Macrothink Institute™

International Finance and Banking
ISSN 2374-2089
2021, Vol. 8, No. 2

Behavioral Analysis of Digital Banking Acceptance and Customer Satisfaction, in Greece

Melpomeni Anysiadou

PhD of Behavioral and Experimental Economics

Dept. of Economics and Sustainable Development, Harokopio University

PO Box 17676, Kallithea, Greece

E-mail: manisiadou@hua.gr

Received: June 17, 2021 Accepted: September 2, 2021 Published: September 19, 2021

doi:10.5296/ifb.v8i2.18769 URL: http://dx.doi.org/10.5296/ifb.v8i2.18769

Abstract

Greeks seem to be unfamiliar with online banking services, which was an obstacle to the smooth conduct of their transactions, especially during the Covid-19 period. The objective of the study is to reveal the dimensions that influence the use of Digital Banking, including users' satisfaction and no users' perceptions in Greece during Covid-19 period, using both econometrical and behavioral analysis approaches. Performing factor analysis, a Structural Equation Model and Multiple Logistic Regressions Models derived that both technological and personal factors, such as, personality and familiarity with banking products could impact the use and maintenance of the use of Digital-Banking in Greece. Besides, technical characteristics of services applications' such as easiness in login and security influenced users' satisfaction, while other traditional banking services such as ATM's and automatic machines' use, including the behavioral intention to change the way someone is conducting his/her banking transactions, could also be an obstacle in adoption. The particular study examines at the first time not only the perceptions of Greek consumers about electronic banking services, such as Digital-Banking, but also the factors, which will enhance the existing users' satisfaction, in conjunction with the barriers that lead in non-adoption, including other banking services.

Keywords: acceptance, behavior, digital banking, satisfaction, structural equation model

1. Introduction

The Pandemic issue has long preoccupied many scientists and multiple sectors of the economy around the world. Electronic banking services were deemed necessary in several countries, including Greece. Greek banks should find out those factors that enhance users' satisfaction and those which prevent a no user from trying online banking services, referring mainly to services used at homes, such as PC-Banking and Mobile-Banking, in order to increase the adoption and facilitate their clients with those services. This, could increase also bank's competitiveness nationally and internationally, as those banking services seem to be the most beneficial way, in managing financial transactions, either for consumers and banks, worldwide.

Various researches have dealt with the services of Digital-Banking, referring to the benefit of the bank's customers, through a wireless platform, connected in parallel with a device, such as the mobile phone and the personal computer, to facilitate his transactions (Cortinas et al., 2010). Digital-Banking can encourage banks, improving their financial performance, providing services tailored to the necessities of their customers (Mbama & Ezepue, 2018; Yang et al., 2018), while its importance is further enhanced, nowadays, by the development of a different order, which called cashless society (Anggarani & Nurzaman, 2020). The expanding growth of technology and people's involvement with information can generate more demanding customers regarding these services, forcing banks to continually improve their products and services based on their customers' new demands (Raicu & Turkes, 2016). According to Larsson and Viitaoja (2016) study, the examination and identification of someone needs about Digital-Banking services are necessary, to enhance the user's comfort, resulting in a stronger loyalty between customer and the bank. Bank customer's commitment is directly and positively associated with his/her perceived value concerning these electronic banking services (Rahi & Ghani, 2016), while the financial and time benefits (Aliyu et al., 2014; Ling et al., 2016), combined with its reliability (Jun & Cai, 2001; Shankar & Jebarajakirthy, 2019), and individuals' trust in these services (Kampakaki & Papathanasiou, 2017; Sanchetz-Torres et al., 2018; Krinsanto, 2018; Aboobucker & Bao, 2018) increase satisfaction and adoption. The current study concentrates on PC-Banking and Mobile-Banking use, referring them as Digital-Banking services, that can be used mainly from the home or work, releasing the Greek consumers from visiting bank branches, especially during this restricted period. The exceptional value of the study lies in the fact that it intends to investigate the technological and personal factors, including familiarity with banking products and services, as well as those factors that could increase users' satisfaction or decrease the probability of a user to adopt Digital Banking services, during Covid-19 period in Greece. In addition, exploring separately, through three different methodologies, those factors that reform users' satisfaction or could be barriers in no users' adoption is extra innovation of this study. All it concerns the structure of the study; it is worth mentioning that in sections one and two, an introduction and a literature review of the subject took place, while sections three and four refer to the research methodology and data collection procedures. Section five contains the conducted methodologies, while discussions, conclusions, limitations and practical implications are included in sections six, seven, and

eight—the study's references placed at the end.

2. Review of Literature

Research has revealed that demographic characteristics of individuals can influence the use of Digital-Banking with particular importance on consumer income (Pikkarainen et al., 2004; Laforet & Li 2005; Mujinga et al., 2018; Abayomi et al., 2019). Katiyar and Badola (2018) in their study revealed also, that individuals' technological background could be a severe obstacle in online banking adoption. Both the technological background of somebody (Poon, 2008; Chau & Ngai, 2010) and their interaction with banking products can determine the use and adoption of these services (Berger & Gensler, 2007; Szopinski, 2016). Digital Banking services are innovative applications, which justifies the contribution of information and awareness regarding the operation and the benefits provided by their use, to the adoption (Pikkarainen et al., 2004). Inconsistency and insufficiency about these services both from the bank and the website of these applications can be a severe obstacle in its adoption, decreasing the satisfaction of even already informed customers (Laforet & Li, 2005; Poon, 2008). It is worth noting that expert advice, special training seminars, and government interventions are proven to increase customers' satisfaction, facilitate information, and promote the use (Wan et al., 2005; Echchabi et al., 2019).

Some personal features of individuals, including the perception that the use of such services, would enhance people's prestige and elements of user's culture confirmed to impact the adoption (Al-smadi, 2012; Boateng et al., 2016; Huang, 2018; Tam & Oliviera, 2018). Similarly, intolerance to innovation and, therefore, adherence to traditional banking services could be an obstacle to both the use and adoption (Santouridis & Kiritsi, 2014; Chauhan et al., 2019; Zhang et al., 2018), while people's need to interact with the bank staff and the sense of stress when using such services are also personal characteristics that subconsciously prevent the use (Hanafizadeh et al., 2014). Individual' s social environment, referring mainly to those who have some control or whose opinion is valuable for potential users (Family, colleagues), could affect the use of some electronic banking services (Akinci et al., 2004; Al-smadi, 2012; Patel & Patel, 2018). It is worth mentioning that, when the social environment also consisted of various promotions or the observations of the use by others, the effect is either negligible, very small, or isolated in specific banking services such as Phone-Banking and other home-based banking services (Alalwan et al., 2018; Malaquias & Silva, 2020).

The impact of technology acceptance factors, such as the perceived usefulness and ease of use of these applications is also significant. Both perceived usefulness, including saving money and time using these applications combined with a 24-hour service (Akinci et al., 2004; Daneshgadesh & Yildirim 2014; Ege & Tatar, 2017; Ajimon, 2018; Uddin et al., 2018), as well as the perceived ease of use of these services can lead directly and indirectly to their adoption (Chau & Ngai 2010; Al-smadi, 2012; Mwiya et al., 2017; Wan et al., 2005; Agrawal et al., 2017; Echchabi et al., 2019). A practical, simple, and straightforward operating application enhances the satisfaction of even already users, increasing its perceived value and establishing a positive attitude towards these services, leading to maintenance of the use (Altobishi et al., 2018; Nkyoi et al., 2019). Patel and Patel (2018), applying an Extended

TAM Model, also found that when an application seems beneficial to the user, it can enhance its use and its composition in the individual' s social environment.

According to the literature, the main impediment to the adoption of these services is the fear of individuals concerning the risk involved in the use of these services, which can be expressed as Privacy, Security, Financial, Performance, Time, and Social Risk, referring mainly to user's time loss and personal information, combined with applications' malfunctions, resulting in loss of money from bank accounts (Luo et al., 2010; Al-smadi, 2012). Even already users of online banking applications can reduce the usage if they feel them risky while improving the website's security and privacy, can positively reinforce customers' satisfaction (Hua, 2008; Chauhan et al., 2019; Chau & Ngai, 2010; Uddin et al., 2018; Jahan et al., 2020; Jahan & Khan, 2018). The feeling of pleasure offered by such kind of banking services is also a key factor of positive influence, increasing customers' satisfaction and perceived value (Pikkarainen et al., 2004; Alalwan et al., 2018; Salimon et al., 2017; Zhang et al., 2018). Rodrigues et al. (2016) similarly pointed out that adding various social elements to the applications produces a sense of fun in the user, which interacts with the perception of their ease of use and tends to find them entertainment and useful, while Boonsiritomachai and Pitchayadejanant (2018) found the severe impact of this factor on the younger.

3. Research Model and Hypothesis

In this specific research, factors referring to demographic, personal and technology acceptance, in conjunction with the use of various banking products and services and Digital Banking's site characteristics, were used to generate an Extended TAM model, and two Multiple Logistics regressions for users and no users respectively. The hypotheses are analyzed below:

3.1 Research Hypothesis for Extended TAM Model

$H(1,2_{a\text{-}c},3_{a\text{-}c})$: Technological background and familiarity with Online Banking services (directly) affect the actual use of Digital Banking services.

$H(4,5,6,7,8,9,10)_{a}$: Technology acceptance and personality factors (directly) affect the attitude towards Digital Banking services.

$H(4,5,6,7,8,9,10)_{b,c,d,e}$: Technology acceptance and personality factors affect (directly and indirectly) both the behavioral intention and actual use of Digital Banking services.

$H11_{a\text{-}c}$: Attitude and behavioral intention to use Digital Banking services (directly and indirectly) affect the actual use of these services.

3.2 Research Hypothesis for Satisfaction from Digital Banking's Site

$H(12_{a\text{-}d},13_{a\text{-}b},14_{a\text{-}c},15)$:

Familiarity with Online Banking services, technical features of digital banking's site, and services provided by mobile banking affect the probability of a user to be satisfied from its use.

3.3 Research Hypothesis for no Users

$H16_{a,b,c,d,e,f,g}$: Technology acceptance factors towards Digital Banking services, affect the probability of a no user to use these services at least once.

$H17_{a,b,c,d}$: The use of other banking services and traditional banking services affect the probability of a no user to use these services at least once.

H18: Behavioral Intention to change the way someone is conducted their financial transactions affect the probability a no user to use these services at least once.

4. Data Collection Research Methodology

A sample of 489 Digital-Banking users and 128 no users, of which some had used the specific applications once, was collected from the capital of Greece, Athens, during December 2019 and April of 2020. Data collected through a properly constructed questionnaire (Table 1), based on technology acceptance model (TAM) and unified theory of acceptance and use of technology model (UTAUT), combined with personal factors, Digital-Banking's site characteristics and frequency of other banking services' use. A five Likert point scale was designed for all variables (from strongly disagree, to agree strongly), while the econometric program that used to analyze the data was STATA 16.

Table 1. Definitions and sources of questionnaire items

Dimensions	Definitions according to literature	Items
PCknow	Knowledge of using the pc (Poon, 2008)	1
Cards	The quantity of bank cards that the respondents have to their possession (Laforet & Li, 2005)	1
InfoM, InfoPC, InfoEs, NoinfoPC,NoinfoEs	Information about Mobile-Banking and PC-Banking from the bank (InfoM, InfoPC), information about all the electronic banking services from social environment (InfoEs), and no information about PC-Banking and for all electronic banking services (NoinfoPC, NoinfoEs (Pikkarainen et al., 2004; Siyal et al., 2019)	4
Stress (STR)	Feeling stressed during the use (Singh et al., 2020)	1
Need for interaction (NFDperson) (NFDmach)	Preference in contact with bank's staff (Hanafizadeh et al., 2014) Preference in conduct transactions through bank's automatic machines than bank's staff (Hanafizadeh et al., 2014)	2
Self-Efficiency (SE)	Feeling confident when using Digital-Banking's applications (Boonsiritomachai & Pitchayadejanant, 2018)	1
Trust Online Bank (TO)	Trust Online Bank like the traditional bank (Pikkarainen et al., 2004; Curran & Meuter, 2007)	1
Perceived Usefulness (PU)	Perceived efficient and quick transactions (Pikkarainen et al., 2004; Altobishi et al., 2018; Venkatesh et al., 2003)	4
Perceived Ease Use (PEoU)	Perceived easiness in navigation, without mental effort through Digital-Banking's applications (Pikkarainen et al., 2004; Zhou et al., 2010)	3
Personality Factors (PF)	Cultural and personality elements such as individualism and innovativeness (Tam & Oliviera, 2018; Hanafizadeh et al., 2014)	4
Perceived Awareness (PA)	Awareness about services' operation and benefits (Pikkarainen et al., 2004)	3
Perceived Risk (PR)	Feeling risky about Digital-Banking applications' security, financial and operating confidentiality (Pikkarainen et al., 2004; Luo et al., 2010)	4
Hedonic Motivation (HM)	Feeling pleasured and informative during the use (Curran & Meuter, 2007; Venkatesh et al., 2012)	3
Social Influence (SI)	Influence in using Digital-Banking's applications from social environment (family, friends, cooperatives) and promotion from Facebook, social media e.g., Facebook, TV etc (Farah et al., 2018)	3
Attitude (ATT) Behavioral Intention (BI) (ABI)	Positiveness and intention to use or continue to use Digital Banking services for all the sample (ATT, BI) and for no users (ABI) (Curran & Meuter, 2007; Hanafizadeh et al., 2014)	9
Behavioral intention to Change (BC)	Behavioral intention for the no user to change the way he/she conduct his/her financial transactions (Curran & Meuter, 2007)	3
Actual Use (AU)	Use of PC-Banking and Mobile-Banking for all the sample and use either PC-Banking either Mobile-Banking at least once for no users (Venkatesh et al., 2012)	4
Satisfaction (SAT)	The sense of satisfaction that the users have using Digital Banking's site (Only for Digital-Banking users) (Chau & Ngai, 2010; Sikdar et al., 2015)	1
Transfers mobile (TM)	The users' frequency of transferring money through Mobile-Banking application (Zhou et al., 2010)	1
Easy login, Brand Bank, Security	Users' affection of Digital banking's site characteristics, such as easiness in login, the brand of the bank's site, the security of the site (Chau & Ngai, 2010)	3
Bank, Machines Use, Card Use ATM Use	The frequency that a no user a) visit the bank branch, b) use the Automatic Machines (ATM) outside the bank branch, c) use the online machines insides the bank and d) use bank card to conduct his/her transactions (Altobishi et al., 2018)	6

5. Data Analysis and Results

5.1 Descriptive Analysis

The empirical results revealed that the majority of the sample was young women (up to 30 years old), while the level of computer use was quite good. Most of the respondents (42.9%) have a high-level education, including economics and computer knowledge, unemployed with a low-income level. All it concerns the relationship with the bank and its products are concluding that the respondents use two bank accounts and two banking cards, on average, and avoid visiting the bank branches.

5.2 Structural Equation Model

Table 2 shows the nine factors, whose definitions described in Table 1, in conjunction with their validated indicators that resulting from the Explanatory Factor Analysis to move on the Confirmatory Factor Analysis model (CFA). Factor loadings are greater than 0.40 (FL Range), which combined with reliability and validity indexes (CA-AVE-CR), proved a good adaptation of our data, without reliability and validity problems. The proposed structural equation model is illustrated in Figure 1. Tables 3 and 4 show the results from the implementation of the hypothetical structural equation model (SEM), including the recommended statistical indices according to the literature (Crowley & Fan, 1997; Bagozzi & Yi, 1988; Gefen et al., 2000) regression paths, standard regression estimates, standard errors and critical values of the equations, probability values, and indications of the research hypotheses for each equation. From the first absolute adjustment indexes such as CMIN (x2) / df (2.389<3), Goodness of Fit Index (GFI=0.882) and Adjusted Goodness of Fit Index (AGFI= 0.860), it is proven good data adaptation, while the following values of indicators CFI=0.935 and TLI=0.927 are consistent with the suggested values (GFI, AGFI>0.80, CFI, TLI>0.90). All it concerns the percentage of estimated errors and the residuals of the model estimated, Root Mean Square Error of Approximation (RMSEA<0.047 with P-Close>0.908) and Root Measures Residuals (RMR=0.054), also proves small deviation from acceptable values.

From Table 4 results we conclude that from technological background and familiarity with online banking services, PCknow (B= 0.088, p<0.05), Cards (B=0.11, p<0.01) and InfoM (B=0.095, p<0.05), variables positively and directly affect the actual use (AU) of Digital Banking services, in 5 and 1% statistical significance level, while NoinfoPC (B=-0.158, p<0.01), NoinfoEs (B=-0.154, p<0.01), STR (B=-0.097, p<0.01) and NFDperson (B=-0.068, p<0.05), variables negatively and directly affect the actual use of Digital Banking services, in 1 and 5% statistical significance level. The hypotheses H1, H2a-c, H3a-c, are confirmed. According to technological acceptance and personality factors, we found that positive and direct effect on attitude (ATT) towards these services have personality factors- PF (B=0.096, p<;0.01), perceived usefulness-PU (B=0.433, p<0.01), perceived ease of use-PEoU (B=0.163, p<0.01), perceived awareness- PA (B=0.079, p<0.01) and hedonic motivation-HM (B=0.224, p<;0.01), while negative direct effect has the perceived risk-PR (B=-0.176, p<0.01) and social influence-SI (B=-0.067, p<0.10). Thus, all the research hypotheses referring to direct effect on ATT through technology acceptance and personality factors are confirmed (H4a,

H5a, H6a, H7a, H8a, H9a, H10a). It is worth mentioning that PU (B=0.197, p<0.01), PA (B=0.063, p<0.10) and ATT (B=0.651, p<0.01), towards these services found to have also positive direct effects on the behavioral intention (BI), while PF (B=0.115, p<0.01), PA (B=0.107, p<0.01) and BI (B=0.244, p<0.01) found to influence positively and directly the AU. On the contrary, negative direct effects on AU found to have PR (B=-0.136, p<0.01) and SI (B=-0.068, p<0.10). Thus, H4c, H5b, H7b, H7c, H8c, H10c, H11b are confirmed while H4b, H5c, H6b, H6c, H8b, H9b,c, H10b, are not. All it concerns the indirect effects on BI through the direct effect of ATT, all the research hypothesis are confirmed (H4d, H5d, H6d, H7d, H8d, H9d, H10d).

Table 2. Keiser-Meyer-Olkin, Bartlett's test of Sphericity, cronbach alpha (CA), factor loading range (FL), composite reliability (CR) and average variance explained (AVE).

Constructs	CA	FL range	AVE	CR
PU	0.826	0.427-0.987	0.826	0.555
PR	0.87	0.512-0.955	0.88	0.655
PA	0.923	0.859-0.953	0.924	0.803
BI	0.91	0.649-1.038	0.914	0.78
PF	0.792	0.435-0.907	0.808	0.525
HM	0.833	0.501-0.914	0.845	0.65
SI	0.792	0.496-0.927	0.81	0.596
PEoU	0.827	0.485-0.974	0.847	0.656
ATT	0.936	0.78-0.832	0.936	0.83

Note. Total Variance explained = 76.6%; Bartlett's test of Sphericity = 12526.952, p-value = 0.000; Keiser-Meyer-Olkin (KMO) = 0.895; df = 435.

Specifically, Positive indirect effects found to have PF (B=0.062, p<0.05), PU (B=0.280, p<0.01), PEoU (B=0.106, p<0.01), PA (B=0.052, p<0.05) and HM (B=0.146, p<0.01), while negative indirect effects had PR (B=-0.114, p<0.01) and SI (B= -0.043, p<0.10). Similarly, all the research hypotheses referring to indirect effects on AU, through the direct effects on ATT and BI were confirmed (H4e, H5e, H6e, H7e, H8e, H9e, H11e and H11c). Positive effect found to have PF (B=0.015, p<0.01), PU (B=0.116, p<0.01), PEoU (B=0.026, p<0.01), PA (B=0.028, p<0.01), HM (B=0.036, p<0.01) and ATT (B=0.159, p<0.01), while negative indirect effects had PR (B=-0.028, p <0.01) and SI (B=-0.011, p<0.05).

Table 3. Results for structural equation model fit

Fit Index	CMIN (x^2)/df	CFI	GFI	TLI	AGFI	RMSEA(P-close)	RMR
Recommended value	<3	>0.9	>0.80	>0.90	>0.80	<0.08 (>0.05)	<0.08
Actual Value	2.389	0.935	0.882	0.927	0.86	0.047 (0.908)	0.054

Table 4. Results for Structural Equation Model hypothesis' test

Technological Background and Familiarity with Online Banking services						
Hypothesis	Hypothesized Path	Path Coefficient	S.E.	C.R.	p-Value	Remarks
H1	Pcknow→ AU	0.088	0.046	2.556	0.011	Supported
H2a	InfoM→ AU	0.095	0.026	2.649	0.008	Supported
H2b	NoinfoPC → AU	-0.158	0.037	-4.362	***	Supported
H2c	NoinfoEs→ AU	-0.154	0.038	-4.13	***	Supported
H3a	Cards→ AU	0.11	0.025	3.186	0.001	Supported
H3b	STR→ AU	-0.097	0.027	-2.673	0.008	Supported
H3c	NFDperson→ AU	-0.068	0.027	-1.965	0.049	Supported
Technology Acceptance and Personality Factors						
Hypothesis	Hypothesized Path	Path Coefficient	S.E.	C.R.	p-Value	Remarks
H4a	PF→ ATT	0.096	0.024	2.669	0.008	Supported
H4c	PF→ AU	0.115	0.015	2.711	0.007	Supported
H4d	PF→ ATT → BI	0.062	0.026	1.615	0.011	Supported
H4e	PF→ ATT → BI → AU	0.015	0.007	0.714	0.006	Supported
H5a	PU → ATT	0.43	0.046	11.003	***	Supported
H5b	PU → BI	0.197	0.051	4.608	***	Supported
H5d	PU→ ATT → BI	0.28	0.035	9.428	***	Supported
H5e	PU → ATT → BI → AU	0.116	0.027	2.629	0.001	Supported
H6a	PEoU→ ATT	0.163	0.036	4.162	***	Supported
H6d	PEoU→ ATT → BI	0.106	0.033	3	0.001	Supported
H6e	PEoU→ ATT → BI → AU	0.026	0.01	1.2	***	Supported
H7a	PA→ ATT	0.079	0.022	2.581	0.01	Supported
H7b	PA → BI	0.063	0.022	2.111	0.064	Supported
H7c	PA → AU	0.107	0.016	2.627	0.009	Supported
H7d	PA→ ATT → BI	0.052	0.023	1.652	0.015	Supported
H7e	PA → ATT → BI → AU	0.028	0.01	1.1	0.001	Supported
H8a	PR→ ATT	-0.176	0.04	-5.194	***	Supported
H8c	PR → AU	-0.136	0.025	-3.371	***	Supported
H8d	PR→ ATT → BI	-0.114	0.024	-5.75	0.001	Supported
H8e	PR→ ATT → BI →AU	-0.028	0.008	-2.125	***	Supported
H9a	HM→ ATT	0.224	0.031	5.871	***	Supported
H9d	HM→ ATT → BI	0.146	0.031	3.903	0.001	Supported
H9e	HM→ ATT → BI →AU	0.036	0.01	1.5	***	Supported
H10a	SI→ ATT	-0.067	0.024	-1.955	0.051	Supported
H10c	SI→ AU	-0.068	0.015	-1.669	0.095	Supported
H10d	SI→ ATT → BI	-0.043	0.024	-1.291	0.062	Supported
H10e	SI → ATT → BI →AU	-0.011	0.006	-0.66	0.041	Supported
H11a	ATT→ BI	0.651	0.046	14.395	***	Supported
H11b	BI→ AU	0.244	0.021	5.919	***	Supported
H11c	ATT → BI →AU	0.159	0.034	2.441	***	Supported

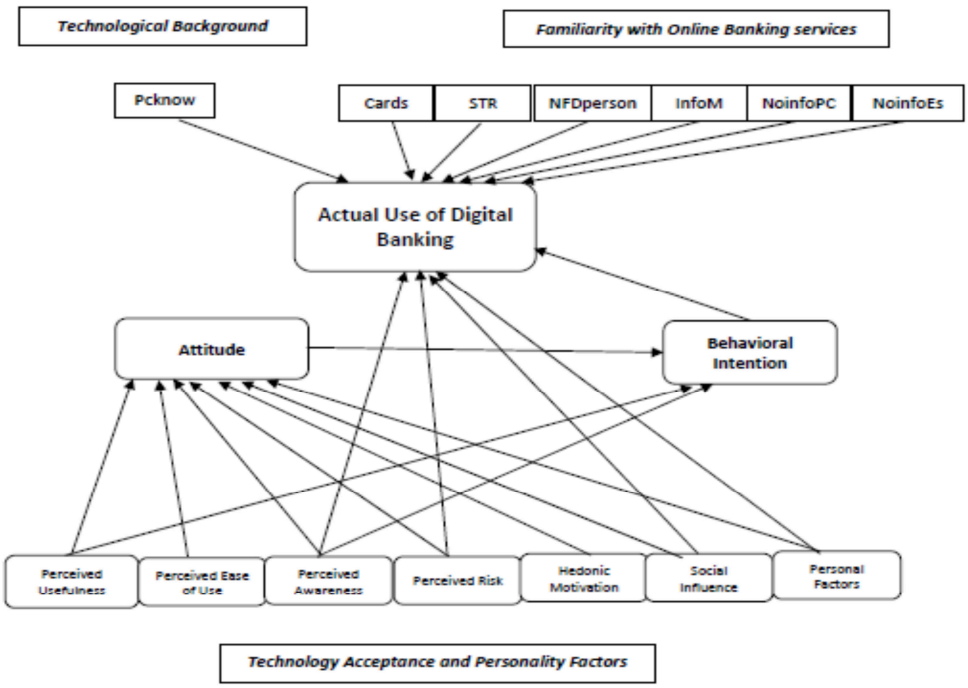

Figure 1. The proposed Digital Banking' Structural equation Model (SEM), introducing the influence of technological background, familiarity with online banking services, technological acceptance factors on attitude, behavioral intention and actual use of Digital-Banking services

5.3 Logistic Regressions Models

5.3.1 Principal Component Analysis and Explanatory Factor Analysis

Afterward, we separate the sample into two sub-groups, of which the first includes only digital banking services' users (489), while the second consists of those who aren't users and those who aren't but have used them at least once time at the past (128). We conduct a Principal Component Analysis (PCA) for the sub-group of users (Sub-group: Only Users) and an Explanatory Factor analysis (EFA) for the sub-group of no users (Sub-group: No Users), to reduce the under-investigation factors and use them in the Multiple Logistic regressions. Tables 5 to 8 show the validity indicators for the investigated factors for both the sub-groups, including a) the derived factors with their factor loading range, b) Chronbach alpha's value, c) Eigenvalue, and d) the variance and cumulative variance for both sub-groups.

Table 5. Cronbach alpha (CA), factor loading range (FL), eigen value, % of variance, cumulative % (Sub-group: Only Users)

Constructs	CA	FL range	Eigen value	% of variance	Cumulative %
ABI	0.937	0.727–0.837	9.937	33.123	33.123
PR	0.87	0.647–0.896	2.777	9.255	42.379
PA	0.923	0.884–0.913	2.356	7.853	50.231
PU	0.826	0.629–0.789	2.058	6.861	57.093
PF	0.792	0.559–0.853	1.62	5.399	62.491
PEoU	0.827	0.7–0.791	1.348	4.494	66.985
HM	0.833	0.67–0.831	1.166	3.887	70.872
SI	0.792	0.675–0.878	1.014	3.88	74.251

Table 6. Component transformation matrix (Discriminant validity) (Sub-group: Only Users)

Component	1	2	3	4	5	6	7	8
ABI	0.616	-0.328	0.263	0.354	0.282	0.339	0.306	0.177
PR	-0.245	0.333	-0.082	-0.193	0.509	-0.048	0.369	0.623
PA	0.325	0.583	-0.565	0.433	-0.164	0.016	0.126	-0.064
PU	0.045	0.638	0.74	0.082	0.028	0.018	-0.083	-0.172
PF	-0.201	-0.046	0.188	0.283	-0.677	0.108	0.018	0.61
PEoU	-0.304	0.065	-0.134	0.173	0.246	0.754	-0.476	0.02
HM	0.205	-0.046	0.002	0.275	0.264	-0.496	-0.672	0.336
SI	0.528	0.162	-0.066	-0.676	-0.212	0.239	-0.262	0.25

Table 7. Cronbach alpha (CA), factor loading range (FL), eigen value, % of variance, cumulative % (Sub-group: No Users)

Constructs	CA	FL range	Eigen value	% of variance	Cumulative %
ABI	0.910	0.591–0.945	7.820	27.928	27.928
PR	0.866	0.430–0.945	3.518	12.563	40.491
BC	0.913	0.829–0.914	2.395	8.554	49.045
PA	0.910	0.790–0.950	2.246	8.020	57.065
SI	0.835	0.638–0.912	1.976	7.058	64.124
PF	0.804	0.531–0.905	1.460	5.213	69.337
HM	0.830	0.523–0.915	1.302	4.651	73.987
PEoU	0.895	0.760–1.042	1.011	3.609	77.597

Table 8. Factor correlation matrix (Discriminant validity) (Sub-group No Users)

Component	1	2	3	4	5	6	7	8
ABI	1.000	-0.384	-0.152	0.077	0.392	0.422	0.579	0.515
PR	-0.384	1.000	-0.104	0.056	-0.258	-0.078	-0.260	-0.226
BC	-0.152	-0.104	1.000	-0.197	-0.143	-0.035	0.010	-0.171
PA	0.077	0.056	-0.197	1.000	0.081	0.139	0.060	0.165
SI	0.392	-0.258	-0.143	0.081	1.000	0.342	0.312	0.201
PF	0.422	-0.078	-0.035	0.139	0.342	1.000	0.331	0.328
HM	0.579	-0.260	0.010	0.060	0.312	0.331	1.000	0.506
PEoU	0.515	-0.226	-0.171	0.165	0.201	0.328	0.506	1.000

5.3.2 Multiple Logistic Regressions Models Result

Table 9 shows the results from the Multiple Logistic Regression methodology, including, the estimated coefficients, the odds ratio, and the marginal effect for Digital-Banking users' satisfaction and no users' probability of using Digital Banking services at least once, while Table 10 shows the regressions' hypothesis. Regarding the interpretability of the final models (Models II), from the indexes of good fit (For Model Sat: Pseudo R2= 0.199, Log likelihood = -202.954 and Hosmer-Lemeshow=10.81, while for Model No User: Pseudo R2=0.186, Log likelihood=-67.312 and Hosmer-Lemeshow=7.35), we conclude that both our models fit properly to our data. All it concerns the Model Sat, which refers to the probability of a user to be satisfied from the Digital Banking's site, we find that all the nine variables we use are statistically significant and thus they affect the probability of a user to be satisfied from the Digital Banking's site. The hypothesis H12a-d, H13a-c, H14a-c, and H15 are confirmed. Thus, according to familiarity with online banking services, a Digital Banking user is satisfied from the site's use when he is aware of these services, is not feeling stressed by the site's use, and believes that he could handle this service on his own, while he trusts an online bank like the traditional one. Also, user satisfaction increases when he could manage money transfers from his mobile banking's site and he feels that the site is easy to log in and navigate, secure, and provided by a good reputation's bank. All it concerns the No users' model (Model No user), we find that technology acceptance factors towards Digital Banking services except social influence and personality factors, are not statistically significant and are not affect the probability of a no user to try Digital Banking services at least one time. On the contrary, the frequency of using automatic machines inside the bank, and banking cards to conduct their financial transactions, in conjunction with the behavioral intention to change the way they are doing their transactions, are statistically significant variables, which positively affect the probability of a no user to use these services at least once. The frequency of ATM's use and visiting a bank branch to conduct transactions through bank staff's help, are also a statistically significant variables, which negatively affect the dependent variable. Thus, hypotheses H16d, H16e, H17a-d, and H18 are confirmed, while H16a, H16b H16c H16f, H16g are not.

Table 9. Regression models for users' satisfaction and no users

Model: Sat	**Model I**	**Model II**			***Model: No Users***	**Model I**	**Model II**		
Variables	**Estimated Coefficients**	**Estimated Coefficients**	**Odds ratio**	**Marginal effect**	**Variables**	**Estimated Coefficients**	**Estimated Coefficients**	**Odds ratio**	**Marginal effect**
Constant	1.388***	-5.222***			*Constant*	-0.650***	-1.592***		
	(0.512)	(1.165)				(0.205)	(0.434)		
STR	-0.779***	-0.744***	0.474	-0.096	*ABI*	-0.263	-		
	(0.245)	(0.26)				(0.318)			
TO	0.308**	0.219*	1.245	0.094	*PR*	0.209 (0.237)	-		
	(0.124)	(0.132)							
NFDmach	0.300**	0.305**	1.357	0.334	*BC*	0.629**	0.582**	1.79	0.127
	(0.119)	(0.127)				(0.246)	(0.245)		
InfoPC	0.787***	0.825***	2.282	0.117	*PA*	0.075 (0.22)	-		
	(0.245)	(0.26)							
InfoEs	0.366	0.465*	1.592	0.055	*SI*	0.504*	0.586**	1.798	0.128
	(0.265)	(0.282)				(0.264)	(0.278)		
SE	0.430***	0.386***	1.471	0,140	*PF*	-0.668**	-0.932***	0.393	-0.204
	(0.110)	(0.116)				(0.263)	(0.287)		
Easy Login	-	0.663**	1.942	0.208	*HM*	0.418 (0.307)	-		
		(0.299)							
Brand Bank	-	0.481**	1.618	0.109	*PEoU*	-0.088	-		
		(0.19)				(0.258)			
Security	-	0.861*	2.365	0.405	*Bank*	-	-0.928*	0.395	-0.184
		(0.446)					(0.525)		
TM	-	0.924***	2.519	0.129	*Machines Use*	-	1.167**	3.213	0.261
		(0.258)					(0.514)		
Pseudo R2	*0.13*	*0.199*			*Cards Use*	-	1.08**	2.964	0.226
							(0.495)		
Log likelihood	-220.465	-202.954			*ATM Use*	-	-0.451***	0.636	-0.098
							(0.251)		
Hosmer and Lemeshow	2.37	10.81			*Pseudo R2*	*0,117*	*0,186*		
Prob Ch2	0.967	0.212			*Log likelihood*	-72.944	-67.312		
*Notes that ***,** and * represent the significance levels of 1%, 5% and 10%, respectively*					*Hosmer and Lemeshow*	4.94	7.35		
					Prob Ch2	*0.117*	*0,186*		

Table 10. Results for logistic regressions hypothesis' test

Satisfaction from Digital Banking site (Only for users)			Use Digital Banking services at least once (No users)		
Hypothesis	Hypothesized Path	Remarks	Hypothesis	Hypothesized Path	Remarks
H12a	STR→ SAT	Supported	H16a	ABI→ AU	Not Supported
H12b	SE→ SAT	Supported	H16b	PR→ AU	Not Supported
H12c	TO → SAT	Supported	H16c	PA→ AU	Not Supported
H12d	NFDmach→ SAT	Supported	H16d	SI→ AU	Supported
H13a	InfoPC→ SAT	Supported	H16e	PF→ AU	Supported
H13b	InfoEs→ SAT	Supported	H16f	HM→ AU	Not Supported
H14a	Easy login→ SAT	Supported	H16g	PEoU→ AU	Not Supported
H14b	Brand Bank→ SAT	Supported	H17a	Bank → AU	Supported
H14c	Security→ SAT	Supported	H17b	Machines use→ AU	Supported
H15	TM→ SAT	Supported	H17c	Cards use→ AU	Supported
			H17d	ATM Use→ AU	Supported
			H18	BC→ ATT	Supported

6. Discussion

From the empirical results of the combination of the methodologies, it is evident that technological background and familiarity with online banking services, including information about electronic banking services influenced the use and the satisfaction of the use, of Digital Banking in Greece the specific period. Specifically, the need for personal interaction with the bank staff, and the feeling stress when using such banking services could be an obstacle in adoption and satisfaction, while the need for personal interaction with bank machines and feeling confident during the use, could expand the use (Hanafizadeh et al., 2014; Boonsiritomachai & Pitchayadejanant, 2018; Singh et al., 2020). This fact indicates that bank managers should promote banking services and products that the Greek client could manage or he could be trained to manage, to eliminate any individual's feeling of insecure.

Personality factors such as the receptivity to innovation, the behavioral intention to change the way someone is doing his financial transactions and the belief that an online bank could function as the bank brunch, were proved to be significant factors that could enhance the use, leading also a no user to try these banking services. The results are in line with those of Pikkarainen et al. (2004), Curran and Meuter (2007), Katiyar and Badola (2018), Arif et al. (2020).

Furthermore, both the technological acceptance factors and technical characteristics of Digital application found to have impact on use. Banks should place particular importance on improving the usability, ease of use and safeness of Digital Banking' site, since according to our results, they could affect directly and indirectly the use, forming a positive attitude towards these services, leading to their adoption and the increase of users' satisfaction (Sikdar et al., 2015; Mwiya et al., 2017; Ajimon, 2018; Alalwan et al., 2018; Nkyoi et al., 2019; Jahan et al., 2020; Malaquias & Silva, 2020; Sabbir et al., 2020).

It is worth mentioning that although, individual's social environment found to affect positively the intention of non-users to try the services of Digital-Banking at least once, it also found to be an obstacle in actual use and maintaining the use, which is evident that Greek consumers cannot be convinced just by simply advertising through social media (such as Facebook, television), but need additional information about these banking services (Alalwan et al., 2018; Malaquias & Silva, 2020).

The contribution of other banking services in trying Digital Banking service is also essential. Adherence to traditional payment methods such as visiting the bank branch, and communicate with bank staff or using ATMs, negatively affect the adoption, while the use of new technological services such as automatic machines inside the bank and bank cards can enhance the use (Altobishi et al., 2018). Those in charge should pay attention to this fact and give disincentives in using traditional banking services, promoting the use of new technological banking services.

7. Conclusions

Covid-19 Pandemic brought about significant changes in people's activities including their financial transactions, forced them to use extensively online banking's services, especially those that used from home or work such, as Digital-Banking, referring to PC-Banking and Mobile-Banking use. By applying factor analyses, a structural equation model and two multiple logistic regressions, in three different samples, including users and no users of Digital-Banking, we verify that Greek consumers are influenced by personal and technological acceptance factors combined with Digital Banking's characteristics and the use of other banking services. Physiological and personal factors such as feeling stressed and self-confident, or the degree of innovativeness and the degree of someone's behavioral intention to change the way he/she is doing his/her financial transactions have an impact both on users and potential users.

8. Limitations and Implications

From the empirical results, it is evident that bank managers should ensure that the entire information regarding the use and the privileges of Digital-Banking services are given to Greek consumers by the bank and its staff, to increase Greeks' self-confidence and eliminate any fear that prevent the adoption and users' satisfaction. Also, there should be appropriate financial and non- financial incentives and disincentives to bank clients, to use more online banking services such as automatic machines and banking cards, and less the traditional ones, like visiting a bank branch or using ATM. Individuals' perceptions could also be explored in the post- Covid-19 era when consumers would have used contactless transactions for a more extended period. Simultaneously, similar studies could be done for the other electronic banking services so that there is an overall picture of electronic banking services, during and after the Pandemic, such as ATMs and Phone-Banking.

Acknowledgements

This research is co-financed by Greece and the European Union (European Social Fund- ESF) through the Operational Programme «Human Resources Development, Education and

Lifelong Learning» in the context of the project "Strengthening Human Resources Research Potential via Doctorate Research" (MIS-5000432), implemented by the State Scholarships Foundation (IKY)»

References

Abayomi, O. J., Olabode, A. C., Reyad, M. A. H., Tetteh Teye, E., Haq, M. N., & Mensah, E. T. (2019). Effects of Demographic Factors on Customers' Mobile Banking Services Adoption in Nigeria. *International Journal of Business and Social Science*. https://doi.org/10.30845/ijbss.v10n1p9

Aboobucker, I., & Bao, Y. (2018). What obstruct customer acceptance of internet banking? Security and privacy, risk, trust and website usability and the role of moderators. *Journal of High Technology Management Research*. https://doi.org/10.1016/j.hitech.2018.04.010

Agrawal, A. M., Tripathi, V., & Agrawal, V. (2017). Exploring key dimensions of e-service quality: A case of Indian banking industry. *International Journal of Services and Operations Management*. https://doi.org/10.1504/ijsom.2018.10010036

Ajimon, G. (2018). Perceptions of Internet banking users—a structural equation modelling (SEM) approach. *IIMB Management Review*. https://doi.org/10.1016/j.iimb.2018.05.007

Akinci, S., Aksoy, Ş., & Atilgan, E. (2004). Adoption of Internet banking among sophisticated consumer segments in an advanced developing country. *International Journal of Bank Marketing*. https://doi.org/10.1108/02652320410530322

Al-smadi, M. O. (2012). Factors Affecting Adoption of Electronic Banking: An Analysis of the Perspectives of Banks' Customers. *International Journal of Business and Social Science*.

Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., & Algharabat, R. (2018). Examining factors influencing Jordanian customers' intentions and adoption of internet banking: Extending UTAUT2 with risk. *Journal of Retailing and Consumer Services*. https://doi.org/10.1016/j.jretconser.2017.08.026

Aliyu, A. A., Rosmain, T., & Takala, J. (2014). Online Banking and Customer Service Delivery in Malaysia: Data Screening and Preliminary Findings. *Procedia - Social and Behavioral Sciences*. https://doi.org/10.1016/j.sbspro.2014.03.714

Altobishi, T., Erboz, G., & Podruzsik, S. (2018). E-Banking Effects on Customer Satisfaction: The Survey on Clients in Jordan Banking Sector. *International Journal of Marketing Studies*. https://doi.org/10.5539/ijms.v10n2p151

Anggarani, M., & Nurzaman, M. S. (2020). How's Prospect of Digital Banking in Indonesia? Notes From Islamic Views, Economic Value Added for Banking Industry, and Changing Costumer Behavior. *Al-Amwal: JurnalEkonomi Dan Perbankan Syari'ah*. https://doi.org/10.24235/amwal.v1i1.6411

Arif, I., Aslam, W., & Hwang, Y. (2020). Barriers in adoption of internet banking: A structural equation modeling—Neural network approach. *Technology in Society*, *61*.

https://doi.org/10.1016/j.techsoc.2020.101231

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*. https://doi.org/10.1007/BF02723327

Berger, S. C., & Gensler, S. (2007). Online Banking Customers: Insights from Germany. *Journal of Internet Banking and Commerce*.

Boateng, H., Adam, D. R., Okoe, A. F., & Anning-Dorson, T. (2016). Assessing the determinants of internet banking adoption intentions: A social cognitive theory perspective. *Computers in Human Behavior*, *65*, 468–478. https://doi.org/10.1016/j.chb.2016.09.017

Boonsiritomachai, W., & Pitchayadejanant, K. (2018). Determinants affecting mobile banking adoption by generation Y based on the Unified Theory of Acceptance and Use of Technology Model modified by the Technology Acceptance Model concept. *Kasetsart Journal of Social Sciences*. https://doi.org/10.1016/j.kjss.2017.10.005

Chau, V. S., & Ngai, L. W. L. C. (2010). The youth market for internet banking services: Perceptions, attitude and behaviour. *Journal of Services Marketing*. https://doi.org/10.1108/08876041011017880

Chauhan, V., Yadav, R., & Choudhary, V. (2019). Analyzing the impact of consumer innovativeness and perceived risk in internet banking adoption: A study of Indian consumers. *International Journal of Bank Marketing*. https://doi.org/10.1108/IJBM-02-2018-0028

Cortiñas, M., Chocarro, R., & Villanueva, M. L. (2010). Understanding multi-channel banking customers. *Journal of Business Research*. https://doi.org/10.1016/j.jbusres.2009.10.020

Crowley, S. L., & Fan, X. (1997). Structural equation modeling: Basic concepts and applications in personality assessment research. *Journal of Personality Assessment*, *68*(3), 508–531. https://doi.org/10.1207/s15327752jpa6803_4

Curran, J., & Meuter, M. (2007). Encouraging Existing Customers to Switch to Self-Service Technologies: Put a Little Fun in their Lives. *Journal of Marketing Theory and Practice*, *15*, 283–298. https://doi.org/10.2753/MTP1069-6679150401

Daneshgadeh, S., & Sevgi Özkan Yıldırım, S. O. (2014). Empirical Investigation of Internet Banking Usage: The Case of Turkey. *Procedia Technology*, *16*, 322–331. https://doi.org/10.1016/j.protcy.2014.10.098

Echchabi, A., Al-Hajri, S., & Nazier Tanas, I. (2019). Analysis of E-Banking Acceptance in Oman: The Case of Islamic Banks' Customers. *International Journal of Islamic Economics and Finance* (IJIEF). https://doi.org/10.18196/ijief.128

Ege Oruç, Ö., & Tatar, Ç. (2017). An investigation of factors that affect internet banking usage based on structural equation modeling. *Computers in Human Behavior*. https://doi.org/10.1016/j.chb.2016.09.059

Farah, M. F., Hasni, M. J. S., & Abbas, A. K. (2018). Mobile-banking adoption: Empirical

evidence from the banking sector in Pakistan. *International Journal of Bank Marketing*. https://doi.org/10.1108/IJBM-10-2017-0215

Gefen, D., Straub, D., & Boudreau, M. (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communications of the Association for Information Systems*, *4*. https://doi.org/10.17705/1CAIS.00407

Hanafizadeh, P., Behboudi, M., AbediniKoshksaray, A., & Jalilvand, S. T. M. (2014). Mobile-banking adoption by Iranian bank clients. *Telematics and Informatics*. https://doi.org/10.1016/j.tele.2012.11.001

Hua, G. (2008). *An experimental investigation of online banking adoption in China*. In 14th Americas Conference on Information Systems, AMCIS.

Huang, L. K. (2018). *Culture and Internet Banking Technology*. Handbook of Research on the Evolution of IT and the Rise of E-Society https://doi.org/10.4018/978-1-5225-7214-5.ch011

Jahan, K., & Khan, F. (2018). Assessment of the Factors Influencing Online Banking Customer Satisfaction: A Banking Perspective in Bangladesh. *World Journal of Social Sciences*, *8*(1), 142–158.

Jahan, N., Ali, M., & Asheq, A. A. (2020). Examining the Key Determinants of Customer Satisfaction Internet Banking Services in Bangladesh. *Academy of Strategic Management Journal*, *19*(1).

Jun, M., & Cai, S. (2001). The key determinants of Internet banking service quality: A content analysis. *International Journal of Bank Marketing*. https://doi.org/10.1108/02652320110409825

Kampakaki, M., & Papathanasiou, S. (2017). *Electronic – Banking and Customer Satisfaction in Greece*. The Case of Piraeus Bank. *Annals of Management Science*. https://doi.org/10.24048/ams5.no1.2016-57

Katiyar, R., & Badola, S. (2018). Modelling the barriers to online banking in the Indian scenario: an ISM approach. *Journal of Modelling in Management*, *13*, 550–569. https://doi.org/10.1108/JM2-01-2018-0006

Krisnanto, U. (2018). Digital banking made transaction more trusted and secured? *International Journal of Civil Engineering and Technology*, *9*, 395–407. Retrieved from http://www.iaeme.com/IJCIET/issues.asp?JType=IJCIET&VType=9&IType=11

Laforet, S., & Li, X. (2005). Consumers' attitudes towards online and mobile banking in China. *International Journal of Bank Marketing*. https://doi.org/10.1108/02652320510629250

Larsson, A., & Viitaoja, Y. (2017). Building customer loyalty in digital banking: A study of bank staff's perspectives on the challenges of digital CRM and loyalty. *International Journal of Bank Marketing*. https://doi.org/10.1108/IJBM-08-2016-0112

Ling, G. M., Fern, Y. S., Boon, L. K., & Huat, T. S. (2016). Understanding Customer Satisfaction of Internet Banking: A Case Study in Malacca. *Procedia Economics and Finance*. https://doi.org/10.1016/s2212-5671(16)30096-x

Luo, X., Li, H., Zhang, J., & Shim, J. P. (2010). Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services. *Decision Support Systems*. https://doi.org/10.1016/j.dss.2010.02.008

Malaquias, R. F., & Silva, A. F. (2020). Understanding the use of mobile banking in rural areas of Brazil. *Technology in Society*, *62*. https://doi.org/10.1016/j.techsoc.2020.101260.

Mbama, C. I., & Ezepue, P. O. (2018). Digital banking, customer experience and bank financial performance: UK customers' perceptions. *International Journal of Bank Marketing*. https://doi.org/10.1108/IJBM-11-2016-0181

Mujinga, M., Eloff, M. M., & Kroeze, J. H. (2018). System usability scale evaluation of online banking services: A South African study. *South African Journal of Science*. https://doi.org/10.17159/sajs.2018/20170065

Mwiya, B., Chikumbi, F., Shikaputo, C., Kabala, E., Kaulung'ombe, B., & Siachinji, B. (2017). Examining Factors Influencing E-Banking Adoption: Evidence from Bank Customers in Zambia. *SSRN*. https://doi.org/10.2139/ssrn.2987982

Nkoyi, A., Tait, M., & der Walt, F. van. (2019). Predicting the attitude towards electronic banking continued usage intentions among rural banking customers in South Africa. *SA Journal of Information Management*. https://doi.org/10.4102/sajim.v21i1.1016

Patel, K. J., & Patel, H. J. (2018). Adoption of internet banking services in Gujarat: An extension of TAM with perceived security and social influence. *International Journal of Bank Marketing*. https://doi.org/10.1108/IJBM-08-2016-0104

Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model. *Internet Research*. https://doi.org/10.1108/10662240410542652

Poon, W. C. (2008). Users' adoption of e-banking services: The Malaysian perspective. *Journal of Business and Industrial Marketing*. https://doi.org/10.1108/08858620810841498

Rahi, S., & Ghani, M. A. (2016). Internet Banking, Customer Perceived Value and Loyalty: The Role of Switching Costs. *Journal of Accounting & Marketing*. https://doi.org/10.4172/2168-9601.1000188

Raicu, I., & Turkes, M. C. (2016). An opinion mining and sentiment analysis approach for evaluating customer satisfaction in a digital banking environment. *Annales Universitatis Apulensis Series Oeconomica*, *2*(18). https://doi.org/10.29302/oeconomica.2016.18.2.16

Rodrigues, L. F., Oliveira, A., & Costa, C. J. (2016). Does ease-of-use contribute to the perception of enjoyment? A case of gamification in e-banking. *Computers in Human Behavior*. https://doi.org/10.1016/j.chb.2016.03.015

Sabbir, M. M., Rahman, M. S., Nomi, M., & Jahan, T. (2020), Understanding Internet Banking Use in Bangladesh: The Role of Internet Banking Apps, Customers' Perceptions and Green Concern. *TUJOM*, *5*(2), 100–120. https://doi.org/10.30685/tujom.v5i2.89

Salimon, M. G., Yusoff, R. Z. B., & Mohd Mokhtar, S. S. (2017). The mediating role of hedonic motivation on the relationship between adoption of e-banking and its determinants. *International Journal of Bank Marketing*. https://doi.org/10.1108/IJBM-05-2016-0060

Sánchez-Torres, J. A., Canada, F. J. A., Sandoval, A. V., & Alzate, J. A. S. (2018). E-banking in Colombia: factors favouring its acceptance, online trust and government support. *International Journal of Bank Marketing*. https://doi.org/10.1108/IJBM-10-2016-0145

Santouridis, I., & Kyritsi, M. (2014). Investigating the Determinants of Internet Banking Adoption in Greece. *Procedia Economics and Finance*. https://doi.org/10.1016/s2212-5671(14)00051-3

Shankar, A., & Jebarajakirthy, C. (2019). The influence of e-banking service quality on customer loyalty: A moderated mediation approach. *International Journal of Bank Marketing*. https://doi.org/10.1108/IJBM-03-2018-0063

Sikdar, P., & Makkad, M. (2015). Online banking adoption: A factor validation and satisfaction causation study in the context of Indian banking customers. *International Journal of Bank Marketing*, *33*(6), 760–785. https://doi.org/10.1108/IJBM-11-2014-0161

Singh, N., Sinha, N., & Liébana-Cabanillas, F. J. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management*. https://doi.org/10.1016/j.ijinfomgt.2019.05.022

Siyal, A. W., Ding, D., & Siyal, S. (2019). M-banking barriers in Pakistan: a customer perspective of adoption and continuity intention. *Data Technologies and Applications*. https://doi.org/10.1108/dta-04-2018-0022

Szopiński, T. S. (2016). Factors affecting the adoption of online banking in Poland. *Journal of Business Research*. https://doi.org/10.1016/j.jbusres.2016.04.027

Tam, C., & Oliveira, T. (2018). Does culture influence m-banking use and individual performance? *Information and Management*. https://doi.org/10.1016/j.im.2018.07.009

Uddin, M. N., & Ahmmed, M. (2018). Islamic Banking and Green Banking for Sustainable Development: Evidence from Bangladesh. *Al-Iqtishad: JurnalIlmuEkonomi Syariah*. https://doi.org/10.15408/aiq.v10i1.4563

Venkatesh, M., & Davis, D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*. https://doi.org/10.2307/30036540

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *Behavioral Marketing eJournal*. https://doi.org/10.2307/41410412

Wan, W. W. N., Luk, C. L., & Chow, C. W. C. (2005). Customers' adoption of banking channels in Hong Kong. *International Journal of Bank Marketing*. https://doi.org/10.1108/02652320510591711

Yang, S., Li, Z., Ma, Y., & Chen, X. (2018). Does Electronic Banking Really Improve Bank Performance? Evidence in China. *International Journal of Economics and Finance*. https://doi.org/10.5539/ijef.v10n2p82

Zahid, N., Mujtaba, A., & Riaz, A. (2010). Consumer Acceptance of Online Banking. European *Journal of Economics, Finance and Administrative Sciences*, *27*, 44.

Zhang, T., Lu, C., & Kizildag, M. (2018). Banking "on-the-go": Examining consumers' adoption of mobile banking services. *International Journal of Quality and Service Sciences*. https://doi.org/10.1108/IJQSS-07-2017-0067

Zhou, T., Lu, Y., & Wang, B. (2010). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*. https://doi.org/10.1016/j.chb.2010.01.013

Copyrights