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THE DIRECT AND INDIRECT RELATIONSHIPS AMONG A BANK'S WEBSITE DIMENSIONS, PERCEIVED FLOW, PERCEIVED PLAYFULNESS, E-BANKING SATISFACTION AND E-BANKING LOYALTY

[1]MOHAMED SALIH YOUSIF ALI, [2]KAMAL MOHAMED HAMID ALFAKI

[1,2]Department of Business Administration, College of Science and Humanity Studies, Prince Sattam Bin Abdul Aziz University, Al-Aflaj, Saudi Arabia

E-mail: [1]my.ali@psau.edu.sa, [2]k.alfaki@psau.edu.sa

ABSTRACT

The aim of this research is to investigate the direct and indirect relationships between banks' website quality (BWSQ) dimensions, perceived flow (PFL), perceived playfulness (PPN), e-banking satisfaction (EBS) and e-banking loyalty (EBL) perceived by Saudi Arabian e-banking service users using the stimulus-organism-response approach. The primary data were gathered by a questionnaire survey using convenience sampling. A total of 336 usable questionnaires were returned. The collected data were analyzed using SPSS 25 and AMOS 25. The results revealed that there are positive relationships between website quality dimensions and PPN, PFL, EBS and EBL. PPN and PFL play a mediating role between BWSQ and EBS. Furthermore, EBL mediates the PPN and EBL relationship. The study closes with a discussion, including implications, limitations, and the direction of future studies, and a conclusion.

Keywords: *Users loyalty, Satisfaction, perceived flow, perceived Playfulness, Website Quality*

1. INTRODUCTION

Customer satisfaction and loyalty are the main characteristics that banks use to lessen the risks of using e-services and establishing and keeping their relationships with customers [1], 2], [3] and [4]. Shafiee et al. [5] showed that customers' satisfaction and loyalty are the main goal of commercial banks to develop the services offered and to face severe competition. For retail banking service providers, EBS and EBL improve leadership in the banking market and maximize long-term profits. E-satisfaction refers to the user's gratification concerning their previous experiences with his/her retail website [6]. Satisfying website users and exceeding their expectations are currently crucial factors to successfully keep and attract new customers. This greatly challenges banks to continually improve their website quality.

E-loyalty refers to a client's affirmative position and adherence to a website resulting in repeated revisiting behavior, repurchases from it and the dissemination of constructive word-of-mouth on it [7], [8], [9], [10], and [11]. This attitude toward a website represents consumers' favorable cognitive, affective, and behavioral reactions [11] and [12]. Customers' loyalty is a substantial concern facing e-service providers [11] [13]. Similarly, Bilgihan & Bujisic [8] emphasized that developing customer loyalty is a current management focus. Loyal users have a greater inclination to reuse and positively recommend services.

Website quality is an interest of practitioners, users and academics. E-banking services have experienced increasing numbers of users globally. Researchers, owners and customers have become more concerned with assessments of the quality and effectiveness of banks' websites [14]. Banks' websites should be dynamically assessed to achieve the best performance [15]. This study assessed the three dimensions of website information quality (INFQ), system quality (SYSQ), and service quality (SERQ), which are the primary components of a website's prosperity. DeLone and McLean [16] illustrated that perfect information quality, system quality, and service quality are factors able to attract customers to utilize e-commerce services. Furthermore, they noted that those three factors would influence utilization and satisfaction [17], [16]. System quality is defined as the website system's performance regarding information delivery, response time, and retrieval realized by users [18], [19] and [20]. Information quality is defined as the outstanding quality of information that the website can provide to users [21]. Service quality is defined as the overall assessment of the service quality provided to website users ([22], [23] and [24]. Banks are continuously managing and

searching for new substantial elements that increase users' EBS and EBL to achieve integrated website services in this intensely competitive business environment.

PPN and PFL could provide an advanced understanding of the important features of websites that influence the relationship between users and banks' websites. Previous studies have assessed how PFL and PPN influence website users in the hotel sector, online stores, online travel organizations, online games, online marketing, and mobile messaging (i.e., [25] and [26]. To the best of our knowledge, few have assessed the influence of these characteristics on a bank website's users. Perceived flow is defined as a psychological position that changes with various positional circumstances and influences due to a person's interaction with various contexts Webster et al. [27] such as online interactions. Perceived playfulness is defined as a system's short-term specified status using focus, curiosity and enjoyment to assess its effect on the usage of internet-based retailing [28]. In the information systems literature, perceived playfulness is often measured from several viewpoints [29], which provides an opportunity to assess how perceived playfulness applies to banking sector websites. Ridings and Gefen [30] show that various internet communities will act differently and acquire distinct traits.

Online providers' services transactions may influence their users' continuance satisfaction and loyalty or vice-versa. This study examines the stimulus-organism-response paradigm in the context of Saudi Arabian users who have practical transactions on a bank website. The following section describes the Stimulus-Organism-Response (S-O-R) model.

2. DESCRIPTION OF THE STIMULUS-ORGGANISM-RESPONSE MODEL

In S-O-R theoretical paradigms, the stimulus is characterized as an internal impactor, and the organism represents the actions that reflect the mediating role of the relationships between an individual stimulus and an individual response [31]. Finally, the response represents the last outcome, such as customer satisfaction and other behaviors [31]. The website's elements will establish the environment, which will motivate customers to browse [32], [26] and [33].

PFL and PPN are different but related approaches that were proposed in the technology acceptance studies [34]. PFL is a significant factor in assessing consumer satisfaction because it allows customers to realize and satisfy their desires [35]. According to [36], perceived playfulness reflects a substantial motive linked with a novel system use, and it is a facilitator that has a direct influence on extrinsic motivators [34]. In addition, PFL and PPN are influential factors in predicting website users' behavioral intentions to interact with the website.

Satisfaction is the interpolation of customer's needs [37] whereas EBL is the widest response construct similar to reuse or repurchasing intentions. According to previous studies [38], [39], [40] and [31], the stimulus will influence the organism and response and then the organism will influence the response. This article postulates that the three bank website quality BWQ constructs (SYSQ, SERQ, and INFQ) are stimuli that will affect the PPN and PFL of users. PPN and PFL are organisms that consequently will influence EBS and EBL. EBS and EBL are responses in the online banking field. Therefore, this study addresses the following questions:

(a) How do a bank's website quality dimensions directly and indirectly influence PPN, PFL, EBS, and EBL?
(b) How do PPN and PFL directly and indirectly influence users' EBS and EBL?
(c) How does users' EBS directly and indirectly influence EBL?

The following section is the literature review, and it is followed by the methods, results, and conclusion.

3. LITERATURE REVIEW:

3.1 The Direct Relationships

Users' satisfaction is directly proportional to the quality of the website features [41]. [42] found that information quality, system quality, and service quality are important antecedents of customer satisfaction, and they determine the net benefits of usage and the motivating forces of consumers' internet behavior [17], [16]. Experienced users are enticed to websites that consider INFQ, SYSQ and SERQ. These three dimensions reflect different aspects of website quality and they will have different effects on user satisfaction [43]. Furthermore, these dimensions will increase the willingness to continue using and enhance satisfaction [44], [45]. System quality helps buyers effortlessly find required information and avoid inappropriate information [20]. Moreover, system quality compensates for the lack of physical sales experience in online marketing [46]. The dimensions of e-service quality are occasionally considered to directly affect e-loyalty [11]. The dimensions of e-service quality are viewed as antecedents or predictors of e-satisfaction [47], [48]

and [20]. Consequently, positive customer perceptions of the quality of the various e-service attributes will result in customer satisfaction with the website e-service provider [49], [50], [51], [52], [53] and [54]. The users' degree of perceiving and grasping the website contents reflect the information quality [46]. A website with high information quality helps a firm to provide the customer with innovative, value-added and customized products/services [55]. Information quality reflects the appropriateness of the data for use and the ability to meet the users' needs [56]. The information displayed on a website has a large influence on the user experience [57], which in turn defines users' loyalty [58]. Online banking users favor and will not change the website they use to another website in the near future when they are satisfied and loyal. These discussions lead to the following main two hypotheses:

H1. A website's dimensions (1. INFQ, 2. SYSQ, and 3. SERQ) positively influence EBS.

H2. A website's dimensions (1. INFQ, 2. SYSQ, and 3. SERQ) positively influence EBL.

System quality compensates for the lack of physically interactive processes. Tsao et al. [59] found that system quality has a significantly positive influence on the perceived value of the consumer/seller relationship. Zhou et al. [58] indicated that system quality has a significant influence on the flow experience of users and influences users' loyalty. Information quality measures the value of the output produced by a website perceived by a customer [31] p. 553. System quality is the website architecture, which includes some key features of the system such as navigation, access speed, ease of use and visual appeal [60]**.** Marketing websites with a high system quality can deliver buyers due to an enjoyable e-marketing experience and fruitful interaction time that have lasting impacts on their behaviors and attitudes [59], [16]. The information quality of a website is important because it can help customers to enjoy an interesting marketing experience and make optimal purchasing decisions [61]. Furthermore, it influences the consumers' total perceived value, which is considered to be a motivating factor for e-business prosperity [62]. E-service quality is widely reflected in all of a customer's interaction stages with a website [23]. [63] deemed that perceived service quality, which involves the service features, has a significant effect on the perceived playfulness; and attracting and retaining customers in the e-banking mostly depend on the quality of the service delivered by the website [64]. Therefore, the following two hypotheses are formulated:

H3. A website's dimensions (1. INFQ, 2. SYSQ, and 3. SERQ) positively influence the PFL.

H4. A website's dimensions (1. INFQ, 2. SYSQ, 3. SERQ) positively influence the PPN.

During online marketing, the perceived flow of consumers is likely to generate transaction intentions [65] and intentions for future return visits or repurchases [66]. Flow is an intrinsic motivator that has attracted researchers' attention in IT/IS studies in recent years and has been used as a basis for forming convincing experiences [38]. Many researchers have found that perceived flow has positively significant effects on customers' satisfaction and repurchase behavior outside of the banking sector [38], [31], [67] and [68]. Therefore, the perceived flow that emerges while searching a website can help to provide a wonderful experience to users [69]. The existing research has expanded perceived playfulness in different internet contexts to successfully predict a user's attitude [70], [71], [72], [73], and [74]. [75] also found that perceived playfulness is a significant factor motivating users to use a virtual store. Mobarakabadi et al. [76] demonstrated that perceived playfulness has a positive relationship with users' intention to revisit an online shopping website. Previous studies have highlighted the playful elements present in internet use [28], internet banking and online shopping [77], [78]. Enterprises should reinforce the playfulness they can provide to improve their promotional activities to consumers [79]. Playfulness can increase usage enjoyment, arrange playful browsing trials and minimize clients' anxiety related to online transactions. The state of playfulness is subject to the site user interaction and the effect of the provided site dimensions. Therefore, any future positive action by user occurs after the first website visit or after receiving a service that increases loyalty. Regarding the banking context, the following four hypotheses are proposed:

H5.1 Perceived flow significantly influences EBS.

H5.2 Perceived flow significantly influences EBL.

H6.1 Perceived playfulness significantly influences EBS.

H6.2 Perceived playfulness significantly influences EBL.

Satisfaction is a tool that assists in measuring customers' behavior and assessing their expectations about the products/services provided by firms [80]. To influence and retain customers in

a competitive market, it is very necessary to identify the factors or issues influencing customers' loyalty when they shop online [81]. Prior researchers have revealed that customer satisfaction can increase loyalty and result in repurchase intentions and positive word-of-mouth recommendations [6], [71]. This satisfaction is a key element of loyalty [39]. Thus, the following hypothesis is proposed:

H7. E-satisfaction significantly influences EBL.

3.2 The Indirect Relationships

Due to the current considerable similarity among electronic banking services and the competition between banks increase users' welfare a website's SYSQ, SERQ, INFQ alone may not result in strong relationships between e-banking users' and their banks. System quality is defined as the customers' assessment of a website's technical components quality with respect to system functions [82], and it is the first impression that website users receive prior to viewing the website's information [21]. System quality is important to user beliefs [83]. The system quality enables users to perceive and feel the friendliness of a website when using it [42]. To persuade bank users to accept services, the attributes of the bank website's information quality contents must be relevant, up-to-date, personalized and accurate [60]. Service quality evaluation includes website service personalization, reliability, assurance and responsiveness [20], [84]. Service quality reflects the website efficiency, reactions and cooperation with users, which are important for indirect contact, and all of which make users feel closer to the service provider. Flow is considered to be the provider of useful insight into consumer behavior in the IT context [85], [86]. Flow reflects three aspects, including enjoyment, curiosity, and concentration, of users' experience in an activity [87]. Users' flow experience and the benefits of e-service quality that users receive will encourage them to use a website [31]. The top levels of perceived playfulness increase the desire to use a system and cope with its operational difficulties, which result in perceived system efficiency [88], [89] and [90]. Playful experience is one of the benefits and reasons why users use systems [91]. Thus, users utilize systems not only for the ordinary known benefits but also for PFL and PPN.

Concerning the roles of PPN and PFL, we consider that e-banking users feel physically close to the provider. PPN and PFL play intermediary roles because users assess their overall gratification with a website experience including the tangible and intangible things he/she received. Thus, this study presumes that users' satisfaction and loyalty can be influenced indirectly by users' PFL and PPN. Hence, the study proposed four main hypotheses as follows:

H8. PPN mediates the relationship between a website's dimensions (1. INFQ, 2. SYSQ, and 3. SERQ) and EBS.

H9. PPN mediates the relationship between a website's dimensions (1. INFQ, 2. SYSQ, and 3. SERQ) and EBL.

H10. PFL mediates the relationship between a website's dimensions (1. INFQ, 2. SYSQ, and 3. SERQ) and EBS.

H11. PFL mediates the relationship between a website's dimensions (1. INFQ, 2. SYSQ, and 3. SERQ) and EBL.

4. CONTROL VARIABLE:

Regarding the study's control variables, the following hypotheses are given:

H12. The control variables (1. user's number of transactions, 2. user's monthly income, 3. user's years of experience, 4. user's academic qualifications, 5. user's age, and 6. user's sex) have significant effects on e-banking satisfaction.

H13. The control variables (1. user's number of transactions, 2. user's monthly income, 3. user's years of experience, 4. user's academic qualifications, 5. user's age, and 6. user's sex) have significant effects on e-banking loyalty.

5. METHOD:

A self-administered questionnaire survey of Saudi Arabian users of online banking was conducted. The questionnaire was prepared based on the stimulus-organism-response approach. The distributed questionnaire was designed in English with Arabic language translation under each sentence for more wording clarity and matching of the meanings. A five-point Likert scale anchored by "strongly disagree" and "strongly agree" was used in all questionnaire item sections except the demographic characteristics section.

This study uses several goodness-of-fit criteria, and the AMOS 25 and SPSS 25 statistical packages are used to analyze the collected quantitative data.

- Descriptive statistics were calculated for the demographic characteristics or variables of interest represented by the control variables (i.e., sex, age, educational qualifications, online banking experience, monthly income and number of transactions).
- The KMO and Bartlett sphericity tests were used to test the suitability of the data for factor analysis.
- The reliability tests including Cronbach's α coefficient, the composite reliability (CR) and the

average variance extracted (AVE) were used to test the study measurements' internal consistency.
- Exploratory factor analysis (EFA) was utilized to investigate the structural value of the model, and confirmatory factor analysis (CFA) was utilized to examine the unidimensionality of each construct [92].
- Harmon's single factor and variance inflation factor (VIF) methods were used to test the common method bias (CMB) problem.
- Three modalities (content, convergent and discriminant validity) were used to assess the validity of the measurements of the study.
- The SEM regression's weights and bootstrapping were used to test the hypotheses.

5.1 The Measurements

Well-validated and developed measurements researched in previous studies were used in this study. A few slight amendments were made to the measurements to match the nature of online banking. Information quality was measured by five items: four of them were adopted from [93], and one item was developed for this study. System quality was measured by four items adopted from Ahn et al. [28]. Service quality was measured by four items adopted from [60]. Perceived flow was measured by three items used in [31]. Perceived playfulness was measured by three items used in [78]. E-banking satisfaction was measured by three items used in [43], [38]. E-banking loyalty was measured by three items taken from [94]. Appendix A shows the measurement items.

5.2 Data Collection and Sampling:

The participants used in this surveyed sample were bank customers who conducted online banking at the area of Riyadh, Saudi Arabia in February 2020. A convenience sampling technique was used to select participants from the banking customers who agreed to complete the questionnaire after they were informed of the aim of the survey. A total of 370 users with experience using online banking participated in the surveyed sample. Of those, 336 usable questionnaires were received for the final analysis, which resulted in a 91% response rate. The participants were informed about the purpose of the survey and voluntarily participated.

Among the 336 people who submitted valid collected questionnaires, shown in Table 1, 78.5% were male and 21.5% were female. Furthermore, 52.6% were from 25-34 years old, 24.8% were less than 25 years old and 17.3% were from 35-44 years old. Additionally, 66.7% of them had a bachelor's degree, 15.7% had secondary school education, 13.9% had a postgraduate education and 3.9% had other educational qualifications. In addition, 41.2% of the sample had 3-5 years of experience using online banking, 27.1% had less than 3 years of experience, 19.9% had 6-8 years of experience and 11.8% had more than 8 years of experience. Furthermore, the majority of the sample had a monthly income from 10000-13999 SAR, 17% had a monthly income from 6000-9999 SAR, 16.7% had a monthly income greater than 14000 SAR and 4.6% had a monthly income less than 6000 SAR. Most of the participating users conducted from 3-5 transactions per week (95.1%), 3.3% conducted fewer than 3 transactions per week and 1.6% conducted from 6-8 transactions per week.

Table 1: Demographic characteristics

Variables	Categories	Percent
Sex	Male	78.5
	Female	21.5
Age	< 25 years	24.8
	25-34 years	52.6
	35-44 years	17.3
	45 -54 years	4.9
	55 year and more	3
Academic Qualifications	Secondary	15.7
	Graduate	66.7
	Postgraduate	13.7
	Other	3.9
Online Experience	Less than 3 years	27.1
	3-5 years	41.2
	6-8 years	19.9
	More than 8 years	11.8
Monthly Income	Less than 6000 SAR	4.6
	6000-9999 SAR	17
	10000-13999	61.8
	14000 and more	16.7
Number of Transactions	Less than 3 a week	3.3
	3 to 5 a week	95.1
	6 to 8 a week	1.6
	More than 8 a week	0

6. ANALYSIS

6.1 The KMO and PCA Analysis

The Table 2 shows the results of testing the study data's suitability for PCA using the KMO test of sampling adequacy and Bartlett's test of sphericity. The KMO value = .853 is higher than the recommended value of .60 [95], and Bartlett's test value = 000 is significant at the .000 level (suggested level of significance = .001) [96]. Therefore, the data are acceptable for factor analysis [97]. Table 2 shows the principal

component analysis (PCA) with varimax rotation matrix that was applied to test the study scale's unidimensionality. This test includes the original seven factors that were proposed, which explained a total of 70.012% of the variance. The top ranked factor is information quality, the second factor is system quality, the third factor is service quality, the fourth factor is perceived playfulness, the fifth factor is perceived flow, the sixth factor is e-satisfaction and the seventh factor is e-loyalty. All seven dimensions' items were retained except for one item from EBL (EbL3) that had a loading of less than .5 and was deleted before further testing. The other items' loadings ranged from .579 to .923, which were greater than the recommended thresholds, and they reflected the strong relationships between the items and their constructs. Moreover, as observed in the table, the eigenvalues are greater than one and above the criterion of acceptability suggested by [98]. In summation, the structure of this study scale met all the required standards that determine whether data are suitable for further analysis, such as multiple regression or correlation analysis.

Table 2: The KMO and EFA table

KMO				.853			
Chi-Squared				3787.522			
df				276			
Sig.				.000			
Factors	1	2	3	4	5	6	7
INFQ1	.822						
INFQ2	.923						
INFQ3	.850						
INFQ4	.579						
INFQ5	.628						
SYSQ1		.780					
SYSQ2		.867					
SYSQ3		.809					
SYSQ4		.791					
SERQ1			.691				
SERQ2			.843				
SERQ3			.831				
SERQ4			.741				
PLF1				.881			
PLF2				.822			
PLF3				.844			
PPN1					.586		
PPN2					.876		
PPN3					.886		
EBS1						.698	
EBS2						.907	
EBS3						.860	
EBL1							.911
EBL2							.897

6.2 Common Method Bias (CMB)

Harman's one-factor test is used to assess CMB. From the total variance explained (70.0%), the first factor explained 13.44% of the total variance, which demonstrated that this factor is not the dominant factor (see Table 2). Accordingly, common method bias is not a concern that should be considered in this study [99]. To further assess CMB, Table 3 shows the VIFs generated from all latent variables' test values in the study model that are lower than 3.3, building on an entirely collinear test. Thus, according to [100], this study can be deemed to be devoid of CMB.

Table 3: The VIFs

Variables	VIFs
INFQ	1.239
SYSQ	1.247
SERQ	1.027
PPN	1.322
PFL	1.321
EBS	1.080
EBL	1.064

6.3 Constructs' Reliability and Validity

Figure A shows that the Cronbach's α values of the overall study's constructs were greater than 0.7, and Table 4 shows the composite reliabilities (CRs), which are above the recommended threshold of 0.7 [101]. Thus, these results indicated that the study's model of the distributed sample met the internal consistency reliability standards.

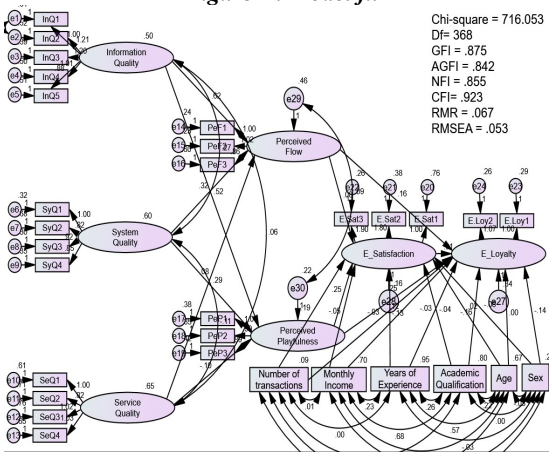
Three validities (content, convergent, and discriminant validity) were used in this research to assess the model measurement items' relation to their constructs. The study model's content validity was investigated through a review of the past literature and by consulting three management information system department heads in the banking sector.

Convergent validity (CV) is tested by the average variance extracted (AVE). CV is deemed to be acceptable when the AVE is above 0.50 [102] [103]. CV was proved for this study, as the AVE for each construct was higher than .50 [102]. As revealed in Table 4, the AVEs ranged from .539 to .626, which were higher than recommended threshold, signifying appropriate convergent validity. Moreover, all the MSVs are less than the corresponding AVEs. In addition, discriminant validity (DV) is used to determine the extent to which each construct varies from the other latent constructs in the measurement model [104]. To ensure satisfactory DV, the interconstruct correlations should be lower than 0.85 [105]. Furthermore, DV was assessed by comparing the square root of the AVE with the correlations among the constructs [102]. Table 3 shows each construct's square root of their AVE compared to the squared correlations with any other construct that is higher. Thus, the model has adequate DV for all seven of the study's constructs.

6.4 CFA

This study adopted the CFA process and steps of [92] and [106]. Liu All the measurement items of the model have individual factor loadings of at least .50 except for one items, EBL3, which had an R-square value less than .50 at a significance level of .01; therefore, this item was deleted before running the second test to increase the reliability and validity of the questionnaire [107]. Some statistical tests such as the Chi-square divided by the degrees of Freedom (χ^2/df), which measures the parsimonious fit; the adjusted goodness of fit index (AGFI), comparative fit index (CFI), and normed fit index (NFI), which measure the incremental fit; and the goodness of fit index (GFI), the root mean square error of approximation (RMSEA), and the significance level, which measure the absolute fit were conducted and assessed to demonstrate the acceptability of the data of model. The results are given in Table 5. Figure A and Table 5 show that the values of χ2/df, AGFI, GFI, CFI, NFI, and RMSEA of this model are within the acceptable limits. Consequently, the study's proposed measurement model achieved a fairly good fit and can be used to evaluate the regression's hypothesized path relationships.

Figure A: Model fit



6.5 Direct and Indirect Paths of Hypotheses Testing:

After the study's model was found to be acceptable and suitable, direct and indirect path analysis was conducted using the SEM method to identify the causal relationships that existed in the model.

Using p <.05 and small convenience sampling, Table 5 summarized the direct path relationships of the study's model. In the first step, the demographic characteristics, such as the number of transactions, monthly income, years of experience, academic qualifications, age, and sex, that were used as control variables were entered into the regression equation. This is done with reference to the six control variables path with EBS. Table 6 shows that all relationships were statistically nonsignificant except for the number of transaction and years of experience (β = .189, p = .030 and β = .128, p = .037, respectively) that have positive relationships with EBS. This consequently supports H12.1 and H12.3 at p < .05. In addition, the six control variables' paths with EBL were statistically nonsignificant except for sex (β = .141, p = .037), which was significant; therefore, only H13.6 was supported.

Regarding the BWSQ and EBS relationship, the three website quality dimensions, INFQ (β = .331, t = 6.134, p = .000), SYSQ (β = .216, t = 3.989, p = .000), and SERQ (β = .141, t = 2.297, p = .042), have positive influences on EBS, which indicated that H1.1, H1.2 and H1.3 were supported. Those three website quality dimensions explained approximately 32% of users' EBS at p < .05 (Table 6). Further, the BWSQ and EBS links revealed that the three website quality dimensions, INFQ (β = .259, t = 4.63, p = .000), SYSQ (β = .205, t = 3.66, p = .000), and SERQ (β = .173, t = 2.496, p = .023), had positive influences on EBL, which indicated that H2.1, H2.2 and H2.3 were supported. Those three website quality dimensions explained approximately 21% of users' EBL at p < .05 (Table 6).

As anticipated, all three website quality dimensions, INFQ (β = .450, t = 9.129, p = .000), SYSQ (β = .230, t = 4.648, p = .000), and SERQ (β = .155, t = 2.427, p = .046), had positive influences on PFL, which supported H3.1, H3.2 and H3.3. Those three website quality dimensions explained approximately 59% of users' PFL at p < .05 (Table 6). Furthermore, the same BWSQ dimensions, INFQ (β = .414, t = 8.327, p = .000), SYSQ (β = .258, t = 5.176, p = .000), and SERQ (β = .197, t = 2.546, p = .033), had positive influences on PPN, which supported H4.1, H4.2 and H4.3. Those three website's quality explained approximately 59% of users' PFL at p < .05 (Table 6).

According to the paths between PFL and both EBS and EBL (β = .196, t = 4.016, p = .000 and β = .164, t = 3.045, p = .003, respectively), PBL had positive influences on EBS and EBL, respectively, which supported H5.1 and H5.2, respectively (Table 6). Moreover, the paths between PPN and both EBS and EBL (β = .179, t = 2.926, p = .004 and β = .307, t = 4.560, p = .000, respectively) showed that PPN had positive influences on EBS and EBL, respectively, which supported H6.1 and H6.2 (Table 6).

The path between EBS and EBL (β = .217, t = 4.542, p = .000) showed that EBS had a positive influence on EBL. Therefore, H7 was supported. Accordingly, EBS explained approximately 21% of users' EBL at p < .05 (Table 6).

Table 6: Regression Weights

Paths			Estimate	p	Result
EBS	<---	Number of transactions	.189	.030	**S**
EBS	<---	Monthly Income	-.053	.473	NS
EBS	<---	Years of Experience	.128	.001	**S**
EBS	<---	Academic Qualifications	-.037	.590	NS
EBS	<---	Age	.020	.661	NS
EBS	<---	Sex	-.082	.148	NS
EBL	<---	Number of transactions	-.030	.817	NS
EBL	<---	Monthly Income	.122	.270	NS
EBL	<---	Years of Experience	-.030	.606	NS
EBL	<---	Academic Qualifications	-.155	.139	NS
EBL	<---	Age	.005	.942	NS
EBL	<---	Sex	-.141	.097	NS
PFl	<---	INFQ	.450	***	**S**
PFl	<---	SYSQ	.230	***	**S**
PFl	<---	SERQ	.076	.238	NS
PPN	<---	INFQ	.414	***	**S**
PPN	<---	SYSQ	.258	***	**S**
PPN	<---	SERQ	-.102	.052	NS
EBS	<---	INFQ	.331	***	**S**
EBS	<---	SYSQ	.216	***	**S**
EBS	<---	SERQ	.141	.042	**S**
EBL	<---	INFQ	.259	***	**S**
EBL	<---	SYSQ	.205	***	**S**
EBL	<---	SERQ	.173	.023	**S**
EBS	<---	PFL	.077	.073	NS
EBS	<---	PPN	.307	***	**S**
EBL	<---	PFL	.196	***	**S**
EBL	<---	PPN	.179	.004	**S**
EBL	<---	EBS	.217	***	**S**

Notes: S= supported and *NS= not supported.*

6.6 The Mediation Tests: Indirect Effects Using the Bootstrap Approach

Table 7 shows the indirect effects for the mediation test using the bootstrap approach techniques used by many authors (i.e., [108], [109], [110] and Preacher's & Hayes [111]) to test four mediating variables. It indicates that for mediator 1 (indirect effects – two-tailed significance for mediation via PPN), PPN mediated the relationships between INFQ and EBS and between INFQ and EBL. PPN also mediated the relationships between SYSQ and EBS and between SYSQ and EBL. These results support H8.1, H8.2, H9.1 and H9.2, respectively. Furthermore, PPN had nonsignificant mediating effects between SERQ and EBS and between SERQ and EBL, respectively, which did not support H8.3 and H9.3, respectively. Regarding mediator 2 (indirect effects – two-tailed significance for mediation via perceived flow), PFL mediated the relationships between INFQ and EBS and between INFQ and EBL. PFL also mediated the relationships between SYSQ and EBS and between SYSQ and EBL. These results supported H10.1, H10.2, H11.1 and H11.2, respectively. Moreover, PFL had nonsignificant mediating effects between SERQ and EBS and between SERQ and EBL, which did not support H10.3 and H11.3, respectively.

Table 7: Indirect effect-two tailed significance test for mediating variables

Mediator 1	SERQ	SYSQ	INFQ	PPN
PPN	...	...	...	...
EBS	.147	.033	.025	.006
EBL	.513	.001	.010	.023
Mediator 2	SERQ	SYSQ	INFQ	PFL
PFL	...	...	...	...
EBS	.354	***	***	...
EBL	.188	***	***	.003

7. DISCUSSION:

This research tested and identified the relationships between website quality constructs, PPN, PFL, EBS and EBL and how they influence e-banking users. The findings of this study indicated that many of the hypotheses were supported and the study's fundamental questions were answered. The results showed that the BWSQ constructs SYSQ, INFQ, and SERQ had positive significant effects on EBS and EBL. These findings agreed with the findings of the previous studies of [112], [113], which indicated the vital role that website information quality plays in satisfying end users, and [114], which found that information quality influences users' satisfaction and intention to use. System quality usability components will provide users with satisfaction [82]. [115] found a significant relationship between e-banking service quality and both the e-satisfaction and e-loyalty of customers.

The findings also showed that SYSQ and INFQ have positive influences on PPN and PFL. These findings agree with previous studies that website quality features, which include service, information and system quality, significantly influence perceived playfulness [28], [29].

Additionally, the website information quality significantly affects the perceived flow of the user [57]. For mobile social networking sites, [116] found that perceived information quality and perceived system quality are significantly linked with perceived flow.

Furthermore, the study's findings showed that PPN has positive significant influences on EBS and EBL. Moreover, the findings showed that PFL has

a positive significant influence on EBL and a nonsignificant influence on EBS. Those findings may be due to an individual's flow state that will help him concentrate on the activity in which he is engaged and avoid unrelated distractions that may occupy the web user in another enjoyable activity that requires his focus. User's level of flow might not be close to satisfaction. This finding is consistent with past studies' findings (i.e., [117], [118]) that support that the elements of PPN are important factors that positively influence the satisfaction and increase the base loyalty.

Regarding the information system success model, Hunga et al. [29] found that the website characteristics of system, information, and service quality considerably influence perceived playfulness. Additionally, Hsu et al.'s [119] results confirm that perceived playfulness significantly and positively affects user satisfaction and continuance intention. Along with the positive relationship between EBS and EBL, this finding can be added to the studies that confirmed the ability of customer satisfaction to influence customer loyalty ([120], [121]. However, SERQ had a nonsignificant influence on both PPN and PFL. Likewise, PFL had a nonsignificant influence on EBS. The possible reason is that e-service users may view e-banking as more than providing the basic functions of service quality, such as reliability, access, customization, difficulties and questions resolved and answered.

The study supported the mediating roles of PPN and PFL on website dimensions (SYSQ, INFQ and SERQ), EBS and EBL. Furthermore, the study also supported the mediation between both PPN and PFL and EBL. The findings show that PPN significantly mediated the connections between SYSQ and INFQ and between EBS and EBL. This result is consistent with Wang and Lin's [122] finding that perceived playfulness mediates the influence of perceived ease of use on the intentions of mobile phone subscribers to adopt services. These findings agree with the studies that indicated that satisfaction is a result of a playful experience [118]. In addition, PFL significantly mediated the relationships between SYSQ and INFQ and between EBS and EBL.

Regarding, the control variables, the number of user transactions and years of experience were found to have significant influences on e-satisfaction. Therefore, more user transactions is an indication of satisfaction, and the users' years of experience increases the degree of benefit from the bank's online services and thus broadens their satisfaction.

7.1 Limitations and Future Research Directions

In spite of this study's numerous valuable contributions and insights into the relationships and understanding of website quality, PFL and PPN, the study has several limitations that need to be addressed. First, this study conducted convenience sampling that was not very representative of online banking users' population. This limits the generalization of the study's findings. Thus, future research using a larger sample size with different sampling types can be used to affirm these study findings and to achieve the strongest results. Second, the study participants were Saudi Arabian residents in the Riyadh area only. Those participants were restricted to online banking users that may have characteristics and attitudes that varied from other global areas and other business contexts. Employing the study's model in more assorted contexts would further demonstrate the effectuality of this model. Third, the study's model constructs consist of the second order for all variables. Nevertheless, future studies should investigate the first order of each variable or use additional dimensions related to these variables to explore more links.

7.2 Overall Implications

This study's investigation adds to the literature on banks' websites. It explained the interrelationship between banks' website quality constructs (INFQ, SYSQ, SERQ), PFL, PPN, EBS and EBL. Furthermore, the findings revealed the mediating roles of the PFL, PPN and EBS of e-banking users. Additionally, the study develops the existing website quality of banks and identifies the factors that help management succeed in this important industry according to the opinions of e-banking users. For bank managers and website designers or developers, this study's model provides them with information on the roles that PPN and PFL play in banks' online services improvement and website users' EBS and EBL, which can increase the number of customers, improve resource allocation decisions about website quality, and improve banks' effectiveness and profit maximization.

E-banking website quality does not only involve INFQ, SYSQ and SERQ that enable users to perform their demanded services; there are also other necessary items used to make the e-banking environment attractive and convenient. Thus, to best serve users, bank managers need to have a clear picture of what online users expect or perceive regarding their website quality and their websites' partners. We determined the desired bank website characteristics for users that both help to strengthen

their partnerships and optimize their investments in the websites. Banks and their partners that search to build firm long-term relationships with their users using a rich website can share the design costs of the website or coordinate to provide a highly customizable website by exchanging users' personals needs, preferences, complaints and sales promotional offerings. This step enables e-banking users entering bank partners' websites through their banks' websites to have higher confidence and intention to purchase/repurchase. The service quality of the surveyed banks has no influence on both PPN and PFL. Thus, improvements are needed in this area by website designers to improve the types of service quality to assure PPN and PFL items' benefits and good email and mobile management that facilitate communication.

8. CONCLUSION:

This study adds valuable knowledge by concentrating on the websites of banks, which are the main drivers of e-commerce. Furthermore, this study shows that the S-O-R approach is quite useful in addressing banks' websites. Specifically, the study supports e-banking website theory based on using the S-O-R model to obtain e-user satisfaction and e-loyalty, showing the potential of the S-O-R model to maximize the value of website services for e-banking users. To form a dynamic website and achieve the best performance, the intrinsic motivators of playfulness and flow linked to a website's primary elements allow e-users to enjoy e-banking and become immersed in its service activities. Furthermore, the playfulness and flow of a bank's website automatically lead the users using this bank partners' websites and vice versa.

9. REFERENCES:

[1] Dahlstrom, R., Nygaard, A., Kimasheva, M. and Ulvnes, A.M. (2014), "How to recover trust in the banking industry? A game theory approach to empirical analyses of bank and corporate customer relationships", International Journal of Bank Marketing, 32(4), 268-278.

[2] Chen, C. (2013), "Perceived risk, usage frequency of mobile banking services", Managing Service Quality: An International Journal, (23)5, 410-436.

[3] Chen, R.-F., Hsiao, J.-L. and Hwang, H.-G. (2012), "Measuring customer satisfaction of Internet banking in Taiwan: scale development and validation", Total Quality Management & Business Excellence, 23(7/8), pp. 749-767.

[4] Aldas-Manzano, J., Ruiz-Mafe, C., Sanz-Blas, S. and Lassala-Navarré, C. (2011), "Internet banking loyalty: evaluating the role of trust, satisfaction, perceived risk and frequency of use", The Service Industries Journal, 31(7), pp. 1165-1190.

[5] Hoornaz Shafiee, Sanaz Shafiee, Elnaz Shafiee and Fakhrolsadat Mortazavi, (2015). Identify the Effective Factors on Website Quality in Electronic Banking. 9th International Conference 16 April 2015. Isfahan. Iran on e-Commerce with focus on e-Business IEEE

[6] Anderson, R. E., & Srinivasan, S. S. (2003). E-satisfaction and e-loyalty: A contingency framework. Psychology & Marketing, 20(2), 123-138.

[7] Shweta Pandey & Deepak Chawla (2016) Understanding Indian Online Clothing Shopper Loyalty and Disloyalty: The Impact of E-Lifestyles and Website Quality, Journal of Internet Commerce, 15:4, 332-352, DOI: 10.1080/15332861.2016.1237238

[8] Bilgihan, A., & Bujisic, M. (2014). The effect of website features in online relationship marketing: A case of online hotel booking. Electronic Commission Researcher Applications. doi:10.1016/j.elerap.2014.09.001

[9] Sri Hayatia, Agus Surosoa, Suliyantoa and M. Elfan Kaukab (2020). Customer satisfaction as a mediation between micro banking image, customer relationship and customer loyalty. Management Science Letters 10 (2020) 2561–2570

[10] Ratanavaraha, V., Jomnonkwao, S., Khampirat, B., Watthanaklang, D., & Iamtrakul, P. (2016). The complex relationship between school policy, service quality, satisfaction, and loyalty for educational tour bus services: A multilevel modeling approach. Transport Policy, 45, 116-126.

[11] Srinivasan, Srini S., Rolph Anderson, and Kishore Ponnavolu (2002), "Customer Loyalty in E-Commerce: An Exploration of Its Antecedents and Consequences," Journal of Retailing, 78(1), 41–50.

[12] Holland, Jonna and Stacey M. Baker (2001), "Customer Participation in Creating Site Brand Loyalty," Journal of Interactive Marketing, 15 (4), 34–45.

[13] Chiung-Ju Liang & Hui-Ju Chen (2009) A study of the impacts of website quality on customer relationship performance, Total Quality Management, 20(9), 971-988, DOI: 10.1080/1478336090318

[14] Fatih ECER (2014). A HYBRID BANKING WEBSITES QUALITY EVALUATION MODEL USING AHP AND COPRAS-G: A TURKEY CASE. Technological and economic

development of economy 20(4), 758–782 doi:10.3846/20294913.2014.915596

[15] Lim Pui Jie, Rohaizan Ramlan, Rohayanti Hassan, Rashidah Omar, Chan Shau Wei (2020). Website quality of Malaysian Technical University (MTUN) Indonesian Journal of Electrical Engineering and Computer Science, 18(3), 1624-1628, DOI: 10.11591/ijeecs.v18.i3.pp1624-1628

[16] W. H. DeLone and E. R. McLean, "Measuring e-Commerce success: Applying the DeLone & McLean information systems success model," International Journal of Electronic Commerce, vol. 9, pp. 31-47, 2004.

[17] W. H. DeLone and E. R. McLean, "The DeLone and McLean model of information systems success: A ten-year update," Journal of Management Information Systems, vol. 19, pp. 9-30, 2003.

[18] Chen, X., Q. Huang, and R. M. Davison. 2017. "The Role of Website Quality and Social Capital in Building Buyers' Loyalty." International Journal of Information Management 37(1): 1563–1574.

[19] Xiayu Chen, Qian Huang, Robert M. Davison & Zhongsheng Hua (2015) What Drives Trust Transfer? The Moderating Roles of Seller-Specific and General Institutional Mechanisms, International Journal of Electronic Commerce, 20:2, 261-289, DOI: 10.1080/10864415.2016.1087828

[21] YiMing Zheng, Kexin Zhao and Antonis Stylianou (2013). The impacts of information quality and system quality on users' continuance intention in information-exchange virtual communities: An empirical investigation. Decision Support Systems, Volume 56, December 2013, Pages 513-524.

[21] Cadelina Cassandra, Rudy, Desi Maya Kristin (2017). Website Quality Impact on Customers' Purchase Intention through Social Commerce Website. IEEE 15-17 November 2017, Melia Purosani Hotel, Yogyakarta, Indonesia 2017 International Conference on Information Management and Technology (ICIMTech)

[22] Zeithaml, V.A., Parasuraman, A. and Malhotra, A. (2002), "Service quality delivery through web sites: a critical review of extant knowledge", Journal of the Academy of Marketing Science, 30(4), 362-375.

[23] Parasuraman, A., Zeithaml, V.A. and Malhotra, A. (2005), "ES-QUAL a multiple- item scale for assessing electronic service quality", Journal of Service Research, 7(3), 213-233.

[24] Liao, C.-H., Yen, H.R. and Li, E.Y. (2011), "The effect of channel quality inconsistency on the association between e-service quality and customer relationships", Internet Research, 21(4), 458-478.

[25] Gao L and Bai X. An empirical study on continuance intention of mobile social networking services: integrating the IS success model, network externalities and flow theory. Asia Pacific J Market Log 2014; 26: 168–189.

[26] Ali, F. (2016), "Hotel website quality, perceived flow, customer satisfaction and purchase intention", *Journal of Hospitality and Tourism Technology*, 7(2), pp. 213-228. https://doi.org/10.1108/JHTT-02-2016-0010

[27] Webster J, Trevino LK, Ryan L (1993). The dimensionality and correlates of flow in human-computer interactions. Comput Hum Behav 9(4):411–426

[28] T. Ahn, S. Ryu, I. Han, The impact of web quality and playfulness on user acceptance of online retailing, Inf. Manage. 44, 2007, pp. 263–275.

[29] Shin-Yuan Hunga, Jacob Chia-An Tsaib, Shin-Tzu Choua (2016). Decomposing perceived playfulness: A contextual examination of two social networking sites, Information & Management 53 (2016) 698–716.

[30] C.M. Ridings, D. Gefen, Virtual community attraction: why people hang out online, J. Comput.-Mediat. Commun. 10, 2004.

[31] Hsu, C. L., Wu, C. C., Chen, M. C., & Chang, K. C. (2012). Formation of e-satisfaction and e-loyalty: An extension of technology acceptance model with perceived quality and flow experience. Journal of Quality, 19(1), 61–84.

[32] Semuel, Hatane and Wijaya, Serli and Tendean, Angelina (2018) *Online Marketing Communication Model of the Decorative Products in Indonesia through User Background, Cultural Experience, Website Quality, Intention and Call to Action Netizen.* .Proceedings of the 2017 International Conference on Information Technology December 2017 Pages 446–450https://doi.org/10.1145/3176653.3178486

[33] Wu, W.Y., Lee, C.L., Fu, C.S., & Wang, H. C. (2013). How can online store layout design and atmosphere influence consumer shopping intention on a website? International Journal of Retail & Distribution Management, 42(1), 4-24.

[34] Padilla-Meléndez, Ana Rosa del Aguila-Obra, Aurora Garrido-Moreno (2013). Perceived playfulness, gender differences and technology acceptance model in a blended learning scenario Antonio. Computers & Education 63 (2013) 306317http://dx.doi.org/10.1016/j.compedu.2012.12.014

[35] Nien-Te Kuo, Kuo-Chien Chang, Yi-Sung Cheng & Jui-Chou Lin (2016) Effects of Tour Guide Interpretation and Tourist Satisfaction on Destination Loyalty in Taiwan's Kinmen Battlefield Tourism: Perceived Playfulness and Perceived Flow as Moderators, Journal of Travel & Tourism Marketing, 33(1), 103-122, DOI: 10.1080/10548408.2015.1008670

[36] Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. Decision Sciences, 39(2), 273–315.

[37] Oliver RL. Satisfaction: a behavioral perspective on the consumer. New York: McGraw-Hill, 1997.

[38] Hossain, M. S., Zhou, X. and Rahman, M. F. (2018). Examining the impact of QR codes on purchase intention and customer satisfaction on the basis of perceived flow. International Journal of Engineering Business Management, 10, 1-11.doi:10.1177/1847979018812323

[39] Rosario Raymundo MRD. QR codes as mobile learning tools for labor room nurses at the San Pablo Colleges Medical Center. Int Technol Smart Edu 2017; 14: 138–158.

[40] Hanyang Luo, Xinwei Han and Yanan Yu, "The impact of website quality on user loyalty through perceived value and commitment," 2016 13th International Conference on Service Systems and Service Management (ICSSSM), Kunming, 2016, pp. 1-5, doi: 10.1109/ICSSSM.2016.7538539.

[41] B. Vishnu Priya and JKR Sastry (2019). Assessment of Website Quality based on Appearance. International Journal of Emerging Trends in Engineering Research, 7(10). https://doi.org/10.30534/ijeter/2019/017102019

[42] Hsiu-Fen Lin (2007). The Impact of Website Quality Dimensions on Customer Satisfaction in the B2C E-commerce Context, Total Quality Management and Business Excellence, 18:4, 363-378, DOI: 10.1080/14783360701231302

[43] Tao Zhou and Shuren Zhang, (2009). Examining the Effect of E-commerce Website Quality on User Satisfaction. Second International Symposium on Electronic Commerce and Security 2009 IEEE DOI 10.1109/ISECS.2009.24

[44] Kuan, H., G. Bock, and V. Vathanophas. 2008. "Comparing the Effects of Website Quality on Customer Initial Purchase and Continued Purchase at E-Commerce Websites." Behaviour & Information Technology 27(1), 3–16.

[45] Ming-Tsang Hsieh & Wen-Chin Tsao (2014) Reducing perceived online shopping risk to enhance loyalty: a website quality perspective, Journal of Risk Research, 17:2, 241-261, DOI: 10.1080/13669877.2013.794152

[46] McKinney V, Yoon K, Zahedi FM (2002). The measurement of web-customer satisfaction: an expectation disconfirmation approach. Information Systems Research, 13(3):296–315.

[47] Chang, H., and S. Chen. 2009. Consumer perception of interface quality, security, and loyalty in electronic commerce. Information and Management 46(7), 411–17. doi:10.1016/j.im.2009.08.002.

[48] Zha J., Ju F. and Wang L. (2006). Customer Satisfaction in E-commerce: an Exploration of its Antecedents and Consequences, International Conference on Management of Innovation and Technology, pp.540-544.

[49] Cristobal, E., Flavián, C. and Guinalíu, M. (2007), "Perceived e-service quality (PeSQ): measurement validation and effects on consumer satisfaction and web site loyalty", Managing Service Quality, 17(3), 317-340.

[50] Raza, S.A., Jawaid, S.T., Hassan, A. and Burton, B. (2015), "Internet banking and customer satisfaction in Pakistan", Qualitative Research in Financial Markets, 7(1), 24-36.

[51] Kaura, V., Prasad, C.S.D. and Sharma, S. (2015), "Service quality, service convenience, price and fairness, customer loyalty, and the mediating role of customer satisfaction", International Journal of Bank Marketing, 33(4), 404-422.

[52] Singh, J .and Kaur, P. (2013). Customers' attitude towards technology based services provided by select Indian banks: empirical analysis, International Journal of Commerce and Management, 23(1), 56-68.

[53] Carlson, J. and O'Cass, A. (2011), "Developing a framework for understanding e-service quality, its antecedents, consequences, and mediators", Managing Service Quality, 21(3), pp. 264-286.

[54] Rod, M., Ashill, N.J., Shao, J. and Carruthers, J. (2009), "An examination of the relationship

between servicequality dimensions, overall internet banking service quality and customer satisfaction: a New Zealand study", Marketing Intelligence & Planning, 27(1), 103-126.

[55] Chiu, H.C., Hsieh, Y.C., & Kao, C.Y. (2005). Website quality and customer's behavioral intention: An exploratory study of the role of information asymmetry. Total Quality Management, 16(2), 185–197.

[56] C. Cappiello, C. Francalanci, and B. Pernici, "TimeRelated Factors of Data Quality in Multichannel Information Systems.," Journal of Management Information Systems, 20(3), pp. 71-91, Winter. 2003

[57] Chau, P. K., Au, G., & Tam, K. Y. (2000). Impact of information presentation modes on online shopping: An empirical evaluation of a broadband interactive shopping service. Journal of Organizational Computing and Electronic Commerce, 10(1), 1–22.

[58] Zhou, T., Li, H., & Liu, Y. (2010). The effect of flow experience on mobile SNS users' loyalty. Industrial Management & Data Systems, 110(6), 930–946. doi:10.1108/02635571011055126

[59] Tsao, W. C., Hsieh, M. T., & Lin, T. M. (2016). Intensifying online loyalty! The power of website quality and the perceived value of consumer/seller relationship. Industrial Management & Data Systems, 116(9), 1987-2010.

[60] Zhou, T. (2013). An empirical examination of continuance intention of mobile payment services. Decision Support Systems, 54, 1085–1091. doi:10.1016/j.dss.2012.10.034

[61] Ahn, T., Ryu, S. and Han, I. (2004). The impact of the online and offline features on the user acceptance of internet shopping malls", Electronic Commerce Research and Applications, 3(4), pp. 405-420.

[62] 62=Lohse, G. L., and P. Spiller. 1998. Electronic shopping. Communications of the ACM 41:81–87. doi:10.1145=278476.278491.

[63] Chung J, Tan FB (2004) Antecedents of perceived playfulness: an exploratory study on user acceptance of general information-searching websites. Inf Manag 41(7), 869–881

[64] Tolga Kaya and Cengiz Kahraman (2011). A FUZZY APPROACH TO E-BANKING WEBSITE QUALITY ASSESSMENT BASED ON AN INTEGRATED AHP-ELECTRE METHOD. Technological and economic development of economy, 17(2): 313–334 doi:10.3846/20294913.2011.583727

[65] Wu JJ, Chang YS (2005). Towards understanding members' interactivity, trust, and flow in online community. Ind Manag Data Syst 105(7):937–954

[66] Cyr D, Bonanni C, Bowes J, Ilsever J (2005) Beyond trust: web site design preferences across cultures. J Glob Inf Manag 13(4), 25–54.

[67] Meng, F., & Xu, Y. (2010). Tourism shopping behavior: Planned, impulsive, or experiential. International Journal of Culture, Tourism and Hospitality Research, 6(3), 250–265.

[68] Lin, C. Y., Fang, K., & Tu, C. C. (2010). Predicting consumer repurchase intentions to shop online. Journal of Computers, 5(10), 1527–1533. doi:10.4304/jcp.5.10.1527-1533

[69] Deighton, J., & Grayson, K. (1995). Marketing and seduction: Building exchange relationships by managing social consensus. The Journal of Consumer Research, 21(4), 660–676. doi:10.1086/209426

[70] C. Jin, The perspective of a revised tram on social capital building: the case of Facebook usage, Inf. Manage. 50, 2013, pp. 162–168.

[71] H.-W. Kim, S. Gupta, J. Koh, Investigating the intention to purchase digital items in social networking communities: a customer value perspective, Inf. Manage. 48, 2011, pp. 228–234.

[72] C.-Y. Li, Y.-C. Ku, The effects of persuasive messages on system acceptance, Pacific Asia Conference on Information Systems (PACIS), 2011, p. 110.

[73] S. Oum, D. Han, An empirical study of the determinants of the intention to participate in User-Created Contents (UCC) Services, Expert Syst. Appl. 38, 2011, pp. 15110–15121.

[74] D.-H. Shin, Y.-J. Shin, (2011). Why do people play social network games? Comput. Hum. Behav. 27, 852–861.

[75] Chen, L.-D., Gillenson, M. & Sherrell D. (2002). Enticing online consumers: An extended technology acceptance perspective. Information and Management 39, pp. 705–719.

[76] Mobarakabadi, H., Karami, M., Far, S. M., & Yarkarami, K. (2013). Influence of online shopping behavior factors on e-satisfaction of customer. Jurnal Teknologi, 64 (3), 1–7. doi:10.11113/jt.v64.2257

[77] Çelik, H. (2008). What determines Turkish customers' acceptance of internet banking? International Journal of Bank Marketing, 26(5), 353–370.

[78] Çelik, H. (2011). Influence of social norms, perceived playfulness and online shopping anxiety on customers' adoption of online retail shopping: an empirical study in the Turkish context. International Journal of Retail & Distribution Management, 39(6), 390–413.

[79] Chi-Hua Li and Chun-Ming Chang (2016). The influence of trust and perceived playfulness on the relationship commitment of hospitality online social network-moderating effects of gender, International Journal of Contemporary Hospitality Management 28(5), 924-944 DOI 10.1108/IJCHM-05-2014-0227

[80] Rodriguez AS, Campdesun ˜er RP, Vidal GG, et al. Tools for measuring and improving external customer satisfaction in stores of Santo Domingo, Ecuador. Int J Eng Bus Manage 2017; 7: 1–12.

[81] Ha Nam Khanh Giaoa, Bui Nhat Vuonga and Tran Nhu Quana (2020). The influence of website quality on consumer's e-loyalty through the mediating role of e-trust and e-satisfaction: An evidence from online shopping in Vietnam, Uncertain Supply Chain Management 8 (2020) 351–370doi: 10.5267/j.uscm.2019.11.004

[82] Alshibly, H.H. A Free Simulation Experiment to Examine the Effects of Social Commerce Website Quality and Customer Pyschological Empowement on Customers' Satisfaction. Journal of Business Studies Quarterly, 2014, 21-40.

[83] Hong W, Thong JYL, Wong WM, Tam KY (2002) Determinants of user acceptance of digital libraries: an empirical examination of individual differences and system characteristics. J Manag Inf Syst 18(3):97–124

[84] Tao Zhou, 2012). An empirical examination of continuance intention of mobile payment services. Decision Support Systems, Volume 54(2), January 2013, Pages 1085-1091.

[85] Novak TP, Hoffman D, Yung YF (2000) Measuring the customer experience in online environments: a structural modeling approach. Marketing Science 19(1):22–42

[86] Hsu CL, Lu HP (2004) Why do people play on-line games? An extended TAM with social influences and flow experience. Inf Manag 41(7):853–868

[87] Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a world-wide-web context. Information & Management, 38(4), 217–230.

[88] Agarwal, R. and Karahanna, E. (2000). Time flies when you're having fun: cognitive absorption and beliefs about information technology usage. MIS Quarterly, 24(4), pp. 665-94.

[89] Venkatesh, V. (2000). Determinants of perceived ease of use: integrating perceived behavioral control, computer anxiety and enjoyment into the technology acceptance model, Information Systems Research, 11(4), 342-65.

[90] Hackbarth, G., Grover, V. and Yi, M.Y. (2003), "Computer playfulness and anxiety: positive and negative mediators of the system experience effect on perceived ease of use", Information & Management, Vol. 40, pp. 221-32.

[91] P. Zhang, The affective response model: a theoretical framework of affective concepts and their relationships in the ICT context, MIS Q. 37, 2013.

[92] Anderson, J. C. and Gerbing, D. W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", Psychological Bulletin, Vol. 103, pp. 411-423.

[93] Wixom BH, Todd PA (2005) A theoretical integration of user satisfaction and technology acceptance. Inf Syst Res 16(1):85–102.

[94] Zeithaml VA, Berry LL, and Parasuraman A. The behavioral consequences of service quality. J Mark1996; 60: 31–46.

[95] Pallant, J. (2001), SPSS Survival Manual, Chicago: Open University Press.

[96] Sanzo, M. J., Santos, M. L., Vazquez, R., & Alvarez, L. I. (2003), "The effect of market orientation on buyer–seller relationship satisfaction", Industrial Marketing Management, 32(4), 327–345.

[97] Z. Guo, Social Statistics and Analysis Methods—the Application of SPSS. Beijing: China Renmin University Press (in Chinese), 1999.

[98] Hair Jr., J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis: A global perspective (7th ed.). New Jersey: Pearson Education.

[99] Podsakoff, P., S. MacKenzie, and J. Lee. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. Journal of Applied Psychology, 88(5), 879–903.

[100] Kock, N., & Lynn, G.S. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. Journal of the Association for Information Systems, 13(7), 546-580.

[101] Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. Journal of Marketing Research, 19, 440–452.

[102] Fornell, C., & Larcker, D. F. (1981) Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. Journal of Marketing Research, 18, 39-50.

[103] Hair, J.F., Hult, G.T.M. and Calantone, R.J. (2014). Common beliefs and reality about PLS: comments on Rönkkö & Evermann (2013), Organizational Research Methods, 17(2), 182-209.

[104] Hair, J.F. Jr, Hult, G.T.M., Ringle, C. and Sarstedt, M. (2016), A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM), Sage Publications, Thousand Oaks, CA.

[105] Kline, R. B. (2005). Principles and practice of structural equation modeling (2nd ed.). New York: The Guilford Press.

[106] Yinghua Liu and SooCheong (Shawn) Jang (2009). Perceptions of Chinese restaurants in the U.S.: What affects customer satisfaction and behavioral intentions? International Journal of Hospitality Management 28(3), September 2009, Pages 338-348 https://doi.org/10.1016/j.ijhm.2008.10.008

[107] Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis (5th ed.). Upper Saddle River, NJ: Prentice-Hall (Upper Saddle River, NJ).

[108] Bollen, K. A., and Stine, R. (1990). Direct and indirect effects: classical and bootstrap estimates of variabilty. *Sociol. Methodol.* 20, 115–140.

[109] MacKinnon, D. P., Lockwood, C. M., and Williams, J. (2004). Confidence limits for the indirect effect: distribution of the product and resampling methods. *Multivar. Behav. Res.* 39, 99–128. doi: 10.1207/s15327906mbr3901_4

[110] Efron, B., and Tibshirani, R. J. (1993). *An Introduction to the Bootstrap*. New York, NY: Chapman and Hall.

[111] Preacher, K. J., & Hayes, A. F. (2008). Contemporary approaches to assessing mediation in communication research. In A. F. Hayes, M. D. Slater, & L. B. Snyder (Eds.), The Sage sourcebook of advanced data analysis methods for communication research (pp. 13-54). Thousand Oaks, CA: Sage.

[112] C. Schaupp, "Web Site Success: Antecedents of Web Site Satisfaction and Re-use," Journal of Internet Commerce, vol. 9, pp. 42-64, 2010.

[113] Qutaishat, F. T. (2012), "Users' perceptions towards website quality and its effect on intention to use e-government services in Jordan", International Business Research, 6(1), 97-105.

[114] Ya-Hui Hsu, Chien-Kuo Li Shin, Chien-Ming Li and Na-Ting Liu (2016). THE EFFECT OF WEBSITE QUALITY FEATURES AND COGNITIVE ABSORPTION ON SOCIAL NETWORK SITE USAGE: A CROSS-NATIONAL STUDY. International Journal of Electronic Commerce Studies 7(2), 156-188, 2016 doi: 10.7903/ijecs.1448

[115] Muslim Amin, (2016). Internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty, International Journal of Bank Marketing, 34(3), 280-306 Permanent link to this document: http://dx.doi.org/10.1108/IJBM-10-2014-0139

[116] Suki, Norazah Mohd and Norbayah Mohd Suki. "Effects of Perceived Information Quality, Perceived System Quality, and Perceived Flow on Mobile Social Networking Sites (SNS) Users' Trust." *Contemporary Advancements in Information Technology Development in Dynamic Environments,* edited by Mehdi Khosrow-Pour, D.B.A., IGI Global, 2014, pp. 22-32. http://doi:10.4018/978-1-4666-6252-0.ch002

[117] Kheiry, B., & Alirezapour, M. (2012). The effect of satisfaction, trust and switching barriers service provider on customer loyalty (Mobile phone users of Iran cell campany In Iran). Australian Journal of Basic and Applied Sciences, 6(12), 52–60.

[118] Hsu, C. L., Chang, K. C., & Chen, M. C. (2012). The impact of website quality on customer satisfaction and purchase intention: Perceived playfulness and perceived flow as mediators. Information Systems and E Business Management, 10(4), 549–570. doi:10.1007/s10257-011-0181-5

[119] Chia-Lin Hsu, Kuo-Hsing Kuo, Ai-Yun Hsieh and Chi-Chieh Tang (2017). THE IMPACTS OF UTILITARIAN AND HEDONIC VALUE ON SATISFACTION AND CONTINUANCE INTENTION OF MOBILE PHONE APPLICATIONS: THE MEDIATING ROLES OF FLOW EXPERIENCE AND PERCEIVED PLAYFULNESS. Journal of Quality 24(3), 191 – 201, DOI10.6220/joq.2017.24(3).02

[120] El-Adly, M. I., & Eid, R. (2016). An empirical study of the relationship between shopping environment, customer perceived value, satisfaction, and loyalty in the UAE malls context. Journal of Retailing and Consumer Services, 31, 217-227.

[121] Han, H., & Hyun, S. S. (2018). Role of motivations for luxury cruise traveling, satisfaction, and involvement in building traveler loyalty. International Journal of Hospitality Management, 70, 75-84.

[122] Kai Wang and Chien-Liang Lin (2012). The adoption of mobile value-added services Investigating the influence of IS quality and perceived playfulness. Managing Service Quality 22(2), 184-208. DOI 10.1108/09604521211219007

[123] Forza, C., & Filippini, R. (1998). TQM impact on quality conformance and customer satisfaction: A causal model. International Journal of Production Economics, 55, 1–20.

[124] K.-T. Hau, Z. Wen, and Z. Chen, Structural Equation Model and Its Applications. Beijing: Educational Science Publishing House (in Chinese), 2004.

[125] Byrne, B. M. (1995). One application of structural equation modeling from two perspectives: Exploring the EQS and LISREL strategies.

[126] Greenspoon, P. J., & Saklofske, D. H. (1998). Confirmatory factor analysis of the multidimensional students' life satisfaction scale. Personality and Individual Differences, 25, 965–971.

[127] Browne, Michael W. and Robert Cudeck (1993), "Alternative Ways of Assessing Model Fit," in Testing Structural Equation Models, Kenneth A. Bollen and J.

[128] Wheaton, B., Muthen, B., Alwin, D. F., & Summer, G. F. (1977). Assessing reliability and stability in panel models. In D. R. Heise (Ed.), Sociological methodology (pp. 84–136). San Francisco: Jossy-Bass.

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10. APPENDIX:

10.1 System Quality:

SYSQ1. The website of this bank has an interface that is easy to use.

SYSQ2. The website of this bank is easy to navigate.

SYSQ3. The website of this bank provides fast download and upload times.

SYSQ4. This bank website provides reliable operating functions.

10.2 Information Quality:

INFQ1. This bank website provides up-to-date information.

INFQ2. This bank website provides accurate information.

INFQ3. This bank website provides complete information.

INFQ4. This bank website provides well-formatted information.

INFQ5. Overall, the information on my bank website is high quality. (Developed)

10.3 Service Quality:

SERQ1. The website of this bank provides on-time services.

SERQ2. The website of this bank provides prompt responses.

SERQ3. The website of this bank provides professional services.

SERQ4. The website of this bank provides personalized services.

10.4 Perceived Flow:

PFL1. I felt very captivated while browsing this bank website.

126=PFL2. Time seemed to pass very quickly while navigating this bank website.

PFL3. Nothing seemed to matter to me while browsing this bank website.

10.5 Perceived Playfulness:

PPN1. When using this bank's website, I did not realize time had elapsed.

PPN2. Using this bank's website leads me to explore.

PPN3. When interacting with this bank's website, I had fun.

10.6 E-banking Satisfaction:

EBS1. I am satisfied with this bank's website services.

EBS2. I am content with this bank's website services.

EBS3. I am pleased with this bank's website services.

10.7 E-banking Loyalty:

EBS2. I am content with this bank's website services

EBL2. I will perform more services on this bank website in the future.

EBL3. I rarely think about changing to another bank website. (deleted)

Table 4: Reliability and Validity of the study's model

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	CR	AVE	MSV	Max R(H)	1	2	3	4	5			6	7
1	.786	.562	.240	.845	**.750**								
2	.853	.539	.371	.864	.490	**.734**							
3	.830	.552	.327	.844	.369	.467	**.743**						
4	.778	.568	.032	.784	.180	.129	-.170	**.684**					
5	.870	.692	.372	.893	.359	.607	.495	.076	**.832**				
6	.779	.540	.372	.780	.431	.609	.572	-.123	.610			**.735**	
7	.770	.626	.172	.770	.261	.391	.415	-.113	.400			.375	**.791**

The significance level is 0.01.

Key: 1-EBS, 2-INFQ, 3-SYSQ, 4-SERQ, 5-PFL,6-PPN, 7-EBL

Table 5: Measurements' Fit

Categories	Parsimonious fit	Incremental fit			Absolute fit		
Indicator	χ2/df	AGFI	CFI	NFI	GFI	RMSEA	(P) Sig
Recommended Value	χ2/df <3	AGFI ≥ 0.80	CFI > 0.90	NFI ≥ 0.80	GFI ≥ 0.80	between .05 and .08	p > 0.05
Actual value	1.95	.842	.923	.855	.870	.053	.000
Remark	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
Source of acceptance	[43] [105]	[123], [124]	[125] [97]	[123]	[123], [126]	[127]	[128]