-loyalty (navigation, ease of understanding, information usefulness, website design, ease of use, security and privacy, ease of ordering, and customization). The results showed that website quality dimensions positively affect customer satisfaction and repurchase intention, and that website service quality can affect repurchase intention through mediators like customer satisfaction. Similar results were obtained by Winnie (2014) and Hashemi (2016).

## **2.2 Relationship Between E-Service Quality Dimensions and E-Satisfaction**

The link between the e-service quality dimensions and e-satisfaction is one of the most closely related topics in the literature of e-commerce and e-marketing, especially with the growing growth of e-transactions in the service industry. The success of any project depends on the level of customer satisfaction, both in traditional and online marketing (Nisar & Prabhakar, 2017.) Several studies have supported a strong positive relationship between the exclusion of quality e-services and e-satisfaction (Al-Hawary & Al-Smeran, 2017; Chang and Wang, 2011; Zavareh et al., 2012). Firdous and Farooqi, 2017) indicated that the quality of e-services is an important factor in maintaining a competitive advantage and maintaining a satisfactory relationship with customers.

## **2.3 Relationship Between E-Satisfaction and E-Loyalty**

Kotler et al. (2005) says that quality of services begins by identifying customer needs and thus influencing their satisfaction and ending with loyalty. Therefore, improving service quality leads to improved customer satisfaction, which in turn leads to loyalty. Moon (2016) believes that due to the lack of direct contact with goods and services for online customers the relationship between satisfaction and loyalty becomes stronger and more important in the electronic environment than in the traditional environment. Many studies supported this relationship (Anderson & Srinivasan, 2003; Eid, 2011; Ismail & Safa, 2014; Jeon et al., 2017; Luran & Lin, 2003; Sugiharto, 2017; Al-dweeri et al., 2017). Table 1 summarizes some of the previous studies that examined these relationships.

The preceding review of literature indicates that most of the studies emphasized the role of e-satisfaction as a mediating variable between website services quality and e-loyalty. Unfortunately, the majority of these studies have been conducted in developed countries and very few studies have investigated the Arab context. Therefore, this study aims to fill the gap in the literature regarding Arab studies about e-loyalty. Additionally, the areas in which these studies were conducted diversified, including banking (Sugiharto, 2017; López-Miguens & Vázquez, 2016); tourism (Shu-pei, 2017; Abou-Shouk & Khalifa, 2016); financial services (Ladhari and Leclerc, 2013); and e-commerce (Al-dweeri et al., 2017; Moon, 2013; Eid, 2011; Yang, 2008). Regarding telecommunication sector, there is a huge shortage in studies related to e-loyalty in this industry. Therefore, the current study is dedicated to analyzing the role of the e-service quality dimensions on e-loyalty in the telecommunications sector due to the importance of this sector in the Palestinian economy in particular and the important role of telecommunications in the lives of individuals in general.

**Table 1. Some of the previous studies related to e-loyalty**

Research	Context	Independent Variables	Mediating Variables	Dependent Variables
Shu-pei (2017)	Tourism	1. Functionality (informational usefulness, navigational effectiveness) 2. Emotional dimension (aesthetic appeal, entertainment) 3. The symbolic dimension (social presence, self-concept congruity)	e-satisfaction e-trust	e-loyalty
López-Miguens & Vázquez (2017)	Banking	1. Website quality 2. Switching barriers	e-satisfaction e-trust	e-loyalty
Jeon et al., (2017)	lodging industry	1. Perceived website quality 2. Functionality 3. Customization 4. Reputation	customer satisfaction return intentions	e-loyalty
Al-dweeri et al., (2017)	e-shopping	electronic service quality (e-SQ)	e-satisfaction e-trust	e-loyalty
Sugiharto (2017)	Banking	1. Accessibility and security 2. Supporting facilities completeness 3. Information quality 4. Supporting customer needs 5. Design	e-satisfaction	e-loyalty
Abou-Shouk & Khalifa (2016)	Tourism	1. Information content 2. Website design 3. Interactivity 4. Responsiveness 5. Ease of use 6. Website appeal 7. Innovativeness 8. Marketing image 9. Online processes 10. Viable substitute		purchasing behavior e-loyalty implemented in (reuse and recommend)
Romadhoni et al., (2015)	A Literature review	1. e-service quality 2. e-satisfaction 3. e-trust 4. e-commitment		e-loyalty
Sanz-Blas et al., (2014)	Accommodation services	1. e-service quality 2. Trust 3. Commitment		Loyalty
Ladhari and Leclerc (2013)	Online financial services	1. Efficiency 2. Responsiveness 3. Information quality 4. Website design	e-satisfaction e-trust	e-loyalty
Moon (2013)	e-commerce	1. Tangible e-service quality dimensions (web design esthetics, ease of use, virtual tour visualization) 2. Intangible e-service quality dimensions (Information content, Reliability, Security, Customization)	e-satisfaction	e-loyalty
Eid (2011)	e-commerce	1. Information quality 2. Interface quality 3. Perceived security 4. Perceived privacy	e-satisfaction e-trust	e-loyalty
Yang (2008)	e-commerce	1. System quality 2. Information quality 3. E-service quality	e-satisfaction	e-loyalty

### 3. METHODOLOGY

In this study, the researcher aims to study, analyze and explain the influence of website electronic services quality of Paltel on the customers' e-loyalty with e-satisfaction as a mediating variable using a quantitative approach. The quantitative approach will be used to measure the influence of independent variables on the mediating variable and the influence of independent variables on the dependent variable as well as the influence of independent variables on the dependent variable through the mediating variable. The reason for selecting the quantitative approach is that this study is deductive and explanatory in its nature. Saunders et al., (2009) indicated that deduction approach possesses four important attributes. First, the ability to explain causal relationships between the studied variables. Second, ability to control hypotheses testing. Third, the operationalization of the concepts is necessary. Finally, the ability to generalize the findings. Because of these attributes, the quantitative approach is the most suitable approach to analyze the collected data. The population of this research is the Palestinian society members who use Paltel website for getting information and conducting transactions related to the services offered by the company.

According to the annual report 2016 of the Palestinian Telecommunication Group, the number of the participants is 3.688 Million. As mentioned before, the overall percentage of internet users in Palestine is 51.4%, with only 7.5% among them use the internet for getting information about goods or services. Because of the lack of official statistics about the percentage of those participants who use the electronic services provided by Paltel group, the researcher is going to assume that the participants of the group are a representative sample of the Palestinian society. Thus, use the 7.5% percentage to calculate the number of the participants who use the e-service of the website. Therefore, the study population could be calculated as follows:

The number of electronic services users =  $7.5\% * 51.4\% * 3,688,000 = 142,173$

Thus, the study population is 142,173. According to Daniel and Cross (2013) formula for calculating sample size the researcher has to collect at least 384 survey items so that the results can be generalized on the population.

A total of 460 questionnaire have been distributed. Of the 407 returned questionnaires, only 393 questionnaires were analyzed using SPSS and PLS. 70.7% of the participants were males and 77.9% of them were between 24-50 years of age. The majority of participants (80%) have at least the first university degree. More than 60% of respondents live in the main cities (Ramallah, Hebron, Nablus, Jenin, and Bethlehem).

### 4. CONSTRUCTS DEFINITIONS

#### 4.1 E-Service Quality and Its Dimensions

E-services are "Web-based initiatives that improve service industries and customer service" (Turban et al, 2015:674).). E-services could be defined as "the consumer's evaluation of process and outcome quality of the interaction with a service provider's electronic channels" (Gummerus et al.,2004, 177). E-service quality dimensions varied among resarchers. For example, Shu-pei (2017) examined e-service quality dimensions in tourism sector using three main dimensions including Functionality (informational usefulness, navigational effectiveness); Emotional dimension (aesthetic appeal, entertainment); and The symbolic dimension (social presence, self-concept congruity). On the other hand, Al-Hawary & Al-Smeran (2017) in banking sector used six dimensions for e-service quality: Ease of use; Reliability; Design; Responsiveness; Privacy; and Effectiveness.

According to Cristobal, et al., (2007), research related to e-services could be classified into two main categories: the first one focuses on online retailing service quality, while the second focuses on website quality. This study will concentrate on the second category. In the current study, seven e-service quality dimensions will be included. These are content, structure, interaction (ease of use), presentation, responsiveness, e-security and reliability.

#### **4.1.1 Content**

Content refers to the information on the website (Ganguly et al,2010). Abou-Shouk & Khalifa, (2016) defined the content of the website as the material and information displayed on the website of the service provider. Fan et al., (2013) defined it as the availability of useful and valuable information about products and services displayed on the website.

#### **4.1.2 Structure**

Structure is defined as the ability of the website to give the customer a clear list of products and services available and providing mechanisms to help him find what he wants in an organized manner (López-Miguens & Vázquez, 2017).

Flavián et al. (2006) pointed that the introduction of value-added services that are accessed easily help in establishing sustainable relationships with customers.

#### **4.1.3 Interaction (Ease of Use)**

Ease of use is defined as the ability of customers to navigate the website through a convenient interface (Moon, 2013). Creating an easy-to-use interface between human and computer is the primary task of website designers (Rosenfeld & Morville, 2002,10).

#### **4.1.4 Presentation**

Presentation refers to the aesthetic properties of the site. It is defined as the degree to which the site is visually attractive and innovative through a well-organized interface (Ting et al., 2016). Turban et al. (2015) noted that the appearance and attractiveness of the site are among the factors that customers consider when assessing a website. The overall appearance of the site results from the interaction of many elements including colors, text readability, ease of navigation, graphics and animation.

#### **4.1.5 Responsiveness**

Responsiveness is defined as the desire to help customers by answering queries (Ladhari and Leclerc, 2013). On the other hand, Turban et al., (2015) used the term customer service, to reflects the means by which customers interact with the company and that the quick response to customer questions can help build long-term and sustainable relationships with customers that benefit both Company and customers.

#### **4.1.6 E-security**

E-security is defined as the availability of mechanisms to ensure secure transmission of customer information. Wolfenbarger and Gilly (2003) pointed out that privacy/security is one of the most important factors on which customers rely for site governance. The availability of sufficient technical capacity to ensure that no other organization replaces its identity on the Internet, or the hacker intercepts data sent or used by any third party (Flavián & Guinalfú, 2006). Perceived security may be defined as the subjective probability with which consumers believe that their personal information (private and monetary) will not be viewed, stored, and manipulated during transit and storage by inappropriate parties in a manner consistent with their confident expectations.

#### **4.1.7 Reliability**

Reliability is the extent to which the website is committed to performing the promised services to customers in the manner promised. In addition, guaranteeing the proper technical performance of the site in general (Mohammed et al., 2016). It has emerged as one of the most important factors determining the quality of the site (Ahmad et al., 2016). Studies have shown that supporting the promises of service and the ability to meet them are factors that help to achieving customer satisfaction (Yang & Fang, 2004, Swaid and Wigand, 2007) and ultimately customers' loyalty.

## 4.2 E-Satisfaction

Satisfaction is a prerequisite for establishing long term relationships. Similarly, in the online context, E-satisfaction is essential for maintaining good relations with customers and build customer loyalty (Constantin, 2013). E-satisfaction could be defined as the state of pleasant fulfillment about the previous online experience in browsing and purchasing in a given e-vendor website (Tang et al, 2005). It is one of the most important success factors in the B2C online environment (Turban et al., 2015).

## 4.3 E-Loyalty

Safa and Von Solms (2016) defined e-loyalty as customers' willing to repurchase from the same e-vendor based on their previous experiences'. E-loyalty is a multidimensional concept that can be measured through behavioral and attitudinal approach (Jeon et. al, 2017). According to Tanner & Raymond (2011,491) the behavioral approach is the rate of repeated purchases conducted by the customer; whereas the attitudinal approach reflects the psychological aspect and the motives for purchasing behavior. Both approaches are important to explain the concept of e-loyalty.

## 5. HYPOTHESES AND RESEARCH MODEL

E-service quality in the current study is composed of seven dimensions (content, structure, interaction, presentation, responsiveness, e-security and reliability). Four main hypotheses are formulated: the first hypothesis ( $H_{01}$ ) to study the direct impact of each of the e-service quality dimensions of the website on e-loyalty directly. Thus, the first hypothesis is divided into seven sub-hypotheses ( $H_{01-1}$ ,  $H_{01-2}$ ,  $H_{01-3}$ ,  $H_{01-4}$ ,  $H_{01-5}$ ,  $H_{01-6}$ ,  $H_{01-7}$ ). The second hypothesis ( $H_{02}$ ) is to examine the impact of each e-service quality dimension on e-satisfaction. Thus, it is divided into seven sub-hypotheses ( $H_{02-1}$ ,  $H_{02-2}$ ,  $H_{02-3}$ ,  $H_{02-4}$ ,  $H_{02-5}$ ,  $H_{02-6}$ ,  $H_{02-7}$ ). The third hypothesis ( $H_{03}$ ) to examine the impact of e-satisfaction on e-loyalty. Finally, the fourth hypothesis ( $H_{04}$ ) to study the impact of each e-service quality dimension on e-loyalty through e-satisfaction as a mediator. Therefore, It is divided into seven sub-hypotheses ( $H_{04-1}$ ,  $H_{04-2}$ ,  $H_{04-3}$ ,  $H_{04-4}$ ,  $H_{04-5}$ ,  $H_{04-6}$ ,  $H_{04-7}$ ).

Based on the ongoing review of related literature the following model is proposed in Figure 1.

## 6. DATA ANALYSIS

### 6.1 Validity and Reliability

Cronbach Alpha (CA) has been used to test the reliability of the constructs. Table 2 shows the values of (CA) for the constructs. All values were above the cut off value of 0.60 (Saundres et al., 2009) implying that the model constructs are reliable for analysis. On the other hand, the average variance extracted (AVE) suggested by Fornell and Larcker (1981) has been applied to measure the convergent validity, the values of AVE for all constructs exceeded 0.50. Thus all constructs are valid for analysis. Table 3 indicates these results.

### 6.2 Path Loadings for Proposed Model

Figure 2 shows the results of the factors analysis for the nine variables used in the research model. Seven variables are related to the independent construct (content, structure, interaction, presentation, responsiveness, e-security, and reliability) while the two other variables are related to the mediating variable (e-satisfaction) and the dependent variable (e-loyalty). The path loadings for all variables were above (0.55) except the third item of the interaction variable, and the first item of the dependent variables (e-loyalty). The values of these two items were less than (0.55), therefore they are unacceptable for analysis (Falk & Miller, 1992).

Figure 1. Proposed model

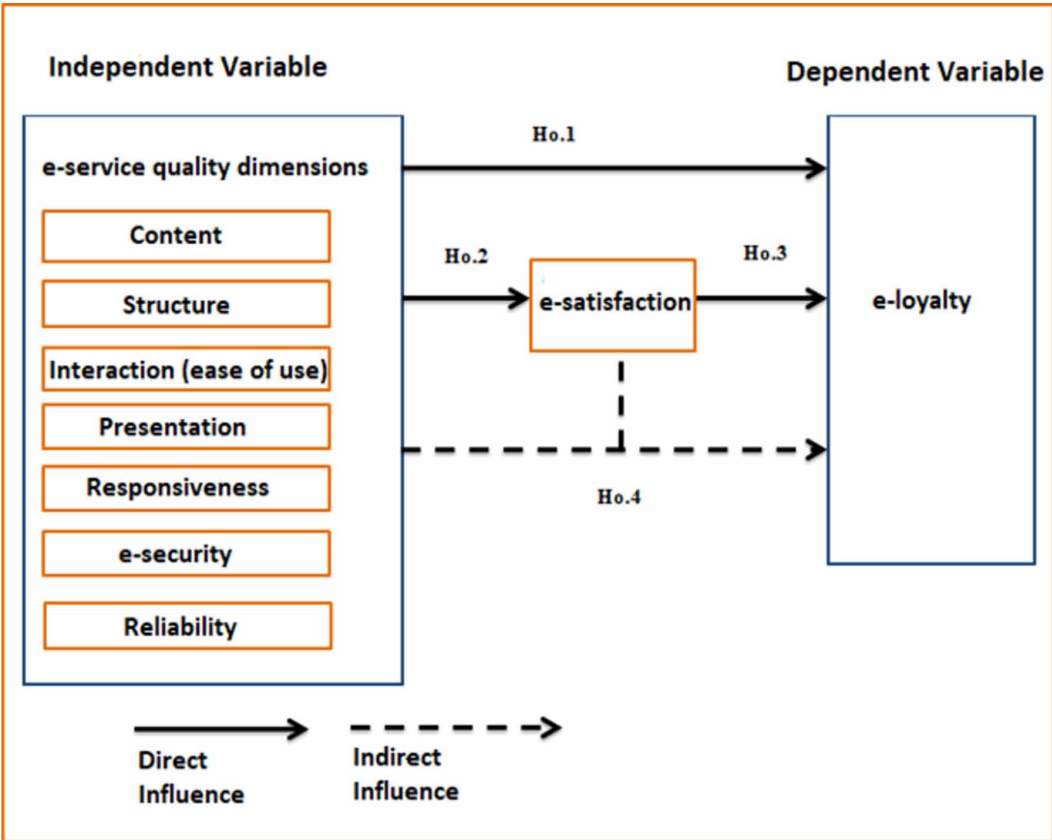


Table 2. Cronbach Alpha Values for the constructs

	Service quality Dimension	Items number	CA Value
1	Content	5	0.752
2	Structure	4	0.699
3	Interaction	4	0.711
4	Presentation	4	0.795
5	Responsiveness	4	0.753
6	E-security	4	0.866
7	Reliability	4	0.750
8	E-satisfaction	4	0.787
9	E-loyalty	5	0.749

### 6.3 Path Loadings for Modified Model

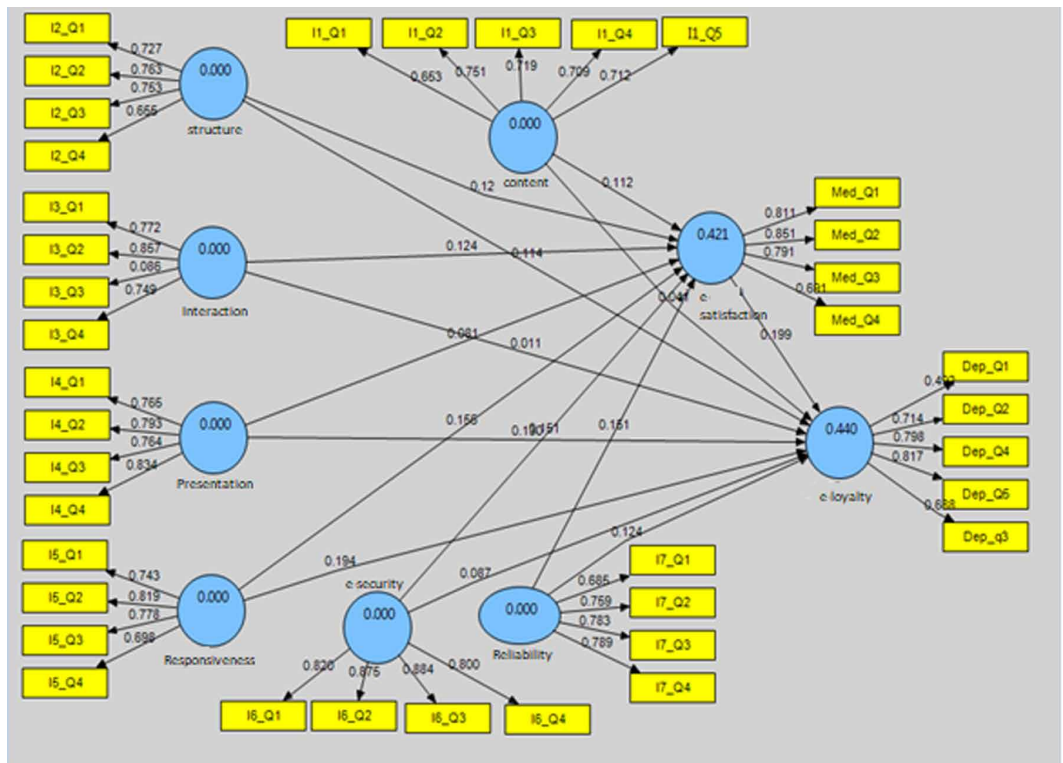
Figure 3. shows the results of the factors analysis for the modified model. The values of the path loadings for all variables were above (0.55). Thus, all variables are acceptable for analysis.



Table 3. AVE Values

	Independent Variables	Average Variance Extracted (AVE)
1	Content	0.502773
2	Structure	0.526319
3	Interaction	0.636369
4	Presentation	0.623307
5	Responsiveness	0.578567
6	E-security	0.714240
7	Reliability	0.569949
8	E-satisfaction	0.621474
9	E-loyalty	0.581567

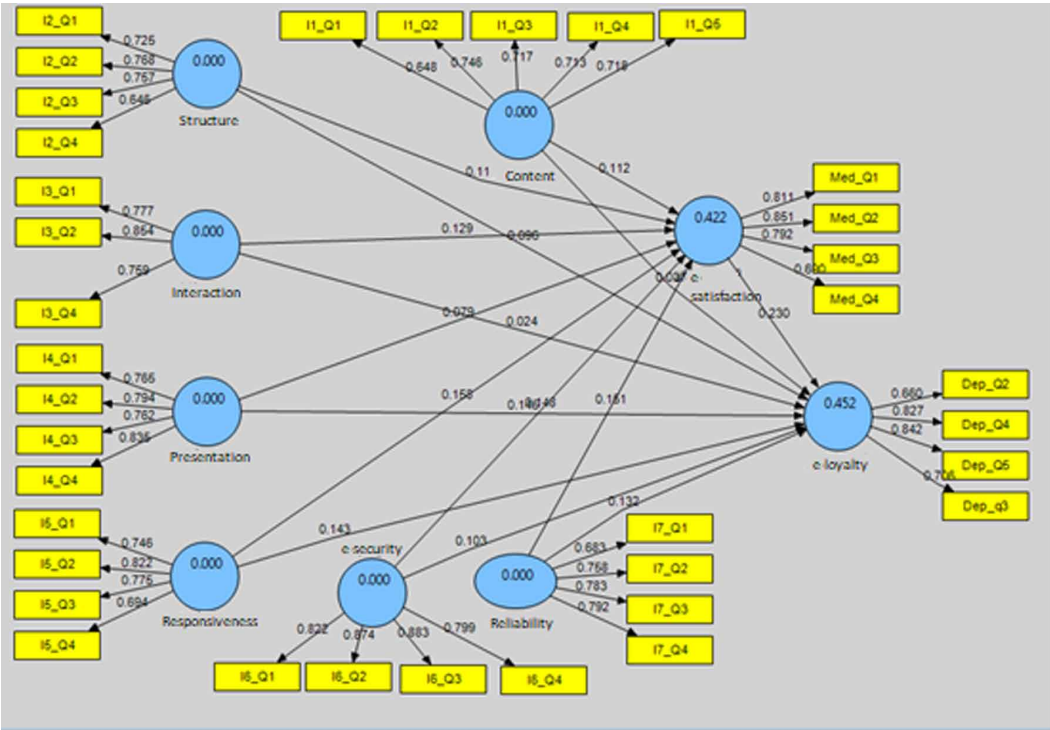
Figure 2. Path loadings for proposed model



## 6.4 R<sup>2</sup> Test

Based on Figure 3, the R<sup>2</sup> is used to determine the direct relationship between the website services quality in its dimensions (content, structure, ease of use, general appearance, response, e-security, reliability) and the dependent variable (e-loyalty). As well as the relationship between the website services quality dimensions and the dependent variable (e-loyalty) through the intermediate variable

Figure 3. Path loadings for modified model



(e-satisfaction). As shown in Table 4, the  $R^2$  value for the variable (e-services quality) without mediation is 0.422 which is above the value of 0.25 determined by (Gaur and Gaur, 2006). Similarly, the value of  $R^2$  for the variable (website services quality) with mediation is 0.452 and it is above the value of 0.25. In addition, the percentage of change in the value of  $R^2$  was 3% (from 0.422) to (0.452), This means that 45% of changes in e-loyalty is attributed to the changes in the independent variable (website services quality) in its dimensions (content, structure, interaction, presentation, responsiveness, e-security, reliability).

## 7. HYPOTHESES TEST

The systematic analysis of the proposed model was used in order to provide a comprehensive explanation of the findings, as well as to test the hypotheses of the model using Bootstrapping in smart PLS to find T value.

### 7.1 Testing the First Main Hypothesis

In order to test the direct relationship between the website services quality in its dimensions (content, structure, interaction, presentation, responsiveness, e-security, reliability) and the dependent variable (e-loyalty) without mediation, the t value for the dimensions of the website services quality on e-loyalty were calculated. Table 5 illustrates these values:

The results of Table 6 indicate that five dimensions of the website service quality have a direct influence on the dependent variable e-loyalty. These are structure, presentation, responsiveness, e-security, and reliability since their t values are higher than 1.65 determined by (Falk and Miller, 1992) at the level of significance (0.05). These results lead to the rejection of the null hypotheses

**Table 4. R<sup>2</sup> values**

Relationship	R <sup>2</sup> Value
The direct relationship between the website services quality in its dimensions (content, structure, ease of use, general appearance, response, e-security, reliability) and the dependent variable (e-loyalty) without mediation.	0.422
The relationship between the website services quality in its dimensions (content, structure, ease of use, general appearance, response, e-security, reliability) and the dependent variable (e-loyalty) with e-satisfaction as a mediating variable.	0.452

**Table 5. T values for e-service quality dimensions influence on e-loyalty**

Direct Influence	T value	β coefficient
Content → e-loyalty	1.25	0.037
Structure → e-loyalty	2.37	0.096
Interaction → e-loyalty	0.85	0.024
Presentation → e-loyalty	2.92	0.145
Responsiveness → e-loyalty	3.44	0.143
e-security → e-loyalty	2.61	0.103
reliability → e-loyalty	3.42	0.132

( $H_{01-2}$ ,  $H_{01-4}$ ,  $H_{01-5}$ ,  $H_{01-6}$ , and  $H_{01-7}$ ) and accepting the corresponding alternative hypotheses, which implies that a direct impact of each of these dimensions on e-loyalty does exist. On the other hand, the remaining two dimensions content and interaction had no direct impact on the dependent variable, as their t values are less than the cut off value of 1.65 (Falk and Miller, 1992). Resulting in failing to reject the null hypotheses associated with these two dimensions.

## 7.2 Testing the Second Main Hypothesis

To test the second main hypothesis that determines the relationship between the website services quality dimensions (content, structure, interaction, presentation, responsiveness, e-security, reliability) and e-satisfaction, the t values were calculated as shown in Table 6.

The results of the analysis of the direct relationship between the independent variable (website services quality dimensions) and the dependent variable (e-satisfaction) indicate that the seven dimensions have direct impact on e-satisfaction since the t value of each dimension is higher than 1.65 (Falk and Miller, 1992). Based on these results, the null hypotheses ( $H_{02-1}$ ,  $H_{02-2}$ ,  $H_{02-3}$ ,  $H_{02-4}$ ,  $H_{02-5}$ ,  $H_{02-6}$ , and  $H_{02-7}$ ) are rejected, and the corresponding alternative hypotheses are accepted.

## 7.3 Testing the Third Main Hypothesis

In order to test the third main hypothesis that determines the direct relationship between e-satisfaction and e-loyalty, t value test was used. The results are as shown in Table 7.

Table 7 Results indicate that a direct influence of e-satisfaction on e-loyalty does exist since the t value is 4.14 which is higher than 1.65 (Falk and Miller, 1992). This implies that the null hypothesis  $H_{03}$  is rejected and the alternative hypothesis is accepted. Additionally, the β coefficient value indicates that a change of one amount in e-satisfaction yields in a change of 0.230 in e-loyalty.

**Table 6. T values for e-service quality dimensions influence on e-satisfaction**

Direct influence	T value	$\beta$ coefficient
Content → e-satisfaction	1.96	0.112
Structure → e-satisfaction	2.02	0.119
Interaction → e-satisfaction	2.44	0.129
Presentation → e-satisfaction	1.72	0.08
Responsiveness → e-satisfaction	3.09	0.158
e-security → e-satisfaction	3.15	0.148
reliability → e-satisfaction	2.71	0.151

**Table 7. T values for e-service quality dimensions influence-satisfaction influence on e-loyalty**

Direct influence	T value	$\beta$ coefficient
e-satisfaction → e-loyalty	4.14	0.230

## 7.4 Testing the Forth Main Hypothesis

The fourth main hypothesis examines the indirect relationship between the website service quality dimensions (content, structure, interaction, presentation, responsiveness, e-security, reliability) and e-loyalty. The following tables Table 8, Table 9, Table 10, Table 11, Table 12, Table 13, Table 14, illustrate the results:

**Table 8. Content and e-loyalty with e-satisfaction as a mediating variable**

Relationship	Direct influence	Direct influence	Indirect influence	Overall influence	Overall influence
	T value	value $\beta$	value $\beta$	T value	value $\beta$
Content → e-satisfaction	1.96	0.112		1.96	0.112
E-satisfaction → e-loyalty	4.14	0.230		4.14	0.230
Content → e-loyalty with e-satisfaction as a mediator	Fully mediate		0.0257		
Content → e-loyalty	1.25	0.037		1.23	0.062

The results of Table 8 indicate that there is a direct effect of the independent variable (content) on the intermediate variable (e-satisfaction) since the calculated t value is 1.96 which is greater than 1.65. Also, the results indicate that there is a direct effect of e-satisfaction on e-loyalty as the calculated t value is 4.14. In addition, the regression coefficient equation showed that the indirect  $\beta$  value of the content dimension reached (0.0257). This means that the increase in one degree of interest in the dimension of content leads to an increase in e-loyalty with the presence of e-satisfaction as mediating variable. Thus, e-satisfaction has a fully mediated the relationship between content and e-loyalty in the Palestinian communications group. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted.

**Table 9. Structure and e-loyalty with e-satisfaction as a mediating variable**

Relationship	Direct influence	Direct influence	Indirect influence	Overall influence	Overall influence
	T value	value $\beta$	value $\beta$	T value	value $\beta$
Structure → e-satisfaction	2.02	0.119		2.02	0.119
E-satisfaction → e-loyalty	4.14	0.230		4.14	0.230
Structure → e-loyalty with e-satisfaction as a mediator	Partially mediate		0.027		
Structure → e-loyalty	2.37	0.096		2.24	0.123

The results of Table 9 indicate that there is a direct influence of the independent variable (structure) on the intermediate variable (e-satisfaction) since the calculated t value is 2.02 which is greater than 1.65 as determined by Falk and Miller (1992). Furthermore, the  $\beta$  coefficient value of the indirect influence of structure on e-loyalty is found to be 0.0274. This means that the increase in structure by one degree leads to an increase in e-loyalty by 0.0274 with the presence of e-satisfaction as a mediator. Thus, e-satisfaction has a partial effect on the relationship between structure and e-loyalty in the Palestinian communications group. In this result, the null hypothesis is rejected and the alternative hypothesis is accepted which states “there is a statistically significant effect of the structure on e-loyalty through e-satisfaction”.

The results of Table 10 indicate that there is a direct effect of the independent variable (interaction) on the intermediate variable (e-satisfaction) as the calculated t value 4.14 is greater than 1.65. Also, the results indicate that there is a direct effect of the e-satisfaction on e-loyalty as the calculated t value is 4.14. In addition, the  $\beta$  coefficient value of the indirect impact of interaction one-loyalty is 0.0296. This means that the increase in one degree in interaction leads to an increase in e-loyalty with e-satisfaction as a mediator variable by 0.0296. Thus, e-satisfaction has a full mediating effect on the relationship between interaction and e-loyalty in the Palestinian communications group. In this result, the null hypothesis is rejected and the alternative hypothesis is accepted which states there is a statistically significant effect of interaction on e-loyalty through e-satisfaction as an intermediate variable for the PALTEL customers”.

**Table 10. Interaction and e-loyalty with e-satisfaction as a mediating variable**

Relationship	Direct influence	Direct influence	Indirect influence	Overall influence	Overall influence
	T value	Value $\beta$	value $\beta$	T value	value $\beta$
Interaction → e-satisfaction	2.44	0.129		2.44	0.129
Interaction → e-loyalty	4.14	0.230		4.14	0.230
Interaction → e-loyalty with e-satisfaction as a mediator	Fully mediate		0.0296		
Interaction → e-loyalty	0.85	0.024		0.83	0.053

The results of Table 11 indicate that there is a direct influence of presentation on the mediating variable e-satisfaction as the calculated t value is 1.72 which is greater than 1.65. Furthermore, the results indicate that there is a direct effect of e-satisfaction on the e-loyalty since the calculated t

**Table 11. Presentation and e-loyalty with e-satisfaction as a mediating variable**

Relationship	Direct influence	Direct influence	Indirect influence	Overall influence	Overall influence
	T value	value $\beta$	Value $\beta$	T value	value $\beta$
Presentation → e-satisfaction	1.72	0.079		1.72	0.079
Presentation → e-loyalty	4.14	0.230		4.14	0.230
Presentation → e-loyalty with e-satisfaction as a mediator	Partially mediate		0.0182		
Presentation → e-loyalty	2.92	0.146		3.01	0.163

value is 4.14. In addition, the  $\beta$  coefficient value of the indirect impact of presentation on e-loyalty is 0.0182. This means that the increase of one degree in presentation leads to an increase in e-loyalty with the presence of e-satisfaction as a mediating variable by 0.0182. Thus, e-satisfaction has a partial effect on the relationship between presentation and e-loyalty in the Palestinian communications group. In this result, the null hypothesis is rejected and the alternative hypothesis is accepted which states “there is a statistically significant influence of presentation on e-loyalty via e-satisfaction as a mediating variable for the PALTEL customers”.

The results of Table 12 indicate that there is a direct influence of responsiveness on the mediating variable (e-satisfaction) since the calculated t value is 3.09 which is greater than 1.65. Also, the results indicate that there is a direct effect of the e-satisfaction on e-loyalty as the calculated t value is 4.14 which is greater than 1.65 as well. In addition, the  $\beta$  coefficient value of the indirect impact of responsiveness on e-loyalty is 0.0364. This means that the increase of one degree in responsiveness leads to an increase in e-loyalty with the presence of e-satisfaction as a mediating variable by 0.0364. Thus, e-satisfaction has a partial effect on the relationship between responsiveness and e-loyalty in the Palestinian communications group. In this result, the null hypothesis is rejected and the alternative hypothesis is accepted which states “there is a statistically significant influence of responsiveness on e-loyalty via e-satisfaction as a mediating variable for the PALTEL customers”.

**Table 12. Responsiveness and e-loyalty with e-satisfaction as a mediating variable**

Relationship	Direct influence	Direct influence	Indirect influence	Overall influence	Overall influence
	T value	value $\beta$	value $\beta$	T value	value $\beta$
Responsiveness → e-satisfaction	3.09	0.158		3.09	0.158
Responsiveness → e-loyalty	4.14	0.230		4.14	0.230
Responsiveness → e-loyalty with e-satisfaction as a mediator	Partially mediate		0.0364		
Responsiveness → e-loyalty	3.44	0.143		3.36	0.179

The results of Table 13 indicate that there is a direct influence of e-security on the mediating variable (e-satisfaction) since the calculated t value is 3.15 which is greater than 1.65. Also, the results indicate that there is a direct effect of the e-satisfaction on e-loyalty as the calculated t value is 4.14 which is greater than 1.65 as well. In addition, the  $\beta$  coefficient value of the indirect impact of responsiveness on e-loyalty is 0.034. This means that the increase of one degree in e-security leads

**Table 13. E-security and e-loyalty with e-satisfaction as a mediating variable**

Relationship	Direct influence	Direct influence	Indirect influence	Overall influence	Overall influence
	T value	value $\beta$	value $\beta$	T value	value $\beta$
E-security → e-satisfaction	3.15	0.148		3.15	0.148
E-security → e-loyalty	4.14	0.230		4.14	0.230
E-security → e-loyalty with e-satisfaction as a mediator	Partially mediate		0.034		
E-security → e-loyalty	2.61	0.103		2.523	0.136

to an increase in e-loyalty with the presence of e-satisfaction as a mediating variable by 0.034. Thus, e-satisfaction has a partial effect on the relationship between e-security and e-loyalty in the Palestinian communications group. In this result, the null hypothesis is rejected and the alternative hypothesis is accepted which states “there is a statistically significant influence of e-security on e-loyalty via e-satisfaction as a mediating variable for the PALTEL customers”.

The results of Table 14 indicate that there is a direct influence of reliability on the mediating variable (e-satisfaction) since the calculated t value is 2.71 which is greater than 1.65. Also, the results indicate that there is a direct effect of the e-satisfaction on e-loyalty as the calculated t value is 4.14 which is greater than 1.65 as well. In addition, the  $\beta$  coefficient value of the indirect impact of responsiveness on e-loyalty is 0.035. This means that the increase of one degree in reliability leads to an increase in e-loyalty with the presence of e-satisfaction as a mediating variable by 0.035. Thus, e-satisfaction has a partial effect on the relationship between reliability and e-loyalty in the Palestinian communications group. In this result, the null hypothesis is rejected and the alternative hypothesis is accepted which states “there is a statistically significant influence of reliability on e-loyalty via e-satisfaction as a mediating variable for the PALTEL customers”.

**Table 14. Reliability and e-loyalty with e-satisfaction as a mediating variable**

Relationship	Direct influence	Direct influence	Indirect influence	Overall influence	Overall influence
	T value	value $\beta$	value $\beta$	T value	value $\beta$
Reliability → e-satisfaction	2.71	0.151		2.71	0.151
Reliability → e-loyalty	4.14	0.230		4.14	0.230
Reliability → e-loyalty with e-satisfaction as a mediator	Partially mediate		0.035		
Reliability → e-loyalty	3.42	0.132		3.29	0.167

## 8. DISCUSSION OF FINDINGS

This study was conducted to analyze the nature of the interrelationship between the constructs related to e-loyalty. Specifically, seven dimensions of e-service quality of the Palestinian Telecommunications Company PALTEL website were examined including (content, structure, interaction, presentation, responsiveness, e-security, reliability) to measure their potential influence on e-loyalty through e-satisfaction as a mediating variable.

To achieve this goal, four main hypotheses were formulated: the first hypothesis to study the direct impact of the e-service quality dimensions of the website on e-loyalty directly. The second is to examine the impact of e-service quality dimensions on e-satisfaction. The third hypothesis to examine the impact of e-satisfaction on e-loyalty. Finally, the fourth hypothesis to study the impact of e-service quality dimensions on e-loyalty through e-satisfaction as a mediator.

The results of the first hypothesis indicate a significant influence of the dimensions structure, presentation, responsiveness, e-security, and reliability on e-loyalty at a 5% significance level. While there was no significant effect for content and ease of use on e-loyalty. Regarding the first dimension the content of the website, according to the respondents it has no influence on their e-loyalty to Paltel website. These results are consistent with the results of previous studies (Ahmad et al., 2017), in which content had a very little influence on e-loyalty. On the other hand, these results contradict the findings of Abou-Shouk & Khalifa (2016) which showed that the quality of the information presented in hotel sites positively affects the purchasing behavior of customers in terms of deciding their destinations and accommodation, and ultimately their e-loyalty. As well as the results of the Shu-pei Tsai (2017) study, which showed an impact of the usefulness of information on electronic loyalty.

In the current study, the absence of direct impact of content dimension on e-loyalty indicates that the information content of the company's website did not provide the study sample with sufficient information about the services provided; or the respondents lack adequate awareness of the importance of the information provided through the website.

For the third dimension, ease of use, the results were consistent with the null hypothesis that there was no trace of content on e-loyalty, meaning that respondents did not believe that the ease of use of the company's website affected their loyalty. This finding is surprising as it contradicted most previous studies such as Tandon et al., 2017, Toufaily and Pons (2017), Abou-Shouk and Khalifa (2016), Abu Rumman and Rimawi (2014). This may be attributed to the poor experience among Palestinian customers in online environment which negatively affect their perception of the importance of this dimension.

The findings regarding the other five dimensions largely coincide with the results of previous studies. The findings related to the structure dimension are consistent with Shu-pei Tsai, 2017; Tandon et al., 2017. Similarly, the findings of presentation dimension are consistent with the results of Shu-pei Tsai (2017), Abou-Shouk & Khalifa (2016), and Gounaris et al. (2010). This reflects the importance of the overall appearance of the site and its design in enhancing the loyalty of the electronic customers towards the website of the Palestinian Telecommunications Company. As for responsiveness, the result of this dimension coincide with the results of Abu-Shouk & Khalifa (2016). E-security dimensions' findings are consistent with Toufay and Pons, (2017; Tandon et al., 2017).

The findings regarding the second hypothesis show a statistically significant influence of all e-service quality dimensions on e-satisfaction at a 5% significance level. It is clear from this result that e-service quality dimensions play a crucial role in achieving electronic customer satisfaction, which is one of the most important objectives of any service or productive institution. This supports the argument (Kotler et al., 2005, 658) that quality of service contributes to enhancing customer satisfaction. This result is in line with most of the results of previous studies on the analysis of factors influencing e-customer satisfaction (eg, Sugiharto, 2017; Khan et al., 2015; Moon, 2013, 2015; Yang, 2008; Gounaris et al., 2010). While this result was partially consistent with the results of Ladhari and Leclerc (2013), which found that efficiency and quality of information only had an impact on electronic satisfaction. The findings contradict the results of Al-dweeri et al. (2017), which showed that the efficiency of (information content and updating, site design, usability, navigation) and privacy have no impact on electronic satisfaction.

Similarly, a statistically significant effect of the customers' e-satisfaction on their e-loyalty to the company's website at a significant level of 5% does exist. This result is considered logical and necessary because the relationship between electronic satisfaction and electronic loyalty is a crucial element in the electronic environment than in the traditional environment due to the absence of direct



contact between customers and service provider. This result is similar to the results of the majority of previous studies that have demonstrated a strong and positive impact of electronic satisfaction on electronic loyalty (López-Miguens & Vázquez, 2017; Shu-pei Tsai, 2017; Tandon et al., 2017; Jeon et al., 2017) ; Sugiharto, 2017; Al-dweeri et al., 2017).

Finally, with regard to the fourth hypothesis, the results show that e-satisfaction fully mediate the relationship between content and ease of use on the one hand and e-loyalty on the other. As for the other five dimensions, e-satisfaction partially mediate the relationship between these dimensions and electronic loyalty. These results are consistent with the results of previous studies (Yang, 2008; Gounaris et al., 2010; Limbu et al., 2011; Ladhari and Leclerc, 2013; Sugiharto, 2017; Tandon et al., 2017;).

## **9. CONCLUSION AND RECOMMENDATIONS**

Based on the preceding results, it can be concluded that a direct positive influence of e-service quality dimensions on e-satisfaction does exist; in addition, a direct impact of e-satisfaction on e-loyalty is found. Five of the seven included e-service quality dimensions have a positive direct influence on e-loyalty, whereas when these relationships were examined through e-satisfaction as a mediator all seven dimensions have a positive influence on e-loyalty through e-satisfaction which emphasizes the role played by electronic satisfaction as a mediator in the relationship between quality service dimensions and electronic loyalty. Supporting the study model proposed by the researcher.

The researcher recommends that enhancing awareness among the Palestinian society of the concept of electronic services and how to use them to spread the culture of e-shopping as a means to facilitate access to services through the electronic environment is necessary. For the Palestinian Telecommunications Company, paying attention to improving and developing the electronic services provided on the website and utilizing them as a permanent strategy to achieve competitive advantage helps in facing current and potential competitors in the future, especially as this sector is one of the most important service sectors that is growing steadily. This can be achieved by following up customer opinions about the quality of the services provided through the site and to gather customer complaints and suggestions through a special icon on the website and then work on developing services to suit the needs of customers. Furthermore, maintaining current customers and working on gaining their satisfaction is important, especially as the cost of retaining existing customers loyal to the company is much less than the cost of attracting new customers. The company's current loyal customers represent a source of promotion for the company to attract new customers.

With the increasing number of cybercrimes, the researcher recommends that the company should pay greater attention to e-security dimension and maintain the privacy of the customer as a cornerstone of the pillars of the quality of electronic services. As well as keeping abreast of the technological development, especially with regard to service delivery devices and adopting new electronic services that meet the increasing needs of customers.

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