

# The Moderating Role of Consumer Characteristics on E-Loyalty in E-banking business: A Multigroup Analysis

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**Abstract-** Noticing the recent development in internet banking in different parts of the world has resulted in increasing online transactions without visiting the bank. Thus, this study investigates the importance of antecedents of e-loyalty—shared value, information quality, system quality, service quality, trust, attraction, and satisfaction—in using e-banking services and the role of consumer characteristics (gender, age, and level of education) as a moderator was analyzed as well. A survey questionnaire was distributed conveniently via online and face-to-face to customers in Muscat and Nizwa to gain important insights on how customer loyalty in the e-banking business is constructed. A total of 228 usable questionnaires were collected and analyzed using descriptive statistics, multigroup analysis, and structural equation modelling to test the hypotheses. Results of the analyses indicated that e-loyalty is found to be positively influenced by satisfaction, which later influenced by trust, attraction, shared value, information quality, system quality, service quality. The moderating role of gender, age, and level of education was supported by the data. The paper concludes some implications and limitations of the results are discussed. Besides, investigating which factors are important in driving customers using online banking, this study provides a deeper understanding of keeping customers online and loyal to a particular service provider. Specifically, the service providers need to focus on the importance of gender, age, and level of education in moderating the construction of e-loyalty in using e-banking services. This study provides new insights by adding attraction as an antecedent of customer satisfaction and the moderating role of consumer characteristics in using e-banking services.

*Keywords— E-Loyalty, E-Banking, Structural Equation Modeling, Multigroup Analysis, Oman.*

## I. INTRODUCTION

The rapid growth in the usage of the internet in all business activities has been tremendous recently. Particularly, one of the internet technologies has changed the way banks provide their services and customers managed their personal financial needs through the internet banking services. Internet banking has increasingly become a favorable distribution channel by service providers and customers alike. e-banking system allows customers to conduct all the traditional banking services without visiting their bank branch. However, the absence of personal contact gives customers a feeling of uncertainty and risk (Reichheld & Schefer, 2000). Therefore, a good security system helps in building customers' trust in performing e-banking transactions (Cappelli & Clancy, 1999).

According to Echchabi, Al-Hajri, & Tanas, (2019) having a developed and secure e-banking system contributes in enhancing the performance and efficiency of banks, and attracting and retaining customers as well. Moreover, e-banking helps banks to expand their market reach and product breadth at a low cost. Moreover, the bank websites offer portals connecting customers to a host of financial products, and thus, increasing marketing opportunities. In fact, internet banking is also known as electronic banking (e-banking), online banking, web banking, and virtual banking (Echchabi, Al-Hajri, & Tanas, 2019). For the purpose of and throughout this research we will use the term internet banking and e-banking interchangeably.

Obviously, what it is essential for the bank is keeping its customers because it is less expensive than to attract the new ones (Reichheld & Schefer, 2000), that is to increase its customer share, not the number of customers. Loyal customers have been always important but the ways in which customers develop loyalty is unclear, especially when the internet is involved (Jansson & Letmark, 2005). Unfortunately, fairly little has been written in this domain.

Thus, this study contributes to the body of knowledge in the trust-relationship model use of technology by developing a comprehensive model on the management of personal finance through e-banking. The following section reviews previous academic literature along with identifying the main research problem, variables, and the proposed theoretical framework.

## II. Literature Review

In this section, the review of literature begins with an overview of previous e-banking research in continuous usage (commitment-trust model) and loyalty. A theoretical framework relating to important determinants of loyalty and a number of mediating variables is discussed.

### Shared Value

According to Morgan and Hunt (1994) shared value is a stage where business partners have beliefs about behavior, goals and regulations. In the context of e-banking, shared values portray consumers' confidence towards values such as ethics, security and privacy (Mukherjee & Nath, 2003; Kassim & Abdulla, 2006). *Security* has an important role in ensuring the safety of customer and that prevent hackers from the invasion of their customer's privacy. In fact, security in internet banking had a positive and significant effect on customer satisfaction.

Indeed, previous studies (Matemba & Li, 2018; Sharma & Lijuan, 2014) stated that perceived security refers to the *ethical* dimension of internet banking users regarding the financial transactions carried out over the internet. It is the risk related to the stealing of financial information by unauthorized personnel, virus attacks, and the installation of malicious software. Thus, as Limbu, Wolf, and Lunsford, (2011) pointed out that internet banking users expected that the mobile applications or website to be fully secured against any unauthorized personnel in order to ensure that the financial detailed are secured properly and not shared or stored in any form.

Next, *privacy* is considered as a critical element which always affect and foster users' trust in the internet banking customers. Where, they are always hoping to be protected by the bank especially when they are using their personal and financial information in doing different online transaction through the internet banking (Ahmad & Al-Zu' i, 2011). Moreover, perceived privacy has been found to be the determinant factor of customer willingness for the usage and trust of technology (Arpaci, 2016; Khasawneh et al., 2018; Ozturket al., 2017; Zhang, Lu, & Kizildag, 2018).

### Communication

Additionally, favourable communication environment may also affect and foster users' trust in e-banking services. Hence, in this study the communication in e-banking includes dimensions such as system quality, information quality, service quality and user interface (Gao & Waechter, 2017; Silic & Ruf, 2018) These dimensions will be discussed next.

First, according to Silic and Ruf, (2018) that the first impression of e-banking users is on many factors such as mobile platforms facelessness, speed access, navigation, and visual appeal. It is evident in the previous studies (Gao & Waechter, 2017; Silic & Ruf, 2018; Zhou, 2011d, 2012b) that users develop a high level of trust only when they received a *system* with high quality and resulted of them spending more on that particular system.

Second, *information quality* on hand is the reflection of information relevance, sufficiency, accuracy, and timeliness that are provided by mobile banking systems. Users while using any mobile banking system usually they search for various type of information. Thus, information quality plays a very important role in trust in mobile banking, and financial services

have as highlighted by extant research (Silic & Ruf, 2018). Across different recent studies in internet banking, researchers have found and agreed that information quality is significantly influenced trust.

Third, offering users good quality of e-banking services is vital as well. Service quality in this regard is defined as the ability of a particular system in offerings to the users in terms of its reliability, responsiveness, assured assurance and personalized services (Gao & Waechter, 2017). Service reliability refers to high-quality services that enables the users in building trust in the system (Apostolos, 2016; Wang et al., 2019). Extant studies (such as Ofori et al., 2018; Silic & Ruf, 2018) have found that service quality is one of the users' trust determinants. Accordingly, when users experienced exceed a certain level of service quality, the trust form of users is as they perceive the offered service to be competent (Puriwat & Tripopsakul, 2017). It is evident that untimely and unreliable services led to building the users' distrust about the system (Apostolos, 2016; Gao & Waechter, 2017; Ofori et al., 2018; Puriwat & Tripopsakul, 2017; Silic & Ruf, 2018).

Finally, in internet banking, the *user interface* is known as the environment of the users which includes various functions such as menus and options (Stewart & Jürjens, 2018). Previous literature on the formation of trust in internet banking disclosed that the user interface design is considered as one of the important factors that affect user's trust in the system. Stewart and Jürjens, (2018) confirmed previous literature where they stated that a well-design user interface helps in reducing the complexity, facilitates navigation and interactivity and builds the user's trust in using the system.

### Attraction

The attraction variable has received little attention in the service-marketing literature that related to customer loyalty decisions (Gronroos, 2001; Kassim & Abdulla, 2006). They further suggested that attraction to a given customer means that there should be something that makes the service provider fascinating that can be built on financial, technology or social constructs (Gronroos, 2001; Kassim & Abdulla, 2006; Sathye, 1999). In the context of internet banking, customers can save on the transaction handling fees and costs associated with performing their financial activities (see Sathye, 1999). Moreover, ease of use element is necessary for customer usage of computer technologies, especially for new users (Davis, 1989; Ribbink et al., 2004). For example, the interaction with e-banking does not require a lot of mental effort, and customers can easily access e-banking services whenever they want, and it enables them to conduct their banking transactions quickly. It is evident in the previous study that attraction has a strong positive effect on relationship commitment in e-banking with communication having the most important determinant of attraction (Kassim & Abdulla, 2006).

### Trust, Satisfaction and Loyalty

The following section highlights the relevant literature on the concept of trust, satisfaction, and loyalty.

According to the Cambridge Dictionary, trust is defined as something is safe and reliable. Thus, it an important construct in many transactional relationships. Morgan and Hunt (1994) found that trust exists in the case of one party has confidence in the reliability and integrity of the exchange partners. The authors also regarded trust as a predictor of customer's future intentions. The previous study by Kesharwani and Bisht (2012) found that trust has an important role in creating satisfied and expected outcomes as a result of transactions. It is recognized to be one of the most critical factors for any online environment to succeed (Benbasat et al., 2010).

In the technology acceptance model, trust has been conceptualized as a dimension that influence users' willingness to engage in online exchanges of money and personal sensitive information (Kassim & Abdulla, 2006). A recent study by Rizomyliotis, Konstantoulaki, Kaminakis, Giovanis, and Papastathopoulos (2018) has found that customer satisfaction is significantly related to trust, while trust is the predictor to customer loyalty in mobile telecommunication market.

Next, satisfaction can be defined as the difference between customer expectation and performance of the service provided and is mostly used as part of the confirmation/disconfirmation paradigm (Oliver & Swan 1989). In other words, a customer is said to be satisfied if the perceived performance of service meets or exceeds his or her expectations or dissatisfied if the perceived performance did not meet his or her expectations of the service provided. In previous studies, customer satisfaction has been regarded solely as a result of cognitive processes. However, in the context of the relationship between satisfaction and loyalty, satisfaction is based on the customer's cumulative experience (Anderson et al. 1994). Satisfaction with a single transaction does not result in long-term loyalty, neither does dissatisfaction transaction lead to customer switching. Therefore, the enhancement of the knowledge regarding internet banking and customer perceptions toward it has become important for banks to be more competitive in providing an effective and efficient internet banking system (Zheng, Men, Yang, & Gong, 2019).

Finally, in the previous study by Anderson and Srinivasan (2003) defines customer loyalty in using a system as the customer tendency to re-dealing with a particular service and frequently visit it. For this reason, Gera (2011) assumed that interaction experience with the web site is considered as one of the most critical in affecting the customer's decision to re-visiting the web site and also to recommend others. Caruana (2002) and Baumann et al. (2012) stated that customer previous experience of a particular service is important in the development of customer attitude toward re-dealing with that service. Consequently, focusing on customer loyalty is critical

for internet banking for marinating the relations with their customers. In this context, a customer with a high level of loyalty will frequently visit the web site and spreading positive comments and recommending others to use the system as well when it comes to making decisions to patronize a financial institution (Amin et al., 2011; Caruana, 2002; Kaur & Soch, 2012). In other words, this leads to a high commitment to re-dealing consistently with the same service provider in the future (Anderson and Swaminathan, 2011; Fraering and Minor, 2013; Kandampully et al., 2015; Ladhari et al., 2011; Melnyk and Bijmolt, 2015).

We included user characteristics such as gender, age, and level of education as moderators in our model. Floh and Treiblmaier (2006) reported and supported the findings of Homburg and Giering (2001) regarding the impact of service quality has on satisfaction for younger people than for the elderly.

Thus, based on the above background, this research project addresses: how to keep the e-banking user online and loyal? This justifies the need for the present study to investigate the determinants of users' patronage with internet banking. Thus, the objectives of this research paper are:

- to investigate the importance of antecedents of e-loyalty— information quality, system quality, service quality, trust, attraction, and satisfaction— in using e-banking services and
- to examine the role of consumer characteristics (gender, age, and level of education) as a moderator.

Based on the above discussions of the previous reviews of literature, we develop a theoretical framework as shown in Figure 1 that links the trust and attraction to the users' satisfaction and loyalty.

The first link examines the influence of shared value, information quality, system quality and service quality on trust. Second link examines the influence of information quality, system quality and service quality on attraction. Third and fourth links examine the influence of trust and attraction on users' satisfaction. The fifth and sixth links examine the influence of trust and satisfaction on users' loyalty. Finally, the moderation effect of demographic characteristic on the relationship between shared value, information quality, system quality and service quality and trust and between information quality, system quality and service quality and attraction, between trust and satisfaction, between attraction and satisfaction and between trust and loyalty and between satisfaction and loyalty.

The research variables in this study are drawn from the works of existing literatures (Gao & Waechter, 2017; Kassim & Abdulla, 2006; Mukherjee & Nath 2003; Yuan, Lai, & Chu, 2019). Based on the proposed theoretical framework, the hypotheses were developed as shown in Table 1.

III. PROPOSED THEORETICAL FRAMEWORK AND HYPOTHESIS

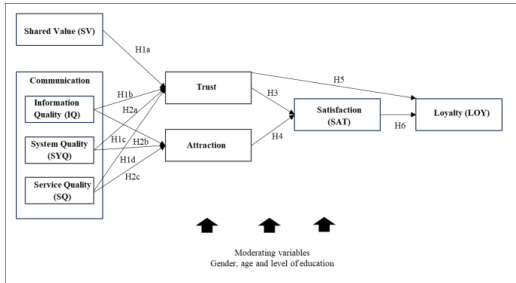


Figure 1. Proposed theoretical framework

(Source: Gao & Waechter, 2017; Kassim & Abdulla, 2006; Mukherjee & Nath 2003; Yuan, Lai, & Chu, 2019)

Table 1 Hypotheses

Hypothesis	Description
H1 <sub>a, b, c and d</sub>	Shared value, information quality, system quality, and service quality influence user trust in e-banking services
H2 <sub>a, b and c</sub>	Information quality, system quality, and service quality influence user attraction in e-banking services
H3	Trust influences user satisfaction in e-banking services
H4	Attraction influences user satisfaction in e-banking services
H5	Trust influences user loyalty in e-banking services
H6	Satisfaction influences user loyalty in e-banking services
H7	Demographic characteristics moderate the relationship of H1- H6

IV. SIGNIFICANCE OF THE STUDY

*Gaps in the literature.* The review of the literature described above clearly indicates some gaps in the literature, which justify this research. Numerous studies have undertaken to identify the factors affecting adopters and/or users of internet banking (see Echchabi, Al-Hajri, & Tanas, 2019; Musaev & Yousoof, 2015; Al-Sabbagh & Alemayehu, 2004) and very few studies on the factors affecting users' patronage with internet banking, specifically in Oman. Hence, the present study provides additional insights into this domain. Moreover, understanding the role of attraction in a customer loyalty decision has received little attention in the service-marketing literature (Gronroos, 2001; Kassim & Abdulla, 2006).

*Size and changes in the industry.* A strong e-banking system is essential in the current business world and is aligned with the Sultanate's vision for a sustainable economy that is fully digitalized which is reflected clearly in the rapid growth of e-banking services in Oman.

*Potential benefits.* The model adopted in this research project poses that the acceptance factors may be strengthened so the users of the system can find it convenient, easy to use, hassle-free, and accessible. Hence, the results of this study will give empirical and substantive information about internet banking adoption and acceptance by the identification of the relevance of all factors in internet banking. It also provides an integrated framework that merged various internet banking attributes and highlights these dimensions' applicability in using internet banking services. The findings of this study will shed lights on Oman's banking industry to offer an effective internet banking platform that harnesses the internet banking advantages by focusing on the important relevant factors in this particular culture. In conclusion, this research is justified on the above three conceptual and practical perspectives.

V. Methodology

Since the objective of this study is to investigate the effects of internet banking on customer loyalty and to examine the demographic characteristics as a moderator on these effects, a hypothesis testing approach will be used in this study for generalizing the results to the population. Next, the survey questionnaire was developed using constructs and items adapted from existing academic literature (Gao & Waechter, 2017; Kassim & Abdulla, 2006; Mukherjee & Nath 2003; Yuan, Lai, & Chu, 2019) and tailored to suit the main objectives of this research project. Each item was measured using five-point Likert-type scales ranging from agreeing to disagree.

Table 2 Measurements used in this research

Construct	Item	Description	Factor loadings
Shared value	SV1	My e-banking site protects information about my onsite behavior	0.73
	SV2	My e-banking site is safe to use for my banking transactions	0.87
	SV3	Security guidelines are displayed before using my e-banking	0.57
Information quality	IQ1	E-banking provides me with information relevant to my needs	0.75
	IQ2	E-banking provides me with sufficient information.	0.77
	IQ3	E-banking provides me with accurate information	0.73
	IQ4	E-banking provides me with up-to-date information	0.71
System quality	SYQ1*	E-banking quickly loads all the text and graphics	Deleted
	SYQ2	E-banking is easy to use.	0.85
	SYQ3	E-banking is easy to navigate	0.76
	SYQ4	E-banking is visually attractive	0.68
Service quality	SQ1	E-banking provides on-time services.	0.76
	SQ2	E-banking provides prompt responses	0.75
	SQ3	E-banking provides professional services	0.75
	SQ4	E-banking provides personalized services	0.73
Attraction	ATR1*	The interaction with e-banking does not require a lot of mental effort.	Deleted
	ATR2*	Saving the transaction handling fees in performing my banking transaction.	Deleted
	ATR3	I can access e-banking whenever I want.	0.77
	ATR4	E-banking enables me to conduct my banking transactions quickly.	0.78
Trust	T1	Can be counted on	0.73
	T2	Has my confidence	0.88
	T3	The bank has high integrity	0.79
Satisfaction	SAT1	I am satisfied with the e-banking	0.82
	SAT2	I am pleased with in e-banking	0.85
	SAT3	I am contented with e-banking	0.72
	SAT4	I am delighted e-banking	0.75
E-Loyalty	LOY1	I would continue to use e-banking for my banking needs	0.79
	LOY2	Continuing to use the e-banking for handling my banking transactions in the future	0.90
	LOY3	I would continue to see myself using the e-banking for handling my banking transactions	0.87
	LOY4*	I believe I could communicate to others the consequences of using e-banking	Deleted
	LOY5	I would have no difficulty telling others about the results of using e-banking	0.69

Source: Adapted from Gao and Waechter (2017), Kassim and Abdulla (2006), Mukherjee and Nath (2003) and Yuan, Lai, and Chu (2019)  
 Note: \*item deleted with factor loading < 0.50

The sample consisted of both Omani and non-Omani population especially those who are having a bank account and who have or have not used internet banking were included in the sample. The questionnaire was conveniently distributed due to time constraints, in doing this research and the costs involved.

Finally, data were analyzed using SPSS software version 24 and AMOS version 20 software. Types of analyzing data used in this study were descriptive analysis (SPSS software version 24) and inferential analysis using structural equation modeling (SEM), and Multigroup analysis using AMOS version 20.

### VI. Results

A total of 228 usable questionnaires were collected online through SurveyMonkey and face to face. The data were analyzed using descriptive statistics, multigroup analysis, and structural equation modeling to test the hypotheses. The majority of the respondents were female (61.8percent) aged between 25 to 44 years old (71.5 percent) and obtained at least a bachelor's degree (43.9 percent). One possible explanation for this issue is that women outnumbered men at universities and college (Viswanathan, 2017). Moreover, the majority of the data consisted of employees (both non-academic and academic) and students at universities and colleges.

The initial CFA model for system quality was not acceptable, and one item was eliminated to achieve an acceptable fit as shown in table 3 (Anderson & Gerbing, 1988).

Table 3 Constructs' reliability

Construct	Source	No. of original item	No. of retained item	Corrected alpha
Shared value	Mukherjee and Nath (2003)	3	3	0.69
Information quality	Gao and Waechter (2017)	4	4	0.83
System quality	Gao and Waechter (2017)	4	3	0.80
Service quality	Gao and Waechter (2017)	4	4	0.82
Attraction	Kassim and Abdulla (2006)	4	2	0.80
Trust	Yuan, Lai, and Chu (2019)	4	3	0.84
Satisfaction	Yuan, Lai, and Chu (2019)	4	4	0.88
E-Loyalty	Yuan, Lai, and Chu (2019)	5	4	0.86

The results in table 4 indicate the psychometric properties of each scale with the goodness of fit indices fit the data very well with  $\chi^2(\text{CMIN}/df) = 2.1$ ,  $CFI = 0.93$ , and  $RMSEA = 0.06$ . Moreover, the results in table 2 demonstrate adequate discriminant validity of the constructs with all the average variance extracted (AVE) exceeded the minimum level of 0.50 (Fornell & Larcker, 1981).

	Mean	SD	$\alpha$	CR	MSV	MIQ	MSYQ3	MSQ	MATR2	MTRT	MSAT	MLOY
MSV	3.94	0.66	0.69	0.77	0.54	0.44	0.34	0.33	0.26	0.29	0.33	0.44
MIQ	3.92	0.72	0.83	0.83		0.55	0.46	0.48	0.35	0.39	0.43	0.44
MSYQ3	3.90	0.77	0.80	0.81			0.59	0.54	0.47	0.35	0.48	0.47
MSQ	3.87	0.69	0.82	0.84				0.56	0.43	0.47	0.55	0.50
MATR2	3.93	0.76	0.77	0.78					0.60	0.36	0.53	0.48
MTRT	3.84	0.74	0.84	0.84						0.64	0.53	0.48
MSAT	3.87	0.79	0.88	0.87							0.62	0.62
MLOY	4.00	0.75	0.86	0.89								0.67

\*\* All are significant at  $p < 0.01$  level (2-tailed).  
 Note: Diagonal value is AVE and values above the diagonal are squared correlations  
 CR = Composite reliability; MSV = Shared value; MIQ = Information Quality; MSYQ3 = System Quality  
 MATR2 = Attraction; MTRT = Trust; MSAT = Satisfaction; MLOY4 = E-Loyalty

Additionally, we conducted Harman's Single Factor Test through exploratory factor analysis (Podsakoff et al, 2003) to estimate the common method bias. The result suggests that there is no significant common method bias in this data since the calculated variance is 47.8 percent that is below 50 percent. The results in table 5 indicate that e-loyalty is found to be positively influenced by satisfaction, which later influenced by trust and attraction. Trust is influenced by the shared value and service quality, while attraction is influenced by system quality and service quality.

Table 5 SEM Results

Hypothesis	Paths	Estimate $\beta$	T value	P value	Result
H1a	MSV $\rightarrow$ MT3	0.257	2.264	0.024**	Accepted
H1b	MIQ $\rightarrow$ MATR2	0.120	0.931	ns	Rejected
H1c	MSYQ3 $\rightarrow$ MATR2	0.353	2.415	0.016**	Accepted
H1d	MSQ $\rightarrow$ MATR2	0.444	2.498	0.012*	Accepted
H2a	MIQ $\rightarrow$ MT3	0.041	0.226	ns	Rejected
H2b	MSYQ3 $\rightarrow$ MT3	-0.213	-1.257	ns	Rejected
H2c	MSQ $\rightarrow$ MT3	0.808	3.493	0.001***	Accepted
H3	MATR2 $\rightarrow$ MSAT	0.637	7.401	0.001***	Accepted
H4	MT3 $\rightarrow$ MSAT	0.397	5.063	0.001***	Accepted
H5	MT3 $\rightarrow$ MLOY4	0.058	0.565	ns	Rejected
H6	MSAT $\rightarrow$ MLOY4	0.847	7.045	0.001***	Accepted

\*\*\* $p \leq 0.001$ ; \*\* $p \leq 0.01$ ; \* $p \leq 0.05$   
 MSV = Shared value; MIQ = Information Quality; MSYQ3 = System Quality  
 MATR2 = Attraction; MT3 = Trust; MSAT = Satisfaction; MLOY4 = E-Loyalty

Multigroup analysis was conducted to test the moderating effects of gender, age, and level of education on shared value, information quality, system quality, service quality, trust, attraction, satisfaction, and e-loyalty.

These results in table 6 show the moderating effect of gender, age, and level of education. The gender effect suggests that the influence of attraction on satisfaction is significantly higher for females than for a male. In other words, female customers are more prone to attraction in explaining satisfaction.

Table 6 Multigroup analysis

Paths		Gender			Age			Education		
		Estimate		z score	Estimate		z-score	Estimate		z-score
		Male	Female		Low	High		Low	High	
MTRT <-- MSV		0.07	0.16	0.680	0.07	0.12	0.331	-0.14	0.21	<b>2.209**</b>
MTRT <-- MIQ		0.15	0.22	0.537	0.31	0.00	<b>-1.979**</b>	0.04	0.34	<b>1.991**</b>
MTRT <-- MSYQ3		0.14	0.05	-0.634	0.08	0.11	0.200	0.28	0.01	<b>-1.726*</b>
MTRT <-- MSQ		0.42	0.47	0.298	0.35	0.65	<b>1.836*</b>	0.73	0.32	<b>-2.402**</b>
MATR2 <-- MIQ		0.17	0.11	-0.375	0.23	0.00	-1.371	0.17	0.16	-0.089
MATR2 <-- MSYQ3		0.25	0.48	1.440	0.41	0.45	0.264	0.43	0.41	-0.089
MATR2 <-- MSQ		0.39	0.32	-0.427	0.19	0.54	<b>1.999**</b>	0.29	0.34	0.243
MSAT <-- MTRT		0.61	0.45	-1.587	0.45	0.62	<b>1.760*</b>	0.62	0.45	-1.618
MSAT <-- MATR2		0.26	0.48	<b>2.431**</b>	0.46	0.31	-1.645	0.26	0.48	<b>2.300**</b>
MLOY <-- MTRT		0.31	0.24	-0.536	0.21	0.44	<b>1.945*</b>	0.20	0.28	0.655
MLOY <-- MSAT		0.46	0.61	1.088	0.61	0.43	-1.539	0.63	0.56	-0.549

Notes: \*\*\* p-value < 0.01; \*\* p-value < 0.05; \* p-value < 0.10  
 MSV = Shared value; MIQ = Information Quality; MSYQ3 = System Quality; MATR2 = Attraction; MT = Trust  
 MSAT = Satisfaction; MLOY = E-Loyalty  
 Source: analysis of survey data

The multigroup analysis for age shows a positive moderator effect on the relationship between information quality → trust, service quality – trust, service quality → attraction, trust → satisfaction, and trust → e-loyalty. Young people rate the importance of information quality is significantly higher in explaining trust than the older respondents for service quality dimension of communication. Similarly, service quality is significantly important in building attraction for older respondents. Additionally, older people rate the importance of trust in explaining both satisfaction and loyalty.

Finally, the last moderating variable, level of education has a positive moderator effect on the relationship between shared value and communication in building trust. In other words, shared value and information quality are important in building trust for highly educated respondents than for system quality and service quality dimensions of communication. While attraction is significantly important for people with higher education in building satisfaction. Thus, we can conclude that H7a, b, and c are partially supported.

**VII. Implications and Conclusion**

Our findings confirm and disconfirm previous studies that the loyalty of e-banking customers is directly affected by satisfaction, however not trust in e-banking services. Satisfaction is determined by trust, attraction, which themselves are determined by shared value, system quality, and service quality.

From the managerial perspective, the findings of the study will help banks to improve the design, and promote their products or services offered that are attractive and trustworthy to their customers. Such emphasis can be placed on shared value, system quality, and service quality. Consequently, customers will feel satisfied and confident in continuing their financial transactions or activities online and telling others about it positively.

The moderating role of customer's characteristics such as gender, age, and level of education aids a significant influence on some of the relationships. This result has several implications for e-banking segmentation strategies and tactics

especially for those banks that want to increase loyalty on the usage of their e-banking services.

There are a few limitations in our study that should be considered in the interpretation of the results and implications. First, our sample size is small; however, a larger sample may be used in future studies. Second, the majority of the respondents in our study were females. Thus, future studies should address this issue. Finally, our study should be replicated in a similar research setting in other high-income countries or GCC regions.

In conclusion, this research was conducted to investigate the antecedents of users' patronage with e-banking services, especially in Oman. Next, this research is one of the few studies to demonstrate the links between different factors that affect the users' patronage with e-banking. Further, this research demonstrated the effect of demographic in determining the relationship between shared value and communication and trust; between communication and attraction; between trust and attraction and satisfaction; and between trust and satisfaction and loyalty, especially for gender, age, and level of education.

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