Technological and Organizational Factors Influencing the Internet Banking Use among SMEs in Yemen: The Mediating Role of Attitude

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Background of the Study

- Internet Banking Service (IBS) is extremely beneficial to both banks and customers. The main benefits to banks are cost savings, reaching new segments of the population, efficiency, enhanced reputation and better customer service satisfaction (Nasri, 2011; Khrerwesh, 2011)
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- Unfortunately, in spite of all these advantages, many customers of financial institutions have yet to embrace these technologically advanced services offered by the banking industry especially in the Middle East and in Yemen in particular (Khalel & Micheal, 2007; Al-Kibsi, 2010; Al-Majali, 2011).

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Objectives of The Study

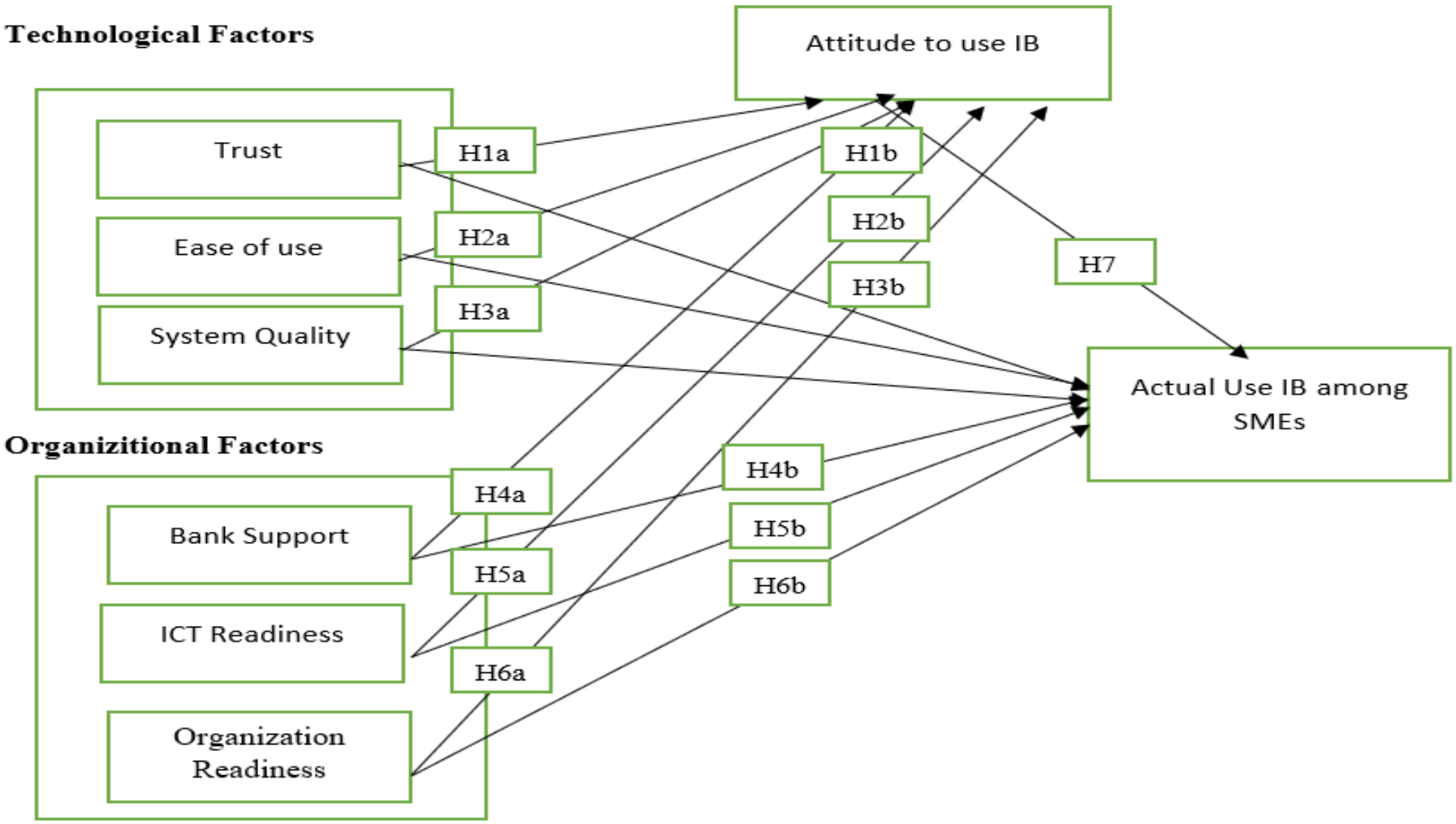
- To determine the technological factors (trust, system quality, ease of use) that could influence the attitude and actual use of IB by SMEs in Yemen.
- To investigate the organizational factors (bank support, ICT readiness, customer readiness,) that could influence the attitude and actual use of IB by SMEs in Yemen.
- To examine the role of attitude towards IB usage as a mediator between (trust, system quality, bank support, ICT readiness, customer readiness, ease of use) and actual use of IB by SMEs in Yemen.

Research Gap

Despite the provision of electronic infrastructure by Yemeni banks and spending millions of dollars annually to adopt electronic banking, IB adoption is very low and minimal among small and medium-sized enterprises (SMEs) in Yemen (Parker and Castelman 2007; Shiels et al 2003). Thus, the lack of comprehensive IB research on SMEs and customers is one of the main gaps globally and in Yemen's IB research particularly.

This study could contribute to help service, manufacturing, and trading organizations such as banks, airlines, insurance companies, and the health sector as well as export and import companies to understand the factors influencing SMEs attitudes regarding the use of technological services

Conceptual Framework and Hypotheses Testing



Methodology

- The total number of distributed questionnaires is 374 and the returned ones are 302 which represents an 80% response rate. From the 302 returned questionnaires, 22 cases were outliers, thus the total number of usable returned questionnaires is 280 which represents a 74% response rate after the outliers were removed.

- Therefore, the sample size of n=280 is considered sufficient for this study. The (n=280) sample size achieved a ratio of 5:1 which means that 5 participants are needed per item (indicator) as recommended by (Hair, et al., 1998; Kline 2005). According to Hair et al. (1998) the minimum of at least 5 respondents for each estimated variable (estimation of approximately 40 parameters, the studies a minimum sample size of 200 respondents).

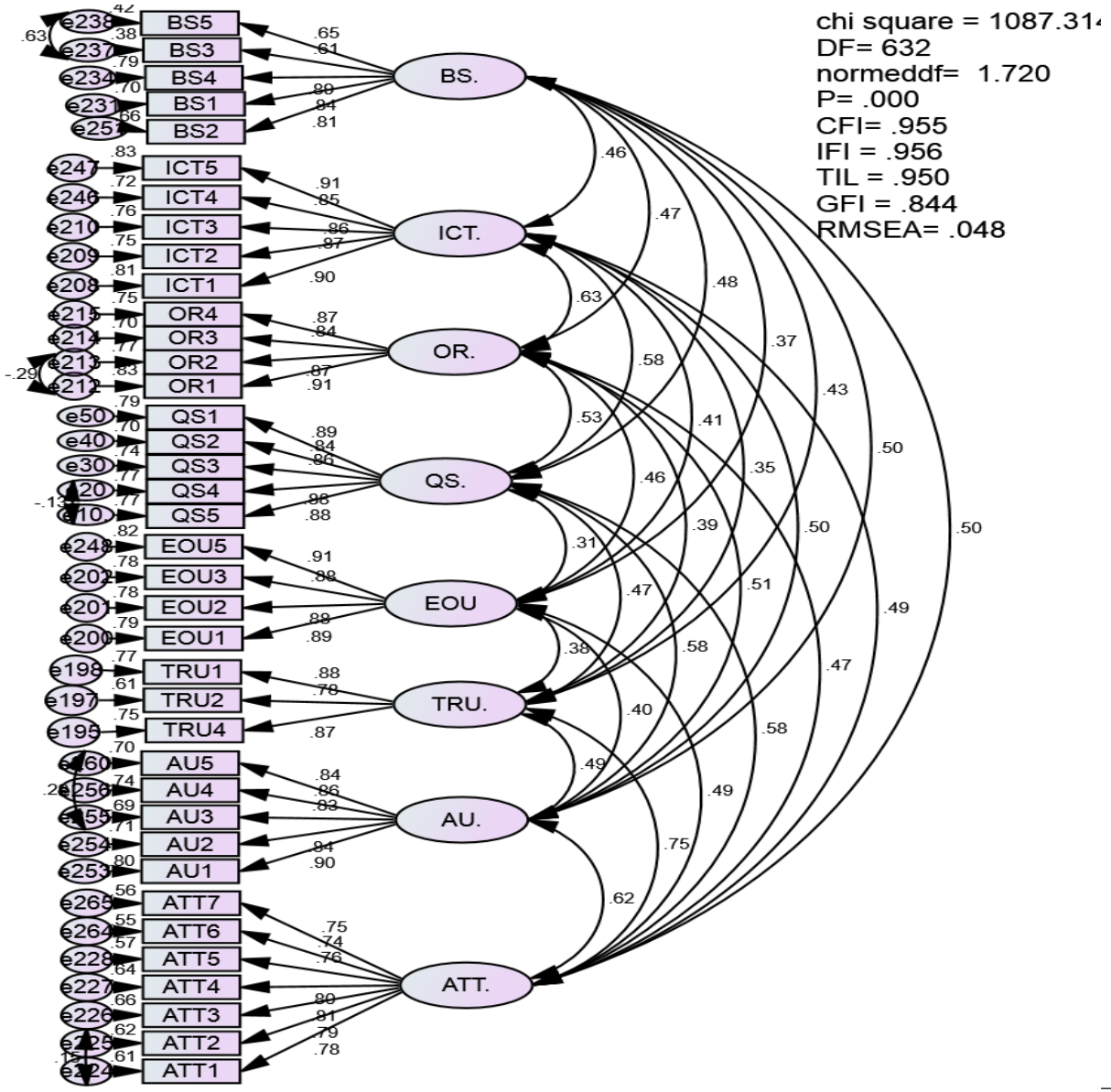
Data Analysis and results

	Variable	Code	No. Items	Mean	%	S.D
	Actual Usage	AU	5	3.3102	0.662	.92378
	Attitude to use IB	ATT	7	3.2179	0.643	.80555
Technological Factors	System quality	QS	5	3.2446	0.648	.95271
	Ease of use	EOU	4	3.1616	0.632	1.0670
	Trust	TRU	3	3.1571	0.631	.87449
Organizational Factors	Bank Support	BS	5	3.3280	0.665	.85216
	ICT Readiness	ICT	5	3.2325	0.646	1.0149
	Organization Readiness	OR	4	3.1822	0.636	.96940
Overall			38	3.229	0.645	.67324

Discriminant Validity of Construct

	AVE	MSV	BS.	QS.	TRU.	EOU.	ICT.	OR.	ATT.	AU.
BS.	0.589	0.255	**0.768**							
QS.	0.725	0.338	0.482	**0.867**						
TRU.	0.713	0.555	0.428	0.469	**0.844**					
EOU.	0.794	0.241	0.373	0.314	0.377	**0.891**				
ICT.	0.773	0.394	0.460	0.575	0.350	0.411	**0.879**			
OR.	0.761	0.394	0.468	0.527	0.389	0.463	0.628	**0.872**		
ATT.	0.601	0.555	0.499	0.581	0.745	0.491	0.492	0.472	**0.775**	
AU.	0.728	0.389	0.505	0.576	0.495	0.396	0.496	0.507	0.624	**0.853**

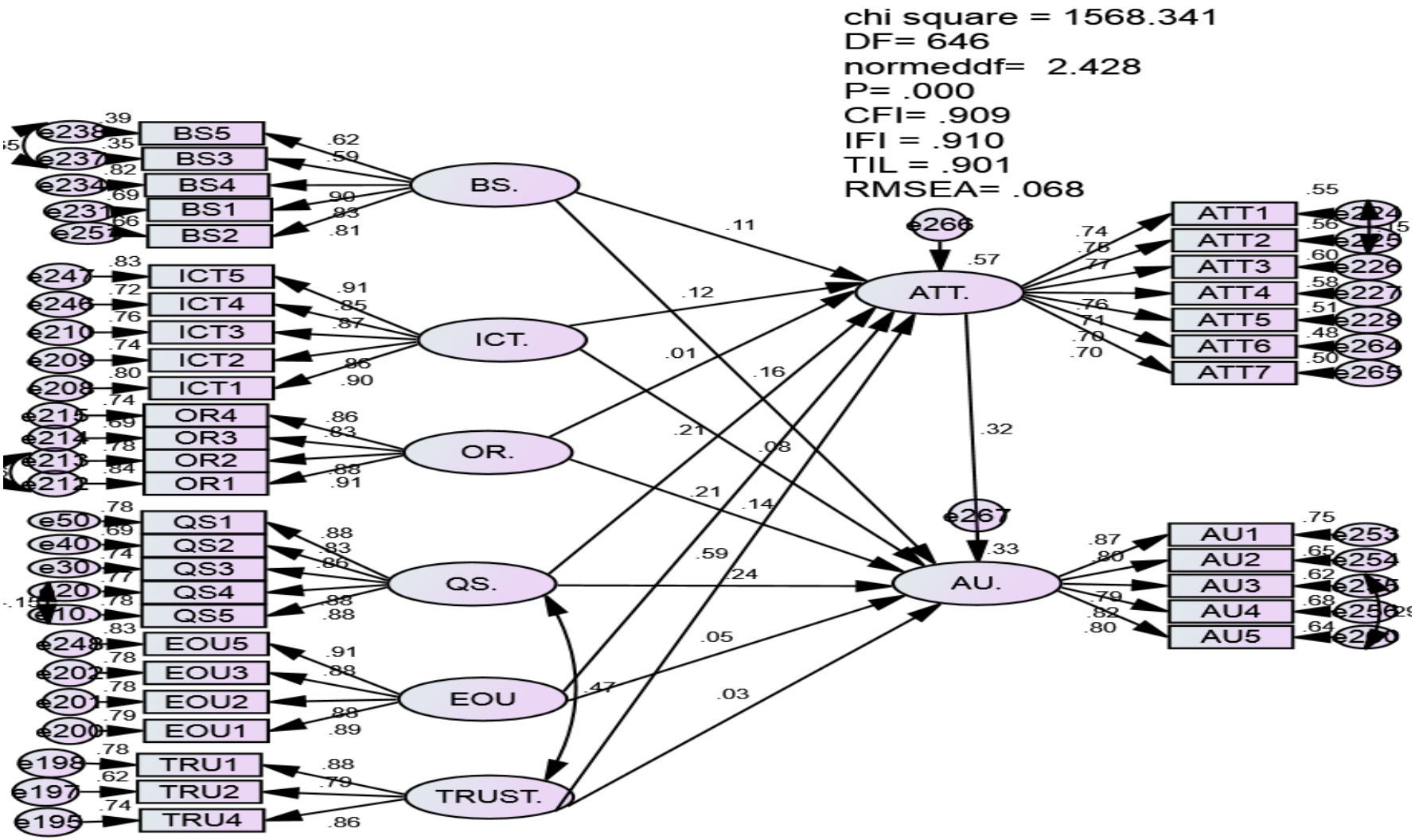
Measurement Model



Items loading, Cronbach's alpha, Composite Reliability (CR) and AVE

Constructs	Items	Factor Loading	Cronbach's alpha	Composite Reliability	AVE
Actual Usage	AU1	0.896	0.933	0.930	0.728
	AU2	0.843			
	AU3	0.830			
	AU4	0.859			
	AU5	0.836			
Attitude	ATT1	0.780	0.914	0.913	0.601
	ATT2	0.788			
	ATT3	0.810			
	ATT4	0.803			
	ATT5	0.756			
	ATT6	0.739			
	ATT7	0.748			
System Qalality	SQ1	0.886	0.937	0.938	0.752
	SQ2	0.837			
	SQ3	0.858			
	SQ4	0.876			
	SQ5	0.879			
Ease of use	EOU1	0.889	0.939	0.939	0.794
	EOU2	0.884			
	EOU3	0.885			
	EOU5	0.905			
Trust	TRU1	0.878	0.880	0.881	0.713
	TRU2	0.784			
	TRU4	0.868			
Bank Support	BS1	0.836	0.884	0.975	0.589
	BS2	0.812			
	BS3	0.614			
	BS4	0.891			
	BS5	0.646			
ICT Readiness	ICT1	0.897	0.944	0.944	0.773
	ICT2	0.863			
	ICT3	0.874			
	ICT4	0.850			
	ICT5	0.910			
Organization Readiness	OR1	0.908	0.940	0.927	0.761
	OR2	0.875			
	OR3	0.839			
	OR4	0.866			

Structural model



Hypotheses Testing of Results Model

Hypothesis	Exog.	Endo.	Estimated B	E.S	C.R t-value	P-Value	Status	Result
H1a	Trust	Attitude	0.592	0.051	8.978	0.000	Sig	Supported
H2a	Ease of use	Attitude	0.206	0.031	4.408	0.000	Sig	Supported
H3a	System quality	Attitude	0.205	0.037	3.803	0.000	Sig	Supported
H4a	ICT Readiness	Attitude	0.118	0.030	2.609	0.009	Sig.	Supported
H5a	Bank Support	Attitude	0.109	0.036	2.343	0.019	Sig.	Supported
H6a	Organization Readiness	Attitude	0.009	0.030	0.192	0.874	No-Sig.	Not Supported
H1b	Trust	Actual Usage	0.034	0.082	0.396	0.692	No-Sig	No Supported
H2b	Ease of use	Actual Usage	0.048	0.045	0.856	0.390	No-Sig	No Supported
H3b	System quality	Actual Usage	0.238	0.053	3.782	0.00	Sig	Supported
H4b	ICT Readiness	Actual Usage	0.084	0.043	1.584	0.113	No-Sig	No Supported
H5b	Bank Support	Actual Usage	0.163	0.052	2.998	0.003	Sig	Supported
H6b	Organization Readiness	Actual Usage	0.144	0.043	2.772	0.006	Sig	Supported
H7	Attitude	Actual Usage	0.316	0.116	3.371	0.000	Sig	Supported

Results of Mediating Effect- Attitude

H	Relationship	Path "a"	Path "b"	Direct effect (c)	Indirect effect (c`)	Significant of indirect effect	Mediation type
H1c	TRU->ATT->AU	0.592	0.316	0.034	0.065	0.001	Full Mediation
H2c	EOU->ATT->AU	0.206	0.316	0.048	0.187	0.001	Full Mediation
H3c	SQ->ATT->AU	0.205	0.316	0.238	0.065	0.001	Partial Mediation
H4c	ICT->ATT->AU	0.118	0.316	0.084	0.003	0.864	No Mediation
H5c	BS->ATT->AU	0.109	0.316	0.163	0.034	0.031	Partial Mediation
H6c	OR->ATT->AU	0.009	0.316	0.144	0.037	0.024	Full Mediation

Discussion

- The results of this study showed that Bank Support, ICT readiness, system quality, and ease of use had a significant and positive effect on attitude to use IB but ICT readiness was no significant effect. In addition, organization readiness, system quality, and attitude had a significant impact on the actual use of IB. However, ease of use and trust were not significant influences on using of IB among SMEs in Yemen.

- Furthermore, attitude mediated the relationship between organization readiness, ease of use, trust, bank support, system quality, and actual usage IB As stated earlier, this study aims at addressing the applicability of the TOE framework (technological and organizational factors) which as introduced in developed countries to developing countries especially Yemen

Practical Implication

- This study emphasized the role of attitude as a significant mediator in the use of IB. This means that SMEs should be ready in terms of attitude in order to use IB in their business transactions. Attitude involves the culture, consistent values, and work practices in the organization itself.
- Moreover, this study also proves that organizational and technological factors are` influential in shaping their organizations' attitude to use IB. Therefore, banks should focus on TOE parameters to improve the number of IB users among their customers.

Managerial Implication

- Bank managers must emphasize the positive features that their e-banking services offer to customers such as safety, security, and trust which improve the perceptions of customers towards using IB services.

- Therefore, banks should keep their customers well informed by sending them messages to inform them of the current security adequacy to improve the feelings of safety when using IB services. Bank managers should also publicize their messages to reach a wider population by using public newspapers, and advisement in social media to influence their customers' attitude to use e-bank services which consequently influences the attitude to use IB.

Recommendation and Conclusion

This study recommends that the policy-makers, practitioners, bank managers of SMEs in Yemen to focus more on maximizing the TOE factors which have been proven empirically to contribute and influence the improvement of SMEs attitudes towards the use of IB.

In addition, more studies on the topic should also be considered because this study didn't cover all the variables that may influence the attitude to use e-banking services by SMEs in developing countries.

Therefore, more research could focus on other variables such as ICT and customer readiness, bank support, ease of use, quality system, and quality of online services. In addition, further research should also examine other theories which would further support the decision-making process of SMEs to implement and sustain IB. This study also recommends conducting comparative studies in other countries with similar conditions which would improve the body of knowledge in this area.

Thank You