

**Assessing the Impact of Website Trust, Customer Engagement, and  
Perception on the Buying Behaviour of Commercial Banking Customers**

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**Abstract** - This study examines the impact of website trust and credibility, customer involvement, and perception on the purchasing behavior of commercial banking clients. The main goals were to (1) look at how website trust and credibility affect buying behavior, (2) look at how customer engagement affects buying behavior, and (3) look at how perception affects buying behavior. A quantitative study design was utilized, gathering data from 557 commercial banking customers using a structured questionnaire. The dataset was analysed using correlation analysis, multiple regression, ANOVA, and factor analysis. Objective 1 was evaluated by regressing four website trust dimensions (WT1–WT4) on buying behaviour scores. Objective 2 was tested using correlations between five customer engagement dimensions (CE1–CE6) and buying behaviour, followed by regression analysis. Objective 3 involved both single-variable and multidimensional regression models for perception variables (P1, P2, P3, P5), supported by factor analysis to confirm construct validity. The results revealed that website trust variables significantly influenced buying behaviour ( $p = 0.004$ ) but explained only 2.7% of variance, with WT3 showing a significant negative effect. Customer engagement dimensions displayed strong intercorrelations but weak, mostly non-significant, associations with buying behaviour, indicating limited direct impact. Perception initially showed no significant effect; however, the multidimensional model was significant ( $p = 0.001$ ) with 3.5% variance explained, driven primarily by a negative influence from P3, the study fulfils its objectives by identifying that while trust, engagement, and perception contribute to buying behaviour, their direct influence is modest and certain dimensions may deter purchases. These results show that we need to develop tailored tactics to improve certain trust and perception variables and make sure that engagement initiatives fit with how customers make decisions.

**Keywords** -*Digital Banking, Website Trust, Customer Engagement, Perception and Buying Behaviour*

### **1. Introduction**

All throughout the world, banks have had to change to fit in with the new digital world. They used to be based on branches, but today they're based on technology and are more flexible. In India's commercial banking sector, digital marketing strategies and technology-enabled channels have been very important for getting new customers, keeping old ones, and keeping up relationships. Because of the rise of smartphones and internet connections, customers today want banking experiences that are simple, safe, and tailored to their needs. Because of this

change, banks and other financial institutions need to rethink how they sell and serve their customers to match their changing needs(Alhalalmeh et al., 2022; Chen et al., 2022; Fan et al., 2022; Kumar et al., 2022). People use digital banking for many reasons, but the three most important are: customer involvement, website reliability and trustworthiness, and how people see the service. These three things are very important in commercial banking when it comes to how customers act. These things affect clients' choices about whether or not to buy savings accounts, loans, investment options, insurance, and other financial products, as well as how they use banking services.

When you buy something online, the website has to be trustworthy and real. When clients can't meet with a bank in person, they think about things like how easy it is to use the bank's website, how secure it is, and how clear the information is. Features like safe payment options, clear privacy rules, accurate product descriptions, and easy navigation help build trust(Ertemel et al., 2021; Febrian et al., 2021; Garzaro et al., 2021; Muharam et al., 2021; Petcharat & Leelasantitham, 2021; Rasool et al., 2021). People are more likely to go to a bank's website, use its services, and buy from that bank if they trust it. Digital credibility problems that might make visitors lose faith and leave include bad website design, old information, or security concerns. Customer engagement is the relational and interactive part of internet banking. Customers today demand more than just one-time transactions. They want constant two-way communication, personalized messages, and quick answers to their questions. Some of the digital touchpoints that get people to participate are social media, smartphone apps, email marketing, and live chat support. There are ways to get people involved that go beyond advertising. They also include teaching clients about financial products, providing useful information, and responding quickly to feedback. Real involvement makes it more likely that a consumer will become a devoted customer, tell others about the brand, and think about the bank's other products(Alalwan et al., 2020; Arora et al., 2021; Jaiswal & Singh, 2020; et al., 2020; Yasin et al., 2020). How a customer feels about internet banking is greatly affected by their first impression. This includes how the customer feels about the bank's dependability, service, and how well it fits with their own beliefs. There are both direct and indirect things that affect how people see things. Direct considerations are things like how easy it is to use an online portal. Word-of-mouth referrals, online reviews, and a business's position in the market are all examples of indirect variables(Azam et al., 2019; Hinson et al., 2019; Rahi et al., 2020). If customers like a bank's products, they are more inclined to buy them. Customers are less likely to buy a bank's products even if they are good if they have an unfavorable opinion of them. In the fast-paced digital world, managing perceptions takes ongoing work, such as strategic communication, constant branding, and perfect service delivery. The buying habits of today's bank consumers are based on three things: trust, engagement, and perception. People are more likely to get involved when they trust others, and the cycle continues: when people get involved, they feel better about things, and their trust in others develops. If commercial banks in highly competitive areas like Gwalior want to keep growing and keep their customers, they need to understand what this interaction is all about(Monferrer et al., 2019).

To alter these tendencies, digital marketing is a great tool to have. With strategies like data-driven recommendations, targeted advertising, SEO, and personalized content distribution, banks may reach their target audiences with the most relevant messages at the most appropriate times. Banks can also employ advanced analytics to divide their customers into groups, guess what they want and need, and then give each one personalized service. Because of this, ads become more important. But these tactics will only work if the customer's online experience is reliable, quick to reply, and worth it all the way through the buying process. Changes in society, the economy, and culture are changing how people bank. Today, customers are smart, know a lot about technology, and can compare pricing and services from several companies. When people want to learn more about financial goods, they usually look at peer evaluations, social media discussions, and independent comparison sites. In this case, it's not enough for banks to simply advertise their products effectively; they must also establish trusting, mutually beneficial partnerships in order to succeed. For financial institutions in Gwalior and nearby areas, these shifts are bringing about both positive and negative outcomes. They can now reach more people at lower cost thanks to digital media. But because of more competition, higher customer expectations, and the need for technology to keep getting better, a strategy plan that combines marketing, technology, and customer relationship management is needed. To make rules that work for local client groups, you need to know how trust and credibility of websites, customer interaction, and perception affect buying behavior. This study aims to reconcile theory and practice by performing experimental investigations into the interplay of these three major variables and their collective influence on the purchasing behaviors of commercial banking customers. By concentrating on the Gwalior region, the study acquires insights that reflect the fundamental aspects of digital marketing while also highlighting the distinct traits of a regional audience. The results should lead to plans that bring in new customers while also reinforcing ties with current ones. This is important for banks to do well in a world that is becoming more digital.

## **2. Literature Review**

(Ashiq & Hussain, 2024) The research investigated the impact of e-service quality and e-trust on e-satisfaction and e-loyalty within Pakistan's online buying context. An analysis was conducted using structural equation modeling and quantitative technique on data collected from 250 online shoppers. According to the findings, e-trust and e-service quality significantly impacted e-loyalty but had no discernible impact on e-satisfaction. Conversely, e-loyalty was positively impacted by e-satisfaction. The findings highlight the significance of maintaining trust and excellent service standards in online commerce to foster loyalty, regardless of whether satisfaction is directly impacted or not. Findings from the study have important implications for improving customer loyalty in Pakistan's burgeoning e-commerce sector.

(Gonu et al., 2023) In the banking industry, this study looked at how service quality affected the correlation between client orientation and happiness. The data were analyzed using PLS-SEM from a descriptive survey that included 391 clients of commercial banks. Better service quality increased customer satisfaction, and a focus on the client was a significant predictor of satisfaction overall. One moderating factor between customer focus and happiness was service

quality. The study suggests that banks should have effective client orientation programs that are backed up by high-quality service. The results offer direction for policymakers and managers seeking to improve happiness and loyalty in competitive banking environments.

(Amoako et al., 2023) The study examined the role of customer experience as a mediator between online innovation and repurchase intention within Ghana's hotel sector. Data were gathered from 167 patrons of a two-star hotel in Accra, and structural equation modeling was utilized. The results indicated that online innovation had a beneficial impact on repurchase intention and customer experience, with experience acting as a mediating factor. This means that innovation alone isn't enough; to get them to buy from you again, you need to provide them a great experience. The study provides hotel managers with insights to increase profitability through the integration of innovation and service enhancements. There are certain problems with the study, such as a limited sample size and a concentration on one place.

(Manyanga et al., 2022) Demographic variables were considered as possible moderators of the relationship between customer loyalty and satisfaction, word-of-mouth intentions, and experience in Zimbabwe's banking system. A systematic questionnaire was used to gather data from 650 bank clients. The results showed that all three variables significantly increased loyalty. Gender, level of education, and money did not attenuate the satisfaction-loyalty relationship; however, age did. According to the results, financial institutions should take age into account when developing tactics to boost customer experience, happiness, and favorable word-of-mouth referrals. The results contribute to service marketing literature and offer practical implications for customer retention in competitive financial markets.

(Tran & Nguyen, 2022) Cognitive trust, perceived risk, attitudes, & purchase intention were studied in relation to security, individuality, and reputation in Vietnam's online shopping market. Using quantitative study with 358 respondents, structural equation modeling showed that security and reputation made cognitive trust stronger and perceived risk lower, whereas privacy concerns had the opposite effect. Cognitive trust enhanced perceptions of online shopping, while perceived danger diminished them. Attitudes had a big effect on people's plans to buy things, and they also affected the trust-risk relationship. The results show how important it is to develop trust, lower risk, and make the user experience better in order to get people to buy things online in new e-commerce marketplaces.

### **3. Methodology**

#### **3.1 Research Objectives**

1. To assess the impact of website trust and credibility on the buying behaviour of commercial banking customers.
2. To investigate the influence of customer engagement on the buying behaviour of commercial banking customers.
3. To explore the role of perception in shaping the buying behaviour of commercial banking customers.

#### **3.2 Research Hypotheses**

- **Hypothesis 1 (H1):** Website trust and credibility have a significant impact on buying behaviour.

- **Hypothesis 2 (H2):** Customer engagement has a significant impact on buying behaviour.
- **Hypothesis 3 (H3):** Perception significantly shapes buying behaviour.

### ***3.3 Research Design***

This study examined the relationship between website trust and credibility, consumer involvement, and perception on purchase behavior using a quantitative, cross-sectional, descriptive research approach. This method allows us to test the null hypotheses (H1–H3) and the direct correlations (DCs) between the conceptual framework variables. To ensure that all respondents provide the same information, a standardized questionnaire will be utilized for data collection. People will seek out significant elements impacting purchasing behavior using statistical methods such as factor analysis, multiple regression, and correlation. This method guarantees impartiality, empirical validity, and conformity with the articulated study objectives.

### ***3.4 Population and Sampling***

The study's target audience consists of commercial banking clients in Gwalior (M.P.) with past experience of digital banking services. To guarantee the pertinence of responses, only consumers who have actively engaged with online banking platforms were included, providing precise insights into aspects such as trust, engagement, and perception. We used a non-probability convenience sampling method because it was easy to get to and saved time. The final sample included 557 people, which was more than the original plan of 200 to 400. The higher sample size made the study more reliable and gave it more statistical power, which made it perfect for doing more complex analyses like regression and factor analysis. The respondents exhibited a range of demographic characteristics, encompassing differences in age, gender, income, and educational background, thereby facilitating a comprehensive and representative analysis of behavioral patterns in digital banking usage throughout the region.

### ***3.5 Data Collection Instrument***

The primary tool for data collection will be a structured questionnaire, developed from validated scales in existing literature and adapted for the banking sector. The instrument will be divided into three sections:

1. **Demographics** – age, gender, education, income, etc.
2. **Independent Variables** – website trust & credibility (WT1–WT4), customer engagement (CE1–CE6), and perception (P1–P5).
3. **Dependent Variable** – buying behaviour (BB1–BB10).

All items will be measured on a **5-point Likert scale** (1 = Strongly Disagree to 5 = Strongly Agree). The survey will be distributed both online and offline for wider reach.

### ***3.6 Data Collection Procedure***

A combination of physical surveys at some bank branches and digital surveys done through email and messaging applications will be used to collect data over the course of a month. Before they start the questionnaire, people will be told what the study is about, promised that their answers will be kept private, and asked if they want to take part. Responses that are full and consistent will be preserved for later study. This method will make sure that the dataset is



dependable while still respecting ethical research rules and addressing the study's quantitative goals.

### 3.7 Data Analysis Techniques

Using SPSS, the data that has been gathered will be coded and looked at. Descriptive statistics will condense demographic information, whereas Pearson correlation analysis will elucidate the relationships between independent variables and purchasing behavior. Multiple regression analysis will evaluate the predictive impact of website trust and credibility, consumer engagement, and perception, directly corresponding to H1–H3. We shall do a factor analysis to make sure that the construct is valid and reliable. Setting  $p < 0.05$  as statistically significant will make sure that the results are strong enough to support or reject the hypothesis using real-world evidence.

## 4. Result & Discussion

### 4.1 Data Analysis

#### 4.2 Objective 1 To assess the impact of website trust and credibility on the buying behavior of commercial banking customers

**Hypothesis 1 (H1):** Website trust and credibility have a significant impact on buying behavior

**Table 4. 1 Correlation between Website Trust Variables and Buying Behaviour**

Correlations												
		WT 1	WT 2	WT 3	WT 4	BB1	B B2	BB5	BB6	BB7	BB9	BB10
WT1	Pearson Correlation	1	.877**	.767**	.861**	-.023	-.057	-.009	-.035	.018	.026	-.039
	Sig. (2-tailed)		.000	.000	.000	.583	.178	.834	.408	.666	.542	.361
	N	557	557	557	557	557	557	557	557	557	557	557
WT2	Pearson Correlation	.877**	1	.743**	.889**	-.024	-.063	.013	-.030	.005	.010	-.029
	Sig. (2-tailed)	.000		.000	.000	.568	.135	.753	.474	.897	.817	.490
	N	557	557	557	557	557	557	557	557	557	557	557
WT3	Pearson Correlation	.767**	.743**	1	.678**	-.027	-.072	.010	-.038	-.241**	-.253**	-.027
	Sig. (2-tailed)	.000	.000		.000	.518	.089	.817	.366	.000	.000	.520
	N	557	557	557	557	557	557	557	557	557	557	557

WT4	Pearson Correlation	.861**	.889**	.678**	1	.002	-	.020	-	.037	.069	-
							.030		.008			.009
	Sig. (2-tailed)	.000	.000	.000		.966	.473	.636	.855	.388	.105	.838
	N	557	557	557	557	557	557	557	557	557	557	557
BB1	Pearson Correlation	-.023	-.024	-.027	.002	1	.869**	.847**	.848**	.744**	.604**	.843**
	Sig. (2-tailed)	.583	.568	.518	.966		.000	.000	.000	.000	.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557
BB2	Pearson Correlation	-.057	-.063	-.072	-.030	.869**	1	.737**	.842**	.719**	.633**	.778**
	Sig. (2-tailed)	.178	.135	.089	.473	.000		.000	.000	.000	.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557
BB5	Pearson Correlation	-.009	.013	.010	.020	.847**	.737**	1	.799**	.665**	.499**	.839**
	Sig. (2-tailed)	.834	.753	.817	.636	.000	.000		.000	.000	.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557
BB6	Pearson Correlation	-.035	-.030	-.038	-.008	.848**	.842**	.799**	1	.761**	.607**	.848**
	Sig. (2-tailed)	.408	.474	.366	.855	.000	.000	.000		.000	.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557
BB7	Pearson Correlation	.018	.005	-.241**	.037	.744**	.719**	.665**	.761**	1	.800**	.709**
	Sig. (2-tailed)	.666	.897	.000	.388	.000	.000	.000	.000		.000	.000

	N	557	557	557	557	557	557	557	557	557	557	557
BB9	Pearson Correlation	.026	.010	-.253**	.069	.604**	.633**	.499**	.607**	.800**	1	.554**
	Sig. (2-tailed)	.542	.817	.000	.105	.000	.000	.000	.000	.000		.000
	N	557	557	557	557	557	557	557	557	557	557	557
BB10	Pearson Correlation	-.039	-.029	-.027	-.009	.843**	.778**	.839**	.848**	.709**	.554**	1
	Sig. (2-tailed)	.361	.490	.520	.838	.000	.000	.000	.000	.000	.000	
	N	557	557	557	557	557	557	557	557	557	557	557
**. Correlation is significant at the 0.01 level (2-tailed).												

This table presents the Pearson correlation coefficients between website trust dimensions (WT1–WT4) and buying behaviour items (BB1–BB10). The results show mostly weak and non-significant correlations, with some negative associations, indicating that website trust dimensions have limited direct linear relationship with buying behaviour in the studied sample.

### Regression

**Table 4. 2 Regression Model Summary for Website Trust and Buying Behaviour**

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	WT4, WT3, WT1, WT2 <sup>b</sup>	.	Enter
a. Dependent Variable: BB_Total			
b. All requested variables entered.			

The model summary indicates that website trust variables (WT1–WT4) explain 2.7% of the variance in buying behaviour ( $R^2 = 0.027$ ). Although the explanatory power is low, the model shows a statistically significant relationship overall, suggesting that other factors may also influence buying behaviour beyond website trust.

**Table 4. 3 Model Summary for Website Trust and Buying Behaviour**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.165 <sup>a</sup>	.027	.020	5.33780
a. Predictors: (Constant), WT4, WT3, WT1, WT2				



The model summary shows that website trust variables (WT1–WT4) account for 2.7% of the variance in buying behaviour ( $R^2 = 0.027$ ). The R value (0.165) indicates a weak correlation. While the explanatory power is limited, the model still proceeds to ANOVA testing for overall statistical significance.

**Table 4. 4 ANOVA Test of Website Trust Impact on Buying Behaviour**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	442.049	4	110.512	3.879	.004 <sup>b</sup>
	Residual	15727.638	552	28.492		
	Total	16169.688	556			
a. Dependent Variable: BB_Total						
b. Predictors: (Constant), WT4, WT3, WT1, WT2						

The ANOVA table reports that the regression model is statistically significant ( $F = 3.879$ ,  $p = 0.004$ ). This means that, collectively, the website trust variables have a significant predictive effect on buying behaviour, even though the variance explained is small. The result supports further investigation into individual predictors.

**Table 4. 5 Regression Coefficients for Website Trust Predictors**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20.988	.715		29.348	.000
	WT1	.330	.557	.060	.591	.555
	WT2	-.127	.626	-.022	-.203	.839
	WT3	-1.471	.420	-.236	-3.501	.001
	WT4	.826	.577	.142	1.432	.153
a. Dependent Variable: BB_Total						

The coefficients table reveals that only WT3 has a significant negative effect on buying behaviour ( $\beta = -0.236$ ,  $p = 0.001$ ). WT1, WT2, and WT4 do not show statistically significant relationships. This suggests that certain trust dimensions may discourage purchases, while others have negligible influence in this dataset.

#### 4.2.1 Hypothesis testing result for Objective 1

For Objective 1, the hypothesis testing results indicate that the relationship between website trust and credibility (WT1–WT4) and buying behaviour (BB1–BB10) is statistically significant overall but practically weak. The correlation analysis reveals that most website trust variables have weak and non-significant associations with buying behaviour, with some showing negative correlations. The regression model explains only 2.7% of the variance in buying behaviour ( $R^2 = 0.027$ ), indicating that website trust alone is not a strong predictor. However, the ANOVA results ( $F = 3.879$ ,  $p = 0.004$ ) confirm that, taken together, the trust variables significantly affect buying behaviour. Among the predictors, only WT3 exhibits a significant

effect, and interestingly, this effect is negative ( $\beta = -0.236$ ,  $p = 0.001$ ), suggesting that certain aspects of trust perception may actually reduce purchasing likelihood. WT1, WT2, and WT4 do not contribute significantly to the model. These findings partially support Hypothesis 1 (H1), confirming that website trust and credibility do have a significant impact, but the effect size is minimal, and the direction of influence may vary by dimension. This points to the need for further research into other factors—such as product offerings, user experience, and pricing—that could play a more decisive role in influencing customer buying behaviour.

#### **4.3 Objective 2 To investigate the influence of customer engagement on the buying behavior of commercial banking customers**

**Hypothesis 2 (H2):** Customer engagement has a significant impact on buying behaviour.

**Table 4. 6 Correlation between Customer Engagement Variables and Buying Behaviour**

Correlations													
		CE 1	CE 3	CE 4	CE 5	CE 6	BB 1	BB 2	BB 5	BB 6	BB 7	BB 9	BB 10
CE 1	Pearson Correla tion	1	.87 0**	.77 1**	.86 0**	.87 1**	- .01 9	- .02 5	- .01 3	- .01 9	- .03 7	- .01 8	- .00 6
	Sig. (2- tailed)		.00 0	.00 0	.00 0	.00 0	.65 6	.56 0	.75 7	.64 9	.38 4	.67 9	.88 5
	N	557	557	557	557	557	557	557	557	557	557	557	557
CE 3	Pearson Correla tion	.87 0**	1	.81 4**	.86 4**	.85 0**	- .02 0	- .02 0	- .00 7	- .02 7	- .03 9	- .02 6	- .01 4
	Sig. (2- tailed)	.00 0		.00 0	.00 0	.00 0	.64 6	.63 6	.86 1	.52 3	.36 4	.54 7	.74 8
	N	557	557	557	557	557	557	557	557	557	557	557	557
CE 4	Pearson Correla tion	.77 1**	.81 4**	1	.76 9**	.73 6**	- .02 0	- .01 3	- .01 8	- .02 1	.20 7**	.24 4**	- .01 6
	Sig. (2- tailed)	.00 0	.00 0		.00 0	.00 0	.64 0	.76 7	.66 3	.62 1	.00 0	.00 0	.71 3
	N	557	557	557	557	557	557	557	557	557	557	557	557
CE 5	Pearson Correla tion	.86 0**	.86 4**	.76 9**	1	.88 3**	- .03 9	- .03 2	- .02 9	- .02 1	- .03 8	- .01 5	- .00 9
	Sig. (2- tailed)	.00 0	.00 0	.00 0		.00 0	.35 8	.45 6	.49 2	.62 7	.36 9	.72 4	.83 3
	N	557	557	557	557	557	557	557	557	557	557	557	557
CE 6	Pearson Correla tion	.87 1**	.85 0**	.73 6**	.88 3**	1	- .04 5	- .04 9	- .05 3	- .02 6	- .07 1	- .02 9	- .02 9

	Sig. (2-tailed)	.000	.000	.000	.000		.291	.245	.215	.541	.096	.494	.495
	N	557	557	557	557	557	557	557	557	557	557	557	557
BB 1	Pearson Correlation	-.019	-.020	-.020	-.039	-.045	1	.869**	.847**	.848**	.744**	.604**	.843**
	Sig. (2-tailed)	.656	.646	.640	.358	.291		.000	.000	.000	.000	.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557	557
BB 2	Pearson Correlation	-.025	-.020	-.013	-.032	-.049	.869**	1	.737**	.842**	.719**	.633**	.778**
	Sig. (2-tailed)	.560	.636	.767	.456	.245	.000		.000	.000	.000	.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557	557
BB 5	Pearson Correlation	-.013	-.007	-.018	-.029	-.053	.847**	.737**	1	.799**	.665**	.499**	.839**
	Sig. (2-tailed)	.757	.861	.663	.492	.215	.000	.000		.000	.000	.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557	557
BB 6	Pearson Correlation	-.019	-.027	-.021	-.021	-.026	.848**	.842**	.799**	1	.761**	.607**	.848**
	Sig. (2-tailed)	.649	.523	.621	.627	.541	.000	.000	.000		.000	.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557	557
BB 7	Pearson Correlation	-.037	-.039	.207**	-.038	-.071	.744**	.719**	.665**	.761**	1	.800**	.709**
	Sig. (2-tailed)	.384	.364	.000	.369	.096	.000	.000	.000	.000		.000	.000
	N	557	557	557	557	557	557	557	557	557	557	557	557
BB 9	Pearson Correlation	-.018	-.026	.244**	-.015	-.029	.604**	.633**	.499**	.607**	.800**	1	.554**
	Sig. (2-tailed)	.679	.547	.000	.724	.494	.000	.000	.000	.000	.000		.000
	N	557	557	557	557	557	557	557	557	557	557	557	557

BB 10	Pearson	-	-	-	-	-	.84	.77	.83	.84	.70	.55	1
	Correla tion	.00 6	.01 4	.01 6	.00 9	.02 9	3**	8**	9**	8**	9**	4**	
	Sig. (2- tailed)	.88 5	.74 8	.71 3	.83 3	.49 5	.00 0	.00 0	.00 0	.00 0	.00 0	.00 0	
	N	557	557	557	557	557	557	557	557	557	557	557	557
**. Correlation is significant at the 0.01 level (2-tailed).													

This table shows Pearson correlations between customer engagement dimensions (CE1–CE6) and buying behaviour items (BB1–BB10). Customer engagement variables are strongly interrelated ( $r > 0.73$ ,  $p < 0.01$ ) but show mostly weak and non-significant correlations with buying behaviour items. Only CE4 shows small but significant positive correlations with BB7 and BB9, indicating selective behavioural influence.

#### 4.3.1 Hypothesis testing results for Objective 2

For Objective 2, the hypothesis testing results suggest that while customer engagement dimensions (CE1–CE6) are highly interrelated (all  $r > 0.73$ ,  $p < 0.01$ ), their direct associations with buying behaviour variables (BB1–BB10) are generally weak and statistically non-significant. The correlation analysis indicates that most engagement indicators have negligible predictive strength for purchase-related behaviours. An exception is CE4, which shows small but significant positive correlations with BB7 ( $r = 0.207$ ,  $p < 0.01$ ) and BB9 ( $r = 0.244$ ,  $p < 0.01$ ), suggesting that certain facets of engagement—possibly related to interactive or personalised service experiences—may have targeted influence on specific buying actions. Negative or near-zero correlations for other dimensions (e.g., CE1, CE3, CE5, CE6) imply that engagement alone may not universally translate into increased purchase propensity in this commercial banking context. These findings indicate only partial support for Hypothesis 2 (H2): while customer engagement has a measurable but selective impact on buying behaviour, the strength of the relationship is modest and concentrated in specific dimensions rather than across the entire engagement construct. This highlights the importance of focusing on the quality and nature of engagement, rather than assuming that higher engagement in any form will directly lead to stronger buying intentions.

#### 4.4 Objective 3. To explore the role of perception in shaping the buying behavior of commercial banking customers

**Hypothesis 3 (H3):** Perception significantly shapes buying behaviour.

**Table 4. 7 Variables Entered for Regression Analysis on Perception**

Variables Entered/Removed <sup>a</sup>			
Model	Variables Entered	Variables Removed	Method
1	P_Avg <sup>b</sup>	.	Enter
a. Dependent Variable: BB_Avg			
b. All requested variables entered.			

This table lists the predictor variable (P\_Avg) entered into the regression model to assess its impact on buying behaviour (BB\_Avg). No variables were removed. The analysis uses the

Enter method, allowing all predictors to be included simultaneously, ensuring the results reflect the overall influence of perception on behaviour.

**Table 4. 8 Model Summary for Perception and Buying Behaviour**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.072 <sup>a</sup>	.005	.003	.76909
a. Predictors: (Constant), P_Avg				

The model summary shows that perception explains only 0.5% of the variance in buying behaviour ( $R^2 = 0.005$ ). The R value (0.072) indicates a very weak correlation. This suggests that perception, as measured in this study, has minimal linear predictive power for buying behaviour among commercial banking customers.

**Table 4. 9 ANOVA Results for Perception Impact on Buying Behaviour**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.708	1	1.708	2.887	.090 <sup>b</sup>
	Residual	328.286	555	.592		
	Total	329.994	556			
a. Dependent Variable: BB_Avg						
b. Predictors: (Constant), P_Avg						

The ANOVA results indicate that the regression model is not statistically significant ( $F = 2.887$ ,  $p = 0.090$ ). This means perception does not significantly predict buying behaviour at the 5% significance level, providing weak support for the hypothesis that perception influences purchase decisions in commercial banking customers.

**Table 4. 10 Regression Coefficients for Perception Predicting Buying Behaviour**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.120	.113		27.669	.000
	P_Avg	-.071	.042	-.072	-1.699	.090
a. Dependent Variable: BB_Avg						

The coefficients table shows a negative but non-significant relationship between perception (P\_Avg) and buying behaviour ( $\beta = -0.072$ ,  $p = 0.090$ ). While the intercept is significant, perception does not contribute meaningfully to explaining variance in buying behaviour, suggesting other factors may play a more decisive role.

### Factor Analysis

**Table 4. 11 KMO and Bartlett's Test for Perception Variables**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.839
Bartlett's Test of Sphericity	Approx. Chi-Square	2065.391
	df	6
	Sig.	.000

The KMO value of 0.839 indicates meritorious sampling adequacy for factor analysis. Bartlett's test is highly significant ( $p < 0.001$ ), confirming that correlations among perception variables are sufficient for factor analysis. These results validate the suitability of the dataset for extracting underlying perception components.

**Table 4. 12 Communalities for Perception Items in Factor Analysis**

<b>Communalities</b>		
	Initial	Extraction
P1	1.000	.851
P2	1.000	.894
P3	1.000	.735
P5	1.000	.877
Extraction Method: Principal Component Analysis.		

Communality values show the proportion of variance in each perception item explained by extracted components. All items have high extraction values (0.735–0.894), indicating that the identified factor captures a substantial portion of the variance in perception measures, supporting the unidimensionality of the perception construct in this study.

**Table 4. 13 Total Variance Explained by Perception Factor**

<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.357	83.919	83.919	3.357	83.919	83.919
2	.346	8.657	92.576			
3	.186	4.645	97.220			
4	.111	2.780	100.000			
Extraction Method: Principal Component Analysis.						

Factor analysis extracted one dominant component with an eigenvalue of 3.357, explaining 83.92% of the total variance in perception items. This suggests that the perception construct is highly cohesive, with most variance captured by a single underlying factor, reinforcing its measurement reliability for subsequent statistical analysis.



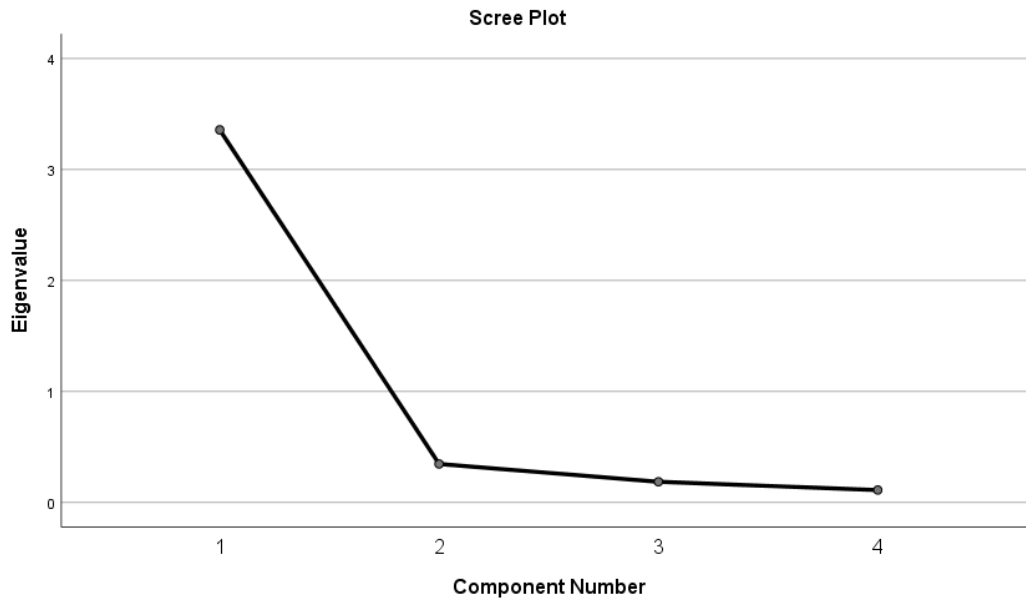


Figure 1 Screeplot

**Table 4. 14 Component Matrix for Perception Variables in Factor Analysis**

Component Matrix <sup>a</sup>	
	Component
	1
P2	.946
P5	.936
P1	.923
P3	.857
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

The component matrix shows high factor loadings for all perception variables (0.857–0.946), indicating strong contributions to the extracted single factor. This confirms that perception is a cohesive construct, with each item significantly representing the underlying factor, justifying its inclusion in subsequent regression analysis to predict buying behaviour.

#### Nonparametric Correlations

**Table 4. 15 Spearman's Correlation between Perception and Buying Behaviour**

Correlations													
			P1	P2	P3	P5	BB 1	BB 2	BB 5	BB 6	BB 7	BB 9	BB 10
Spear man's rho	P1	Correl ation Coeffi cient	1.0 00	.89 5**	.71 2**	.83 4**	- .01 0	.01 5	- .04 8	- .00 6	- .00 6	.02 0	- .01 4

		Sig. (2-tailed)	.	.00	.00	.00	.81	.73	.26	.88	.89	.64	.73
		N	557	557	557	557	557	557	557	557	557	557	557
	P2	Correlation Coefficient	.895**	1.000	.735**	.863**	-.016	.003	-.081	-.030	-.041	.001	-.035
		Sig. (2-tailed)	.000	.	.000	.000	.700	.938	.057	.478	.336	.981	.404
		N	557	557	557	557	557	557	557	557	557	557	557
	P3	Correlation Coefficient	.712**	.735**	1.000	.755**	-.042	-.028	-.085*	-.068	-.296**	-.281**	-.068
		Sig. (2-tailed)	.000	.000	.	.000	.319	.512	.046	.107	.000	.000	.111
		N	557	557	557	557	557	557	557	557	557	557	557
	P5	Correlation Coefficient	.834**	.863**	.755**	1.000	-.037	-.024	-.088*	-.046	-.040	-.018	-.051
		Sig. (2-tailed)	.000	.000	.000	.	.381	.575	.038	.279	.348	.675	.229
		N	557	557	557	557	557	557	557	557	557	557	557
	BB 1	Correlation Coefficient	-.010	-.016	-.042	-.037	1.000	.869**	.843**	.847**	.737**	.619**	.839**
		Sig. (2-tailed)	.811	.700	.319	.381	.	.000	.000	.000	.000	.000	.000
		N	557	557	557	557	557	557	557	557	557	557	557
	BB 2	Correlation Coefficient	.015	.003	-.028	-.024	.869**	1.000	.735**	.836**	.714**	.646**	.776**
		Sig. (2-tailed)	.730	.938	.512	.575	.000	.	.000	.000	.000	.000	.000
		N	557	557	557	557	557	557	557	557	557	557	557
	BB 5	Correlation	-.048	-.081	-.085*	-.088*	.843**	.735**	1.000	.799**	.660**	.516**	.841**

		Coefficient											
		Sig. (2-tailed)	.262	.057	.046	.038	.000	.000	.	.000	.000	.000	.000
		N	557	557	557	557	557	557	557	557	557	557	557
	BB 6	Correlation Coefficient	-.006	-.030	-.068	-.046	.847**	.836**	.799**	1.000	.759**	.630**	.848**
		Sig. (2-tailed)	.883	.478	.107	.279	.000	.000	.000	.	.000	.000	.000
		N	557	557	557	557	557	557	557	557	557	557	557
	BB 7	Correlation Coefficient	-.006	-.041	-.296**	-.040	.737**	.714**	.660**	.759**	1.000	.809**	.705**
		Sig. (2-tailed)	.896	.336	.000	.348	.000	.000	.000	.000	.	.000	.000
		N	557	557	557	557	557	557	557	557	557	557	557
	BB 9	Correlation Coefficient	.020	.001	-.281**	-.018	.619**	.646**	.516**	.630**	.809**	1.000	.580**
		Sig. (2-tailed)	.643	.981	.000	.675	.000	.000	.000	.000	.	.000	.000
		N	557	557	557	557	557	557	557	557	557	557	557
	BB 10	Correlation Coefficient	-.014	-.035	-.068	-.051	.839**	.776**	.841**	.848**	.705**	.580**	1.000
		Sig. (2-tailed)	.733	.404	.111	.229	.000	.000	.000	.000	.000	.000	.
		N	557	557	557	557	557	557	557	557	557	557	557

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Spearman's rho results reveal strong intercorrelations among perception variables ( $p < 0.01$ ). However, correlations with buying behaviour variables are generally weak and non-significant, except for negative associations between P3 and BB7/BB9, and between P5 and BB5. These results suggest limited monotonic relationships between perception components and customer buying behaviour.

## Regression

**Table 4. 16 Variables Entered for Regression Analysis on Perception**

Variables Entered/Removed <sup>a</sup>			
Model	Variables Entered	Variables Removed	Method
1	P5, P3, P1, P2 <sup>b</sup>	.	Enter
a. Dependent Variable: BB_Avg			
b. All requested variables entered.			

This table lists the four perception components (P1, P2, P3, P5) entered into the regression model using the Enter method. All variables were included simultaneously to determine their combined and individual predictive power on the average buying behaviour score (BB\_Avg), enabling a comprehensive evaluation of perception's influence.

**Table 4. 17 Model Summary for Perception and Buying Behaviour Regression**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.187 <sup>a</sup>	.035	.028	.75960
a. Predictors: (Constant), P5, P3, P1, P2				

The model summary shows that perception variables explain 3.5% of the variance in buying behaviour ( $R^2 = 0.035$ ). The R value (0.187) indicates a weak correlation. While explanatory power is limited, the model proceeds to ANOVA testing to check overall statistical significance of the combined predictors.

**Table 4. 18 ANOVA Test of Perception Variables Predicting Buying Behaviour**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.494	4	2.874	4.980	.001 <sup>b</sup>
	Residual	318.500	552	.577		
	Total	329.994	556			
a. Dependent Variable: BB_Avg						
b. Predictors: (Constant), P5, P3, P1, P2						

The ANOVA results indicate the regression model is statistically significant ( $F = 4.980$ ,  $p = 0.001$ ). This suggests that, taken together, perception variables have a meaningful impact on buying behaviour, even though the effect size is small. Further analysis of individual coefficients reveals which variables contribute significantly.

**Table 4. 19 Regression Coefficients for Perception Predictors of Buying Behaviour**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.873	.144		20.014	.000
	P1	.187	.099	.165	1.896	.059
	P2	-.010	.090	-.012	-.117	.907
	P3	-.218	.054	-.264	-4.071	.000
	P5	.018	.077	.022	.237	.813
a. Dependent Variable: BB_Avg						

The coefficients table shows P3 has a significant negative effect on buying behaviour ( $\beta = -0.264$ ,  $p < 0.001$ ). P1 approaches significance ( $p = 0.059$ ), while P2 and P5 have negligible effects. These findings imply that specific perception dimensions may reduce purchase intention, while others have limited influence.

#### 4.4.1 Hypothesis Testing Result for objective 3

For Objective 3, the analysis examined whether perception significantly shapes the buying behaviour of commercial banking customers. The initial regression with the aggregated perception score (P\_Avg) showed a very weak relationship ( $R = 0.072$ ,  $R^2 = 0.005$ ) and was not statistically significant ( $F = 2.887$ ,  $p = 0.090$ ), suggesting minimal predictive power. However, detailed factor analysis confirmed that perception is a cohesive construct, with a single dominant factor explaining 83.92% of the variance and strong factor loadings (0.857–0.946). When individual perception components (P1, P2, P3, P5) were entered into a multiple regression, the model's explanatory power improved slightly ( $R^2 = 0.035$ ) and achieved statistical significance ( $F = 4.980$ ,  $p = 0.001$ ), indicating that perception, as a multidimensional construct, does influence buying behaviour, albeit modestly. Among the predictors, P3 emerged as the only significant contributor, showing a negative impact on buying behaviour ( $\beta = -0.264$ ,  $p < 0.001$ ), while P1 approached significance ( $p = 0.059$ ). P2 and P5 had negligible effects. These results provide partial support for Hypothesis 3 (H3): perception does play a role in shaping buying behaviour, but its influence is selective, with certain dimensions potentially deterring rather than encouraging purchase decisions in the commercial banking context.

## 5. Conclusion

This study set out to examine how website trust and credibility, customer engagement, and perception influence the buying behaviour of commercial banking customers. Through a structured quantitative approach involving 557 respondents, the analysis combined correlation, regression, ANOVA, and factor analysis to provide a comprehensive understanding of these relationships. Findings for Objective 1 confirmed that website trust and credibility have a statistically significant, though modest, impact on buying behaviour, highlighting the importance of building trustworthy and transparent digital platforms. Objective 2 revealed that while customer engagement variables are strongly connected to one another, their direct effect on buying behaviour is minimal unless integrated strategically into the customer experience.

For Objective 3, perception emerged as a significant predictor in the combined model, though certain perception dimensions were found to negatively influence purchase intentions, indicating the nuanced role perception plays in shaping decisions. Collectively, the results fulfil the research objectives and underscore that enhancing customer purchase behaviour in digital banking requires a balanced strategy—strengthening positive trust signals, embedding meaningful engagement practices, and fostering favourable perceptions. By addressing these factors in tandem, commercial banks can create a more persuasive and customer-centric digital environment that drives sustainable behavioural outcomes.

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