FACTORS AFFECTING CONSUMERS' PERCEPTION TOWARDS TECHNOLOGY ENABLED BANKING SELF-SERVICES (TEBSS): AN EMPIRICAL ANALYSIS

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ABSTRACT

This research serves two purposes: first, to identify the factors that influence how rural customers perceive technology-enabled banking self-services, and second, to determine whether these variables have any impact on rural customers' perceptions. Firstly, a number of statements about perception were developed by reviewing relevant studies. To validate the constructs, a pilot study was carried out with data collected from 100 respondents both online and offline. After reviewing the pilot survey data to assess the scales' reliability and validity, a few items were deleted to boost the construct's validity. 500 responses were gathered for the final survey using the amended instrument. Multistage and purposive sampling was used for collecting data from respondents. 400 responses were kept for data analysis after they were checked for completeness and passed a normality test. Factor analysis was used to identify factors which effect perception of customers. Correlation and regression analysis was used to find out impact of these factors. Factor analysis has identified four factors, namely perceived ease of use, perceived usefulness, perceived risk, and perceived security. The results of the correlation analysis show a positive association between all four factors and perception. According to the results of the multiple linear regression analysis, all these factors have a big impact on how they perceived various technology enabled banking self-services. This study's findings suggest two key consequences. The banks should put their primary effort into offering a straightforward, user-friendly, and continuously accessible banking self-services interface. Customers must be educated by receiving a trail sample of the service.

Keywords: Perceived Ease Of Use, Perceived Usefulness, Perceived Risk, Perceived Security, Customers' Perception, Technology Enabled Banking Self-Services.

Abbreviation - Perceived ease of use (PEOU), Perceived usefulness (PU), Perceived risk (PR), Perceived Security (PS), Customers' perception (CP), Technology enabled banking self-services (TEBSS) and Self-service technology (SST).

Introduction

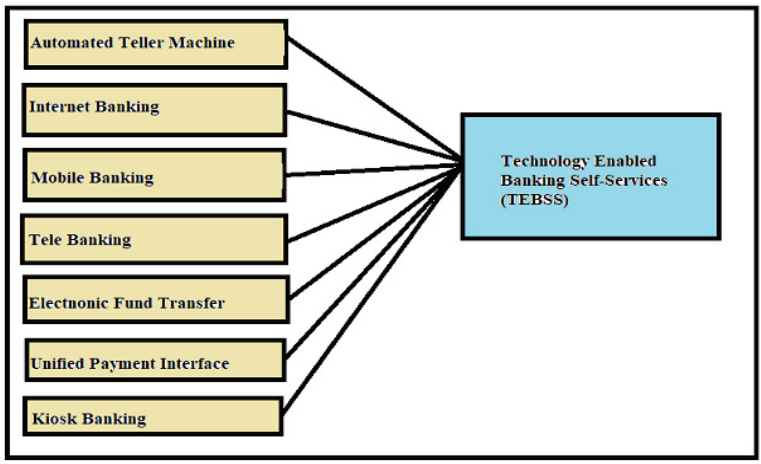
Today's marketing landscape is marked by growing competition and numerous changes in macroeconomic fundamentals. One of these is increasing competition, which is why it goes without saying that having a distinct competitive edge is one of the drivers of corporate success (Devi & Ramburuth (2012)). The growth of technology to deliver goods and services to customers has been one of society's most important changes during the last decade. In today's world, banking operations are increasingly dependent on technology breakthroughs, processes, and services that banks use to provide to their consumers. Self-service gadgets, computers, mobile phones, the Internet, and other technology platforms are a few examples of how services can now be provided in novel and creative ways (Wentzel et al., 2013), Throughout the various services industries, the advancement in technology changes the way in which services have been delivered (Curran et al., 2003). In today's world, banking operations are increasingly dependent on technology breakthroughs, processes, and services that banks use to provide to their consumers (Tiwari et al., 2017). The advancement of information technology has resulted in the transformation of face-to-face services with self-service technology (SST) (Hensmans et al., 2001 and Waite, 2006. Internet banking is taking the world to a new level of banking by allowing customers to conduct their everyday commercial and banking-related activities from the comfort of their own homes. (Kesharwani & Bisht , 2012). In reality, the banking industry was among the first to embrace service automation, as providers recognized that technological improvements in financial services provided an opportunity to distinguish themselves from their rivals (Devlin, 1995).

Meuter et al. (2000) defined SSTs as "technological interfaces which allow customers to get services free from the direct involvement of service firm's employees". Service providers make use of several of SSTs, and this number is growing (Lin and Hsieh, 2011). Particularly, banks have provided a variety of self-service technologies (SSTs), such as "Automated Teller Machines (ATMs), Telephone Banking (TB), Internet Banking (IB), Mobile Banking (MB), Electronic Fund Transfer (EFT) and Kiosk Banking (KB)", each of which can be used by customers that do not necessitate interaction with bank personnel (Meuter et al., 2000). It allowed banks to target specific consumer categories with new services after determining their banking and investing needs. Customers have more control over the service process because to the self-service option, which also lightens the pressure on service providers (Ding et al., 2007). Consumers are attracted towards ATMs, internet banking, and mobile banking etc. because they give banking services everywhere and at any time. In the following part, we'll go through some of

the most popular TEBSS services (Shahid et al., 2018).

In light of this, the current study's goal is to examine the factor influencing rural customers' perceptions of various technology-enabled banking self-services. By conducting an empirical analysis of four variables "perceived usefulness, perceived ease of use, perceived risk, and perceived security" among 400 users of seven types of SST banking services "Internet Banking (IB), Mobile Banking , Automated Teller Machines (ATMs), Telephone Banking, Electronic Fund Transfers (EFT), Unified Payment Interface (UPI) and Kiosk Banking ", the study works towards achieving its primary goal.

Figure 1: Types of TEBSS



Source: Compiled by the author itself.

The remainder of this study is organised as follows. The next section presents the literature review and framework of the study, as well as the development of hypotheses. The technique of the empirical investigation is discussed in next section. The results are presented in the fourth section. In the fifth section, the findings are examined in the light of the current literature. The publication concludes with a summary of the important findings, managerial implications, and study limitations.

Theoretical background/Literature Review

Definition of SST

The new generation of banks introduced critical competition into the business and pushed improvements towards greater use of technology, better customer service, and creative products (Das & Kumar (2013)). The term "Self service technologies" was first used by Prendergast, G. P., & Marr, N. E. (1994). Although the concept of

self-service is not new, the significance of the self-service technologies has grown as a result of technological breakthroughs and improvements in service technologies (Bateson, 1985). Due to technological advancements, the majority of customers now prefer interacting with technology than service persons. Self-service technology can conduct a service more effectively than a service provider (Dabholkar, 1996). The service encounter, which was formerly dominated by interpersonal interactions, has become more sophisticated as a result of the expansion of technology utilised in service delivery. Self-service technologies are those that allow customers to access services electronically without having to interact directly with business personnel. The majority of service providers have started using a variety of technologies, to enable this (Meuter et al., 2003). SSTs are technological interfaces that allow clients to provide a service without the personal intervention of a service employee (Meuter et al., 2000). As more customers conduct routine banking tasks using ATMs, online banking, or mobile banking without the assistance of branch staff, self-service banking is growing quickly (Augustine, 2013).

Types of TEBSS

TEBSS is an umbrella term which includes "Internet Banking (IB), Mobile Banking (MB), Automated Teller Machines (ATMs), Telephone Banking, Electronic Fund Transfers (EFT), Unified Payment Interface (UPI) and Kiosk Banking" (Nagdev et al., 2019).

Table 1: Types of technology enabled banking self -services

S.No.	Service	Author	Definition
1	Internet banking (IB)	(Sathye,1999)	"Internet banking involves consumers to access their bank and account using the internet, to undertake banking transactions"
2	Mobile banking (MB)	(Lee, M. C., 2009)	"Mobile banking (mBanking) refers to internet banking that occurs via app or browser of a mobile phone rather than via a PC (Personal Computer) (online/internet banking)"
3	Automated Teller Machine (ATM)	(Mishkin, F. S., & Eakins, S. G., 2008)	"ATM banking is defined as a banking facility that enables banking transactions to be conducted using an automated teller machine that allows bank customers to withdraw cash, make deposits, transfer funds from one account to another and check balances"
4	Tele Banking (TB)	(Magnin, C. J. ,2001)	"Telephone banking is a service provided by a bank or other financial institution that enables customers to perform financial transactions over the telephone, without the need to visit a bank branch or automated teller machine."
5	Electronic Fund Transfer (EFT)	(Panurach, P. 1996).	"EFT (Electronic Fund Transfer) is the process by which a user of one bank can transfer money from their account to another account by the way of National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS), Immediate Payment Service (IMPS)"
6	Unified Payment Interface (UPI)	(Gochhwal, R. (2017))	"Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood"
7	Kiosk Banking (KB)	(MK, M. S., & Reddy, M. R. (2022))	"It is conceived that the kiosks will functions with the support of leading banks in the private, public and cooperative sectors and using the shops as a touch-point for basic banking services such as cash deposits, withdrawals and cheque deposits, balance inquiries, etc. It consists of Barcode Scanner, Cash Acceptor, Integrated Full-Page Thermal Printer, Integrated Speaker, and Keyboard with Trackball, Touch and Non-Touch Display, Video Camera."

Source: Compiled by the author itself

Perceived Ease of Use

PEU refers to "the degree to which a person believes that using particular system would be free of effort" (Davis, 1989, p. 322). An application that users view as being simpler to use than another is said to have a higher chance of being adopted by users (Sahi, G. K., & Gupta, S. (2013). In the current context, ease of use refers to a feature In which the SST offers a clear interface and straight forward procedure to ensure clients can utilise it efficiently (Suh, B., & Han, I. 2002). Users with higher levels of self-efficacy are more likely to use SST effortlessly (Lee and Allaway, 2002). Additionally, the SST's complexity can impair users' comprehension and ability to complete tasks, making it challenging to grasp and lowering their desire to utilise it (Meuter et al., 2005). Dabholkar (1996) came to the conclusion that consumer acceptability of the SST depends on how simple it is to use.

H1: There is a significant impact of perceived ease of use on rural customers' perception.

Perceived Usefulness

The perceived utility of a new technology is regarded to have a substantial influence on an individual's motivation to adopt it (Amin, 2009; Chan and Lu, 2004; Davis, 1989; Toh et al., 2009). Perceived usefulness is "the degree to which an individual believes that using a system would improve his or her job performance" (Davis, 1989). According to Lu et al. (2003) when customers grasp the practical benefits of SST, they are more inclined to implement it.

H2: There is a significant impact of perceived usefulness on rural customers' perception.

Perceived Risk

"The consumer's subjective expectation of suffering a loss in pursuit of a desired outcome"(Pavlov, 2001). First, issue about the technological capability or usability of the service delivery system may be the root of perceived risk. Second, issues about security and personal privacy may be linked to perceived risk (Walker, R. H., & Johnson, L. W. 2006). Researchers have long thought that a consumer's perception of risk is an important consideration in any transaction (Bettman 1973). The type and quantity of risk that a customer perceives when making a certain purchase decision is known as perceived risk (Cox and Rich, 1964). Many consumers think that online payments are unsafe (Vatanasombut et al. 2004).

H3: There is a significant impact of perceived risk on rural customers' perception.

Perceived Security

When conducting any online transaction, customers are more worried about security risks (Casalo et al., 2007). "Perceived security refers to the reactions consumers have to both perceived and actual online security threats, such as their personal information being hacked" (Yousafzai et al., 2010). According to Hua (2009), security is the capacity to defend against risks to information or to ensure that an attack cannot harm data or services (Schneider 1998).

H4: There is a significant impact of perceived ease of use on rural customers' perception. In this research, Ashoka et al., (2017) investigate the factors that influence adoption, customer issues, and satisfaction with internet and online banking. They used basic random sampling to acquire data from 125 participants using a questionnaire. Chi square and descriptive statistics are used for data analysis. According to the study's findings, most users choose internet banking since it is simple to use and consumers are satisfied with the services.

Mandala et al., (2019) investigate the factors that influence customers' perceptions of internet banking in their article. They gathered data from 250 Visakhapatnam residents for their article. The collected data are analysed with the help of descriptive statistics, correlation and regression analysis. The study's findings indicated that all three factors "perceived ease of use, perceived usefulness, and perceived reliability" significantly and favourably affect consumer perception.

Das and Mahapatra (2020) investigate consumer perceptions towards payment banks. For their study, they used convenience sampling to collect data from 110 respondents using a structured questionnaire. The data are analysed with the help of descriptive statistics and cross tab. According to the study's findings, male members between the ages of 31 and 40 who have a high degree of education are inclined to utilise and have a good attitude towards internet banking.

Said N.M et al., (2022) studies the factor that affects customers' perception towards banking 4.0. For their study they collected data from 150 respondents with the help of online questionnaire. The collected data are analysed with the help of multiple regression and factor analysis. The finding of the study demonstrated that "Confidence, protection and ease of use" are factors that affect significantly and positively customers' perception towards banking 4.0.

Gap

Prior e-banking research has primarily focused on the user interface (websites, web portals), or a single service (mobile or internet). This study tries to more thoroughly portray the complexity of e-banking adoption by include all electronic services

supplied by banks (ATM, internet, mobile, fund transfer, etc.). Almost all prior studies on the adoption of technology focused on adoption as a particular element, that is, whether consumers or enterprises accepted or rejected the innovation under study. In this study, the adoption continuum, which indicates the level of usage, is the other topic of discussion. Only a small percentage of IT adoption studies focus on the actual deployment of such technologies (in contrast to adoption intention or initial adoption). The beliefs that first inspire someone to accept technology may differ from those that motivate them to continue using it (Venkatesh et al., 2003; Yang et al., 2012). Furthermore, previous research has focused on service qualities as factors influencing adoption. This study tries to delve deeper into customer behaviour by focusing on the elements that affect preference.

Objective

1. To explore the factors which affect respondents' perception towards technology enabled banking self-services (TEBSS).
2. To examine whether these factors have any relation with customers' perception towards technology enabled banking self-services (TEBSS).

Research Methodology

The Study:

The current study is exploratory in nature, with the goal of exploring the factors that influence bank customers' perceptions of different technology-enabled banking self-services.

The Sample:

The state of Haryana's divisions, districts, and sub-districts were chosen using a multi-stage sampling procedure. Purposive sampling (non-random sampling) was employed to choose rural respondents from the designated sub-district. The universe of the research includes all rural households in Haryana that uses at least two banking self-services, and sample units are drawn from the sub-districts of chosen districts. The research study selects two divisions among the state's six divisions that have previously been separated for administrative purposes by the Haryana government. Two divisions (Rohtak and Faridabad) are chosen based on the highest and lowest numbers of rural households that use banking services. Two districts are chosen from each division based on the highest and lowest number of rural household using banking services in rural areas as reported by census data in 2011. Two sub-districts are chosen from each selected district based on the highest and lowest number of rural households using banking services. 50 respondents are selected from each selected sub-districts. A sample size of 400 rural respondents is selected for the present study. The above said sample design may be understood

with the help of the following table:

Table 2: Selection of Sample

Stage	**Haryana**								
1st	**Rohtak Division (H)**				**Faridabad Division (L)**				2
2nd	**District**				**District**				
	Bhiwani (H)	Rohtak (L)			Palwal (H)	Faridabad (L)			4
3rd	**Sub Distt.**				**Sub Distt.**				
	Bhiwani (H)	**Siwani (L)**	**Rohtak (H)**	**Sampla (L)**	**Palwal (H)**	**Hathin (L)**	**Ballabgarh (H)**	**Faridabad (L)**	8

A total of 400 people were chosen for the investigation. 500 questionnaires were provided to respondents for this study, 75 of which were not returned, 22 were eliminated from the study owing to insufficient and incomplete answers, and 03 questionnaires were misplaced. Finally, 400 people were chosen to participate in the study.

Tools for Data Collection:

To achieve the aims, the current study utilised both primary and secondary data. A semi-structured questionnaire was utilised to acquire primary data from rural respondents. Secondary data was also used to better identify new patterns in the banking business, particularly in rural regions. Secondary data was gathered from a variety of sources, including books, journals, RBI reports and bulletins, relevant articles published in media, and material received from numerous websites linked to the topic.

A questionnaire with two main sections was used to conduct the survey. Five questions are included in Section A to gather demographic data. This section focuses on gathering demographic data, such as age, gender, education level, income, and the type of bank where consumers have their bank accounts. Section B contains 22 statements that deals with perception of the rural customers towards various technology enabled banking self-services. Respondents were asked to response on "five point Likert scale i.e. 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) and 5 (strongly agree)". The items were taken from various studies, i.e. Perceived ease of use (Oghazi et al. 2012) and Perceived usefulness (Kim and Mirusmonov 2010), security (Kim et al., 2009, Li and Suomi 2009 and Kumar and Bose 2003), and perceived risk (Cheng et al., 2006 and Walker et al. 2002).

Prior to beginning the main data collection procedure, a pilot study is conducted to test the instrument's questions on a sample of 100 respondents in order to determine the time required to complete it and fully appreciate the obstacles

respondents encountered. In response to the outcomes of this pilot study, the questionnaire was slightly adjusted and rewritten to better fit the rural context.

Tools for Data Analysis:

Descriptive statistics, factor analysis and multiple regression were utilised to analyse the obtained data. SPPS 26, AMOS 23 and JMOVI 2.3.21 was used to perform the given analysis.

Result

Reliability

In order to evaluate the accuracy of the scales, the acquired data was analyzed using SPSS 26. The study's variables' reliability was examined using Cronbach's alpha. It was discovered that the questionnaire's variables all exhibit high levels of internal consistency. The factor loading and Cronbach's Alpha were given in the below table 3.

Table 3: Reliability of the construct

Reliability			
S.NO.	**Construct**	**No. of items**	**Cronbach's Alpha**
1	Ease of use	5	.907
2	Perceived Risk	6	.854
3	Perceived Usefulness	5	.935
4	Perceived Security	6	.928
5.	Perception	22	.910

Source: SPSS Output

Validity

"Content validity refers to the extent to which the items in a questionnaire are representative of the entire theoretical construct the questionnaire is designed to assess". For checking content validity the questionnaire are validate from some experts and senior scholars from which some are from the Department of Commerce, MDU Rohtak and two outsider experts.

One of the experts is Dr. Rajiv Kumar, Associate Professor in Haryana School of Business, GJU Hisar and Dr. Ajay Kumar, Assistant Professor, Department of Management, Central University of Haryana.

Demographic profile of respondents

Table 4 shows the demographic profiles of respondents.

Variables	Classification variables	*n*	%
Gender	Male	225	56.3
	Female	175	43.8
Age	Below 25 years	173	43.3
	25-50 Years	133	33.3
	Above 50 Years	94	23.5
Income	Below 2 Lakhs	175	43.8
	2-5 Lakhs	100	25.0
	5-10 Lakhs	76	19.0
	Above 10 Lakhs	49	12.3
Education Qualification	Upto 12^{th}	84	21.0
	Graduation	147	36.8
	Post Graduation	137	34.3
	M.Phil/ Ph.D	22	5.5
	Others	10	2.5
Type of Bank	Public Bank	288	72.0
	Private Bank	112	28.0

Source: Compiled by the author himself

Almost equal numbers of men and women responded to the survey, but men made up the majority of respondents. Almost one-third from the total respondents were having a graduate degree (Das and Mahapatra (2020)). The annual income of 43.8 percent of them is less than 2 lakhs. By analysing the primary data it has been observed that almost one-third of total respondent uses technology enabled banking self-services of public banks, which shows rural people were more relay on public banks for banking services. As it has been observed from the primary data most of the respondents are male which shows male dominance in rural areas and majority of the respondents having annual income less 2 lakhs, which indicates that rural people are having limited income.

KMO and Bartlett,s test

KMO is a test that determines how well the items explain each other in terms of partial relationship among the variables. KMO values around 1.0 are considered great, while values below 0.5 are considered undesirable. "**Bartlett's test for Sphericity"** compares your correlation matrix (a matrix of Pearson correlation) to the identity matrix". In other words, it determines whether there is duplication among variables that may be summed with some components.

Table 5: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.904
Bartlett's Test of Sphericity	Approx. Chi-Square	6616.587
	df	231
	Sig.	.000

Source: Result of KMO and Bartlett's test (Output of SPSS)

As it is observed from the above table that KMO value is more than .750, which means the sample is adequate and Barrtellt's Test of Sphericity is also significant. The result shows that the above sample is adequate for applying factor analysis.

Factor Analysis

By applying factor analysis to the collected data. Four factors were identified which is "Perceived ease of use, Perceived risk, Perceived usefulness, Perceived security". The factor loading of all these factors are shown in table 6.

Table 6: Factor loading

Construct	Item	Loading			
		Factor 1	Factor 2	Factor 3	Factor 4
Perceived Security	PS2	.863			
	PS5	.798			
	PS3	.871			
	PS4	.809			
	PS1	.853			
	PS6	.725			
Perceived Usefulness	PU5		.895		
	PU2		.858		
	PU4		.902		
	PU3		.855		
	PU1		.796		
Perceived Ease of Use	PEOU2			.868	
	PEOU3			.852	
	PEOU1			.858	
	PEOU4			.788	
	PEOU5			.721	
Perceived Risk	PR1				.385
	PR5				.709
	PR6				.737
	PR4				.865
	PR3				.784
	PR2				.795

Source: Output of SPSS by applying factor analysis.

The below table 7 shows that total variance explained by all the four factors were 72.934. The variance explained by security factor was more than others (35.981).

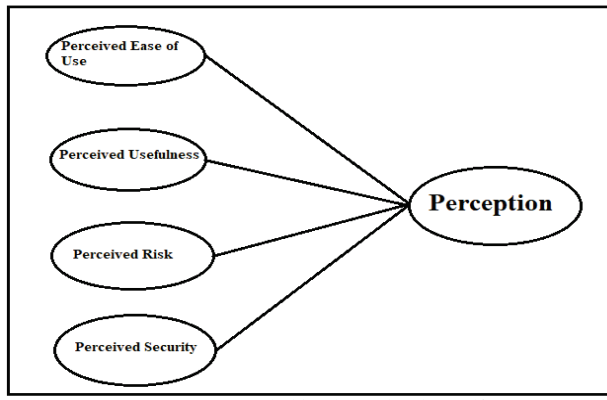
Table 7: Total variance explained

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.916	35.981	35.981	7.916	35.981	35.981	4.494	20.428	20.428
2	3.315	15.067	51.048	3.315	15.067	51.048	4.075	18.523	38.951
3	3.027	13.760	64.808	3.027	13.760	64.808	3.871	17.595	56.546
4	1.788	8.127	72.934	1.788	8.127	72.934	3.605	16.389	72.934
5	.759	3.449	76.384						
6	.574	2.611	78.995						
7	.509	2.314	81.308						
8	.464	2.107	83.415						
9	.405	1.842	85.258						
10	.384	1.746	87.004						
11	.372	1.693	88.696						
12	.328	1.492	90.188						
13	.313	1.423	91.611						
14	.286	1.298	92.909						
15	.244	1.110	94.020						
16	.241	1.096	95.116						
17	.225	1.025	96.141						
18	.198	.901	97.042						
19	.190	.865	97.907						
20	.167	.761	98.668						
21	.159	.723	99.391						
22	.134	.609	100.000						
Extraction Method: Principal Component Analysis.									

Source: Researcher's computation using Factor Analysis

Theoretical Model

Figure 2: Proposed theoretical model of factors effecting perception



Source: Compiled by the author himself

Customer perception in marketing literature refers to a consumer's entire opinion, thought, awareness, and sentiments about a firm and its product and service offerings. Perception is crucial in determining how a certain person experienced a product or service. This research study addressed four main perception factors: perceived ease of use, perceived usefulness, perceived risk, and perceived security. As a result, a theoretical model of perception has been examined. CFA is used to examine the concept validity on numerous perceptual aspects. The CFA results are then displayed using a table and a diagram.

Convergent and discriminant validity for the two validity metrics are statistically assessed. The average percentage of variation explained by the indicators on the constructs tested is displayed by the convergent validity metric called as "Average Variance Extracted (AVE)"." An "AVE" > or equal to 0.5 is required for each build. To support the discriminant validity, the construct's shared variance with other constructs is examined. The "Maximum Shared Variance's" discriminant validity is assessed. "Maximum Shared Variance (MSV)" and Average Shared Variance must be less than "Average Variance Extracted (AVE)" in order for the validity to be supported. The "AVE" should be higher than the "MSV" since the items of the constructs are better internally connected than the items of the constructs correlated with other constructs."

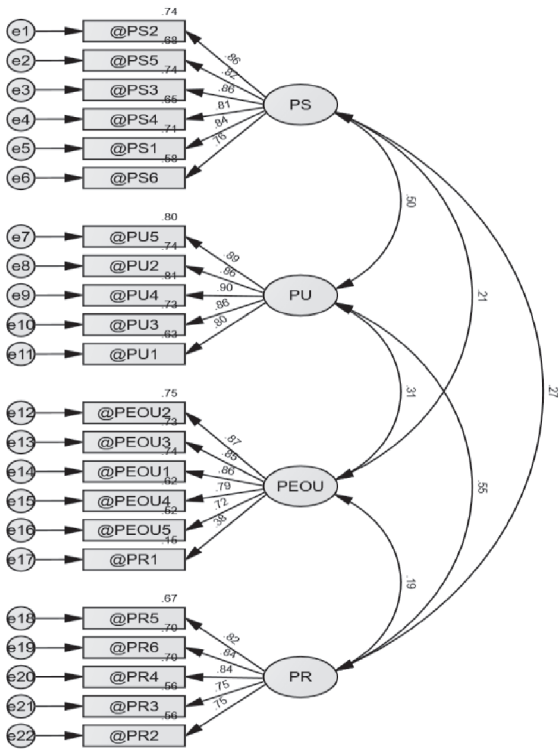
Table 8: Correlation matrix of perception

	CR	AVE	MSV	MaxR(H)	PS	PU	PEOU	PR
PS	0.928	0.684	0.254	0.931	**0.827**			
PU	0.935	0.743	0.301	0.940	0.504***	**0.862**		
PEOU	0.889	0.584	0.094	0.919	0.214***	0.307***	**0.726**	
PR	0.899	0.640	0.301	0.903	0.274***	0.549***	0.186***	**0.800**

Source: Output of SPSS

"It is evident from Table 8 above that there are no validity issues with the model. The value of "Composite Reliability (CR)" for all variables with values over 0.8 indicates the dependability of variables because it exceeds the threshold value of 0.70. All of the "Average Variance Extracted (AVE)" values are greater than 0.5, which seems to be enough to ensure the convergence validity. Discriminant validity is also assured because the "MSV" values are lower than the "AVE" values and each construct's square root of "AVE" is higher than that of its highest correlation with any other construct. The "discriminant validity" of a variable reveals how differently it behaves from other variables. In conclusion, there are no problems with the validity of the hypothesised model being investigated."

Figure 3: Measurement model of Perception



Source: Amos output

Figure 3 represents factors that affecting customer's perception and the interrelationship among the factors. The measurement model was employed to examine the hypothesized connections among the variables. Table 9 summarises all the predicted relationships in this investigation. At the significance threshold of $p<0.05$, all of the paths demonstrated a significant association. H1 was supported by

the finding that perceived ease of use had a significant influence on perception (β =0.55, p<0.05) which supported the finding of Mandala et al., (2019), Singhal, D & Padhmanabhan, V. (2008), Said N.M et al., (2022) and Ashoka et al., (2017). Substantial influence on a customer's perception of technology enabled banking self-services in terms of perceived risk was also supporting H2 (β =0.56, p<0.05) which supported findings of Vatanasombut et al. (2004) and Walker, R. H., & Johnson, L. W. (2006). H3 was supported by the finding that perceived usefulness had a significant influence on perception (β =0.51, p<0.05) which support the findings of Mandala et al., (2019), Said N.M et al., (2022) and Singhal, D & Padhmanabhan, V. (2008). However, perceived security has also significant impact on customers' perceptions of technology-enabled banking self-services, supporting H4 (β=0.57, p<0.05) which supported finding of Walker, R. H., & Johnson, L. W. (2006), Said N.M et al., (2022) and Casalo et al., (2007) .

Table 9: Standard estimation of the measurement model

Hypothesis	Relationship	Estimate	S.E	C.R.	Result
H1	Ease of use ‰-- Perception	0.312	0.059	5.288**	Supported
H2	Usefulness ‰-- Perception	0.242	0.057	4.245**	Supported
H3	Risk ‰-- Perception	0.670	0.096	6.979**	Supported
H4	Security ‰-- Perception	0.512	0.087	5.885**	Supported

Source: Result of path analysis (Output of SPSS, JMOVI), ** p<0.05.

Discussion

Conclusion

The purpose of this study is to explore the factors that affect the customer's perception towards various technology enabled banking self-services. By analyzing the demographic profile of the respondents it has been demonstrated that nearly one-third of all respondents utilise technology enabled banking self-services of public banks, indicating that rural people rely more on public banks for financial services. According to the main data, the majority of respondents are male, indicating male dominance in rural regions, and the majority of respondents had yearly incomes less than 2 lakhs, indicating that rural people have limited income (Das and Mahapatra (2020)) . By using factor analysis, four factors were found which is "perceived ease of use, perceived usefulness, perceived risk and perceived security". The variances explained by these factors are 20.428, 18.523, 17.595 and 16.389 respectively. According to the regression analysis, four variables "ease of

use, usefulness, risk, and security" are significantly and positively related to the customer's perception towards various technology enabled banking self-services. The regression analysis demonstrated that perceived security shows the positive and highest relation with customer's perception than other factor (Walker, R. H., & Johnson, L. W. (2006), Said N.M et al., (2022) and Casalo et al., (2007)). By analyzing the above result it has been conclude that "Perceived security and Perceived Risk" are the main factors that affects "Customers Perception". So it becomes the responsibility of the banks to care of the security and minimize the risk associated with various services provided by "Technology enabled banking self-services" which may be by enabling two factor authentication, One Time Password and by providing assurance the user that they were using safe platform for complication their transaction, their personal information was also not shared with any other etc. And other main thing is that mostly the users of these services were the male and people of young age group so the banks should aware female and old age people so that they were aware about the benefits of the various services provided by "Technology enabled banking self-services". It also has been observed that mostly people prefers services of Public Banks instead of private banks. So the private banks should make efforts to improve their trust worthiness among rural people.

Theoretical implications

In terms of examining the four components in a single environment, this study has filled in some of the gaps left by earlier studies. It has increased the body of knowledge regarding the use of TEBSS, particularly from a nation that has seen encouraging progress in this area. The validated instrument enables comparison research across economies to determine whether the findings are uniform or inconsistent.

Practical implications

Overall, the findings indicate the importance of each of the four characteristics studied, allowing for practical implications in terms of measures to boost the usage of TEBSS. Above all, it suggests that, given the optimistic growth rate, Indian banks and online transaction facility providers consistently upgrade their TEBSS. "Perceived ease of use, perceived usefulness, perceived risk and perceived security" seem to be important variables, thus banking institutions, companies that offer online transaction service, and software developers should pay them more attention. It's important to recognize the value of safety and trust. It is critical that legislators, banking organizations, online transaction facility providers, and software developers collaborate to assure the security and stability of the systems. To protect customers, the government should continue to maintain stability and financial integrity through regulating TEBSS. To maintain trust and confidence, banking institutions and providers of online transaction services must ensure that

the system is constantly secure. When creating the technology enabled banking self-services functionalities, the software designers must have these in mind. Bank employees may have a role in educating and informing customers about new services. Information like payment terms and conditions, warranties, and return guidelines must be included in this. The capabilities and user-friendliness of technology-enabled banking self-services could be demonstrated via video presentations in bank branches or to the general public in order to increase confidence and improve the quality of the information. Additionally, based on the user feedback gathered, operating processes must be regularly reviewed.

Limitation of the study and Direction for future research

The study used primary data, and primary data has the potential to be biased due to respondents' individual preferences. In the future, the same study might be carried out by taken more factors, different states, regions, or the entire nation as the study area. Future research on this topic could include comparisons of public, private, cooperative, and local rural banks.

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