

Customers' Perception and Satisfaction towards E-Banking Service in Yemen and Its Quality

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Providing quality e-banking services helps banks to achieve customer satisfaction, which in turn affects banks' overall financial performance. Therefore, there is need for banks to monitor the quality of the e-banking services they provide. The present study is a quantitative descriptive study intended to measure the level of customer perception and satisfactions towards e-banking service in Yemen and its quality (i.e, overall e-banking service quality as well as the quality of its dimensions: website design, reliability/fulfillment, privacy/security and customer service). The sample included 454 respondents drawn from the population of customers of Yemeni banks that provide e-banking service. The tool of data collection was questionnaire developed by the researchers. The study revealed that the level of customer perception and satisfactions towards e-banking service in Yemen was moderate, and the overall e-banking service quality as well as the quality of its dimensions (website design, reliability/fulfillment, privacy/security and customer service) was also moderate.

Keywords: *Customer perception; customer satisfaction; e-service quality; e-banking; yemeni banks.*

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1. INTRODUCTION

With the development in the internet and information technology, electronic services emerged in banks, and to keep pace with the ongoing technological development taking place in the world, the development in the electronic services increased to include a radical change in traditional banking services provided to customers and replaced them with electronic services and banking applications on smart phones [1]. This allowed customers to conduct their financial transactions using the Internet, which is known as electronic banking services or Internet banking services.

Electronic banking service is the conduct of banking operations in electronic ways; that is, using new information and communication technologies for withdrawal, payment, transfer or dealing in securities or other banking activities. In light of this type of banking, the customer does not have to visit the bank as he can carry out some transactions with his bank while he is at home or in his office, which enables him to exceed the dimensions of space and time (Hussein & Maraj, 2004, cited in Ayyash & Ababsa [2]). Electronic banking services are those operations or activities that are conducted, implemented or promoted by electronic or optical means such as: telephone, computer, ATM, the Internet, digital television and other means by banks and financial institutions (Bouras, Barika, 2014, cited in Ayyash & Ababsa [2]).

E-banking services are fast and efficient and enable customers to monitor their accounts regularly. This has made e-banking services more convenient to the users, and has also helped reduce the costs associated with the operating from the physical branches of banks. Therefore, there are many banks that have become operating exclusively through the Internet without having actual branches.

Monitoring of electronic banking service quality is the effective tool for knowing the level of services provided to customers and for knowing what needs to be done to improve them. The quality of electronic service has effects on customers' attitudes, satisfaction and behavioural intentions, and customers' evaluation of e-service quality enables practitioners to allocate the organization's resources to ensure the performance of electronic services that achieve their satisfaction and positive behavioural attitudes.

The present study was intended to measure the level of customer perception and satisfactions towards e-banking service in Yemen and its quality (i.e, overall e-banking service quality as well as the quality of its dimensions: website design, reliability/fulfillment, privacy/security and customer service). We start our research with a review of previous research related to our study and then we explain the research methodology, present the results of the analysis and discuss the results.

2. LITERATURE REVIEW

Studies on e-banking service investigated different aspects related to the service. A number of studies investigated customers' perception of the e-banking service. For example, Harikanth and Gnanadhas [3] found that the customers in Kanniyakumari District, India were not fully aware of the operational part of each channel of e-banking service and their transactional facilities. Similarly, customers in Thiruvananthapuram, Kerala, India were not found to be fully aware of some of the electronic banking services, except for ATMs, where the majority of the customers were aware of ATM [4]. Rani [5] found that around 60% of the people in Ferozepur District, India have positive perception of electronic banking. Comparing private and foreign sector banks to public sector banks in Delhi and National Capital Region indicated that the level of consumer perception of e-banking service was higher in case of private and foreign sector banks in comparison to public sector banks [6]. Customers in Iran found electronic banking system enjoyable, convenient, and easy to use but they think there was low level of reliability in the security measure of electronic banking [7]. Most of the customers in Trichy District, India perceived electronic banking a secure, convenient, and reliable mode of transaction [8]. Perception of customers on the benefits of electronic banking in Tanzania was found to be a driving force of customer involvement was electronic banking. Therefore, perceptions of customers of risks associated with electronic banking could not fully restrict customers from using electronic banking Erick [9].

Other researchers studied the quality of e-banking service. For example, Mujinga [10] used the electronic service quality (E-S-QUAL) scale that consists of the four dimensions: efficiency, fulfilment, system availability, and privacy, and found that banks in South Africa met customer expectations of service quality delivery, although there was room for improvement. Tharanikaran,

Smitharan and Thusyanthy [11] depended on E-S-Qual scale dimensions in addition to other dimensions related customer satisfaction which had been identified by Chen et al. (2012) and found that there was a high level of service quality in electronic banking as well as a high level of customer satisfaction towards electronic banking in Batticaloa district Sri Lanka.

Customer satisfaction towards e-banking service was one of another important aspect investigated in previous research. Some researchers focused on the measuring the level of customers' satisfaction. For instance, Nair [4] found that majority of the customers from both urban and rural area in Thiruvananthapuram, Kerala, India were satisfied with e-banking services. Asiyani and Ishola [12] found that customers in Ibadan metropolis, Oyo state, Nigeria were satisfied with e-banking due to its cashless nature, cash accessibility, saving time from bank visitation and seamless transactions. Rani [5] found that around 60% of the people in Ferozepur District, India were satisfied with electronic banking, but people of this district were not yet using electronic banking frequently because of their little knowledge about the internet and computers. So they felt hesitant in using electronic banking.

Other researchers investigated the relation between e-banking service quality and customer satisfaction. For example, Omodele and Onyeiwu, [13] showed that there was a significant relationship between customer satisfaction and e-banking service quality, and also found that e-banking service quality has significant impact on customer satisfaction in Nigeria. Altobishi, Erboz and Podruzsik [14] found that there was a positive relationship between customer satisfaction level and usage of electronic Banking among customers, where there is positive relationship between five indicators of service quality i.e. (convenience, cost, ease of use, personalization and customization and security) and customer satisfaction level and usage of electronic Banking. Only Privacy is not revealed to have an effect on Customer Satisfaction in Jordan. Dabaen, K. S. E., [15] found that there was a wide use of the e-banking services by the customers of the Yemeni banks and customers were satisfied with the e-banking services provided by the Yemeni banks in Taiz city.

Finally, some research focused on finding out what dimensions of the e-banking service had an impact on customers' satisfaction. For instance,

Yitbarek [16] focused on the following seven dimensions of e-banking service quality: reliability, transaction efficiency, customer support, service security, ease of use, performance quality and service content, and found that only three out of the seven dimensions had strong influence on the level of electronic banking customers' satisfaction in both public and private commercial banks in Addis Ababa, Ethiopia. These three dimensions were reliability, customers support and ease of use. Sakhaei, Afshari and Esmaili, [17] developed hybrid model of service quality dimensions based on the previous literature review that contained six dimensions including reliability, efficiency, responsiveness, fulfillment, security / privacy and website design. Their study revealed that the six service quality dimensions had meaningful relationship with customer satisfaction in Internet Banking in Iran with the reliability being the most effective and website design the least effective dimension on customer satisfaction.

Reviewing literature revealed that there is scarcity in the studies on e-banking service in Yemen. Banks need to measure the level of service quality they provide to their customers to know what needs to be done to improve their service since e-banking service quality affects customers' attitudes, satisfaction and behavioural intentions. Also, customers' evaluation of e-service quality enables practitioners to allocate the organization's resources to ensure the performance of electronic services that achieve their satisfaction and positive behavioural attitudes. Therefore, there is need for studying customers' perception and satisfaction towards e-banking service in Yemen and its quality, which the present study was intended to investigate. To this end, the following three objectives have been identified for the present study:

1. To find out the level of customers' perception towards e-banking service in Yemen.
2. To find out the level of e-banking service quality in Yemen.
3. To find out the level of customers' satisfaction towards e-banking service in Yemen.

In light of the above mentioned objectives of the present study, the following hypotheses have been formulated to be tested in the study:

H1. The level of perception of customers towards e-banking services in Yemen is high.

H2. The level of E-banking service quality in Yemen is high.

This hypothesis is better restated in the form of the following sub-hypotheses:

H2.a. The level of the quality of website design of banks in Yemen is high.

H2.b. The level of the quality of reliability/fulfilment of e-banking service of banks in Yemen is high.

H2.c. The level of the quality of security/privacy of e-banking service of banks in Yemen is high.

H2.d. The level of the quality of customer service of e-banking of banks in Yemen is high.

H2.e. The level of overall service quality of e-banking in Yemen is high.

H3. The level of satisfaction of customers towards e-banking service in Yemen is high.

light of the e-service quality scales in literature. Reviewing literature revealed that “there is disagreement in the literature about the specific dimensions that comprise e-service quality” [19]. Despite the disagreement in the dimensions among the different authors, many of them are more or less similar as indicated by Hussien and El Aziz [20], but the authors of this paper found that the most precise and comprehensive conceptualisation available in literature for the dimensions of an e-service quality scale is that of Wolfenbarger and Gilly’s eTailQ [21], which was also supported by Blut et al’s meta-analysis study [19]. Thus, the four dimensions of e banking service quality specified for the present paper are: website design, reliability/fulfillment, privacy/security and customer service. The scale developed by the researchers was in the form of a 5-point Likert Scale questionnaire that measures customers’ perception and satisfaction towards e-banking service and its quality.

3. RESEARCH METHODOLOGY

The study is a quantitative descriptive study. The sample was drawn from the population of customers of Yemeni banks that provide e-banking service. The population size is not identified since there is information available from banks. Seeing that the sample size for a population over 100,000 subjects in Krejcie and Morgan’s table (Krejcie & Morgan, 1970, cited in Kenya Projects Organization Website, [18]) is 384, the study intended to have a sample of 500 subjects; however, only 454 questionnaires were returned. The responses were collected online and offline, the online sample included 221 respondents, and for the offline sample, 300 questionnaires were distributed, but only 262 questionnaires were returned, 29 of which were invalid for analysis. Therefore, the total valid questionnaires for analysis were (221 + 233 = 454 questionnaires).

The tool of data collection was a scale of e-service quality developed by the researchers in

To determine the level of customers’ perception, satisfaction towards e-banking service and service quality of e-banking, there was need to specify cut-off scores to determine low, medium and high levels. Mean scores and standard deviation values were used for determining the levels as follows.

- If a customer’s total score value is $\geq \bar{X} + S.D.$, the customer is considered to have high level.
- If a customer’s total score value is $\leq \bar{X} - S.D.$, the customer is considered to have low level.
- If a customer’s total score value is between $\bar{X} + S.D.$ and $\bar{X} - S.D.$, the customer is considered to have moderate level.

The cut scores for the low, moderate and high levels are presented in Table 1 below along with the means and standard deviations for each of the variables of the study.

Table 1. Means, standard deviation and cut-off scores of the variables

Variables	N	Mean	Std. deviation	Low	Moderate	High
Perception	454	75.71	11.26	≤ 64	65-86	≥ 87
E-service Quality						
Website Design	454	34.57	7.21	≤ 27	28-41	≥ 42
Reliability/Fulfilment	454	36.22	7.07	≤ 29	30-40	≥ 43
Security/Privacy	454	38.73	6.62	≤ 32	33-44	≥ 45
Customer Service	454	35.88	7.18	≤ 29	30-42	≥ 43
Overall e-service quality	454	145.40	24.42	≤ 121	122-169	≥ 170
Customer Satisfaction	454	108.82	20.36	≤ 88	89-128	≥ 129

Source: researchers’ work

4. FINDINGS

4.1 Demographical Details of the Sample

Table 2 presents the distribution of the selected sample by various demographic variables.

Table 2 shows the distributions of the selected sample by various demographic variables. Gender-wise, 89.9% (408) of the sample was found to be males, while 10.1% (46) were found to be females. Age-wise, there were 44.1% (200) of the respondents within the age group of 36-45 years, 41.2% (187) of them were within 26-35 years, 7.3% (33) were within 46-55 years, while we see 6.2% (28) were below 25 years and 1.3% (6) of them were above the age of 55 years. Education level-wise, from the table, we see that 63.4% (288) of the sample have completed their degree and 17.4% (79) of them have a Master's degree. Also, we observed that 8.1% (37) of them had been to high school, 5.3% (24) have a diploma, 5.1% (23) have completed their Ph.D,

0.4% (2) have received elementary education and 0.2% (1) were literate. Occupation-wise, 47.6% (216) of the sample worked in private organizations, while 26.9% (122) of them were government employees and 15.4% (70) of them were self-employed. Further, 4.4% (20) of them were students, 3.7% (17) of them owned businesses and 2.0% belonged to the 'others' category. Monthly Income-wise, it is clear from the table that, 39.4% (179) of the sample earned more than Yemeni Rial 150k, 27.1% (123) of them earned Yemeni Rial 50-100k, 20.7% (94) earned Yemeni Rial 100-150k and 12.8% (58) earned below Yemeni Rial 50,000.

4.2 Observed Mean Values and Std. Deviation of Perception, Overall E-Service Quality and Customer Satisfaction

Table 3 presents the observed values on customer perception, overall e-service quality and customer satisfaction.

Table 2. Distribution of the selected sample by various demographic variables

Variables		Frequency	Percent
Total		454	100%
Gender	Male	408	89.90%
	Female	46	10.10%
Age groups (in years)	<25	28	6.20%
	26-35	187	41.20%
	36-45	200	44.10%
	46-55	33	7.30%
	55+	6	1.30%
Education level	Literate	1	0.20%
	Elementary	2	0.40%
	High school	37	8.10%
	Diploma	24	5.30%
	Degree	288	63.40%
	Master degree	79	17.40%
Occupation	Ph. D	23	5.10%
	Government	122	26.90%
	Private	216	47.60%
	self-employed	70	15.40%
	Business	17	3.70%
	Students	20	4.40%
Monthly Income	Others	9	2.00%
	<50,000	58	12.80%
	50-100 K	123	27.10%
	100-150 k	94	20.70%
	150K+	179	39.40%

Source: researchers' work by SPSS

Table 3. Observed values on customer perception, overall e-service quality and customer satisfaction

Variables	N	Mean	Std. Deviation
Perception	454	75.71	11.26
E-service Quality			
Website Design	454	34.57	7.21
Reliability/Fulfilment	454	36.22	7.07
Security/Privacy	454	38.73	6.62
Customer Service	454	35.88	7.18
Overall E-Service Quality	454	145.40	24.42
Customer Satisfaction	454	108.82	20.36

Source: researchers' work by SPSS

Table 3 shows that the participants' observed mean and Std. Deviation of perception were 75.71, 11.26 respectively. Regarding Website Design, the participants' observed mean was 34.57 and Std. Deviation was 7.21, while for Reliability/Fulfilment, the participants' observed mean was 36.22 and Std. Deviation was 7.07, for Security/Privacy, the participants' observed mean was 38.73 and Std. Deviation was 6.62, for Customer Service, the participants' observed mean was 35.88 and Std. Deviation was 7.18, and for Overall E-Service Quality, the participants' observed mean was 145.40 and Std. Deviation was 24.42. Finally Regarding Customer Satisfaction, the participants' observed mean was 108.82 and Std. Deviation was 20.36.

4.3 Frequency and Percentage Distribution of the Levels of Perception, Dimensions of E-Service Quality and Customer Satisfactions towards E-Banking

Depending on the cut scores developed for the study, which are presented in Table 1 shows, the levels of customers' perception and satisfaction towards e-banking service as well as the level of quality of the dimensions of e-banking service were calculated. Table 4 shows presents the frequency and percentage distribution of levels of customers' perception, dimensions of e-service quality and customers' satisfaction.

Perception: As it is shown in table (4), the majority of the respondents, 71.4% (324), had moderate level of perception towards e-banking, while there were 15.6% (71) of the respondents who had high level on perception and 13.0% (59) of them had low level of perception, which indicates that the majority of the respondents had moderate level of perception towards e-banking.

Website Design: A majority of 71.1% (323) of the respondents found that website design of banks providing e-banking service had moderate level of quality, while the remaining 15% (68) and 13.9% (63) found website design to have high and low levels of quality respectively, which indicates that the majority of the respondents found that website design of banks providing e-banking service had moderate level of quality.

Reliability/Fulfilment: There were 71.8% (326) of the respondents who found the reliability/fulfilment of e-banking service to be moderate, while 15.4% (70) had the view that the reliability/fulfilment of e-banking service was high and the remaining 12.8% (58) had the view that the reliability/fulfilment of e-banking service was low, which indicates that the majority of the respondents found the reliability/fulfilment of e-banking service to be moderate.

Security/Privacy: 62.8% (286) of the respondents had the view that the security/privacy of e-banking service was moderate, while 20.0% (91) had the view that it was high, and the remaining 17.2% (78) the view that it was low, which indicates that the majority of the respondents found that the security/privacy of e-banking service to be moderate.

Customer Service: A majority of 69.6% (316) of the respondents found that the quality of customer service of e-banking service was moderate, while 15.4% (70) had the view that it was high, and the remaining 15% (68) had the view that it was low, which indicates that the majority of the respondents had the view that the quality of customer service of e-banking service was moderate.

Table 4. Frequency and percentage distribution of levels of customers' perception, dimensions of e-service quality and customers' satisfaction

Variables	Levels	Frequency	Percent
Perception	Low	59	13.0
	Moderate	324	71.4
	High	71	15.6
	Total	454	100.0
Website Design	Low	63	13.9
	Moderate	323	71.1
	High	68	15.0
	Total	454	100.0
Reliability/Fulfilment	Low	58	12.8
	Moderate	326	71.8
	High	70	15.4
	Total	454	100.0
Security/Privacy	Low	78	17.2
	Moderate	285	62.8
	High	91	20.0
	Total	454	100.0
Customer Service	Low	68	15.0
	Moderate	316	69.6
	High	70	15.4
	Total	454	100.0
Overall E-service Quality	Low	66	14.5
	Moderate	316	69.6
	High	72	15.9
	Total	454	100.0
Customer Satisfaction	Low	52	11.5
	Moderate	334	73.6
	High	68	15.0
	Total	454	100.0

Source: researchers' work by SPSS

Overall E-Service Quality of e-banking: There were 69.6% (316) of the respondents who saw that the overall e-service quality of e-banking was moderate, while the remaining 15.9% (72) and 14.5% (66) of the respondents found it to be high and low respectively, which indicates that the majority of the respondents had the view that the overall e-service quality of e-banking was moderate. Finally,

Customer Satisfaction: As it is shown in Table 4, a majority of 73.6% (334) of the respondents had moderate level of satisfaction towards e-banking service, while 15% (68) of the respondents had high level of satisfaction and the remaining 11.5% (52) of the respondents had low level of satisfaction towards e-banking service, which indicates that the majority of the respondents had moderate level of satisfaction towards e-banking service.

The levels of customers' perception, quality of e-banking service and customers' satisfaction are

also shown in Fig. 1, which shows clearly that all the measure of levels of study's variables were moderate levels. So from the results above, the hypotheses of the present study were rejected because the results of all the measure of levels of study's variables were moderate levels.

5. DISCUSSION

The present study revealed that 89.90% of e-banking users are males; we think this result is due to the Yemeni nature, where most women are housewives and do not have jobs or bank accounts. Age-wise analysis revealed that the highest use of electronic banking services was in the age group between 36-45 years, representing 44.10% of the respondents. Regarding the education level, the highest use of e-banking was for those who have degree, representing 63.40% of the respondents. Analysis according to the occupation showed that the highest use of e-banking was for those who work with private companies, representing

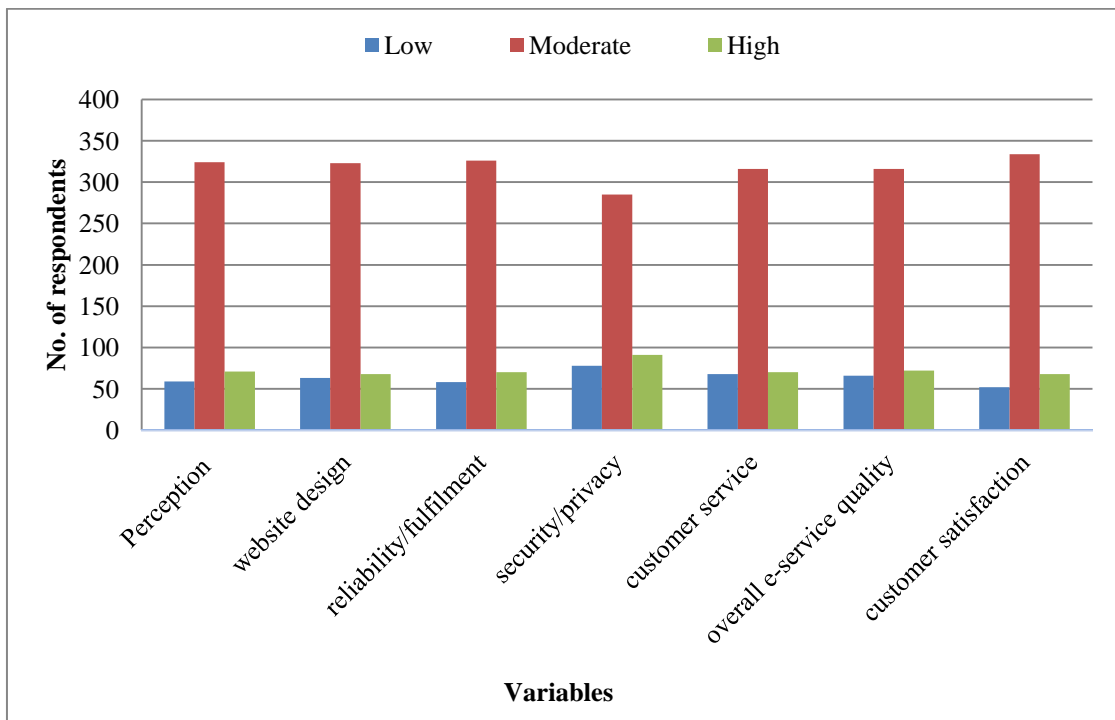


Fig. 1. Levels of customers' perception, quality of e-banking service and customers' satisfaction

47.60% of respondents. Regarding the monthly income, the highest use of e-banking was for those who have monthly income above 150K, representing 39.40% of the respondents.

The present study showed that the level of customer perception towards e-banking services was moderate, where the majority of 71.4% (324) of respondents had moderate level of perception towards e-banking. This finding is consistent with the findings in the studies of Ashgan and Malathi [8] and Rani [5]. Regarding website design, the present study found that the level of quality of website design for banks providing e-banking service was moderate, where this was the view of the majority of the respondents, 71.1% (323). Reliability/Fulfilment level was found to be moderate, where there were 71.8% (326) of the respondents who had the view that the level of reliability/fulfilment of e-banking service was moderate. This finding is consistent with the findings in the study of Ashgan and Malathi [8]. Security/Privacy level was found to be moderate, where there were 62.8% (286) of the respondents who had the view that the level of security/privacy of e-banking service was moderate. This finding is not consistent with the findings in the study of Abadi and Nematizadeh [7] and Altobishi, Erboz and Podruzsik [14], where respondents in their studies had the view

that the level of security of e-banking service was low. The level of quality of Customer Service was found to be moderate, where the majority of the respondents, 69.6% (316), had the view that the level of quality of customer service of e-banking service was moderate. Overall e-banking Service Quality was found to be moderate, where this was the view of the majority of the respondents 69.6% (316). This finding is not consistent with the findings in the study of Tharanikaran, Sritharan and Thusyanthy [11], where the level of overall service quality of e-banking in their study was found to be high. Finally, the present study showed that customer satisfaction towards e-banking service was moderate, where the majority of the respondents, 73.6% (334), showed moderate level of satisfaction towards e-banking service. This finding is consistent with the findings in the studies of Asiyandi and Ishola [12], Dabaen [15], Nair [4] and Rani [5], but in Tharanikaran, Sritharan and Thusyanthy [11] customer satisfaction towards e-banking service was found to be high.

6. CONCLUSION

The present study was intended to measure the levels of customer perception and satisfaction towards e-banking service in Yemen and its quality (i.e, overall e-banking service quality as

well as the quality of its dimensions: website design, reliability/fulfillment, privacy/security and customer service). The study revealed that the level of customer perception and satisfactions towards e-banking service in Yemen was moderate, and the overall e-banking service quality as well as the quality of its dimensions (website design, reliability/fulfillment, privacy/security and customer service) was also moderate. In light of these findings, Yemeni banks need to take measures to improve the quality of their e-banking services. This in turn will improve customer' perception and satisfaction towards the e-banking service provided by banks in Yemen, which will affect banks' overall performance.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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