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Building E-Loyalty in Digital Banking: How Perceived Value and Trust Translate Service Quality into Customer Commitment

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With the gradual migration of banking to online platforms, the drivers of customer loyalty now represent the point of focus by managers and researchers. This study explores how the customer ratings on the quality of e-banking services affect their loyalty intentions, the mediating effect of perceived value, and trust. Using the Cognitive-Motivational-Relational (CMR) theory, the study conceptualizes loyalty as the result of a process of a psychological appraisal by customers who examine the performance of service, appraise the value of the performance and develop confidence in the provider. The results obtained using the data on active e-banking users underwent structural equation modelling, which disclosed that the perception of reliability, security and efficiency of e-banking services make the customers more prone to realize the value addition and build stronger trust in the bank. Both perceived value and e-trust are strong contributors to loyalty and important mediating variables between the quality of service and the intentions to use it further. The results of this study suggest that digital loyalty is not only determined by technical performance, but also by larger cognitive and relational evaluations of customers regarding their banking experience.

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1. Introduction

The banking industry worldwide has undergone rapid digital transformation, customers increasingly use internet and mobile channels for transactions, information and relationship management (Hakizimana et al., 2023). Electronic banking which includes internet banking, mobile banking, and other digital financial services has become a key service delivery channel that shapes customer experiences and the competitive positioning of banks (Moraes & Schaefer, 2026; Mogaji, 2023). Digital service quality and digital banking experience strongly influence customer responses such as satisfaction, trust and loyalty, making e-banking a central element in studies of customer behaviour in modern banking (Chauhan et al., 2022). The rapid adoption of electronic and mobile banking has changed loyalty dynamics like electronic service quality, convenience, and technology readiness now strongly influence customer's continued use and loyalty toward banks. Research on electronic banking and mobile banking in Pakistan finds that digital experience and trust in electronic channels significantly affect loyalty and that trust often mediates the relationship between electronic service quality and digital customer loyalty (Ahmad et al., 2021; Mazhar et al., 2022).

Perceived value and trust are consistently identified as critical psychological mechanisms through which electronic banking affects long term outcomes (Kim et al., 2024; Prodanova et al., 2019). Perceived value (the customer's cognitive trade-off between what they give and what they receive) has been found to mediate the relationship between electronic service quality and loyalty for digital payment and banking services (Prodanova et al., 2019). Trust customer belief that the bank's digital channels are secure, reliable and acting in customer's interests likewise mediates how digital experiences translate into commitment and repeat usage. Together, perceived value and trust form plausible mediating pathways linking electronic banking capabilities to customer loyalty (Prodanova et al., 2019; Shankar & Jebarajakirthy, 2019).

In Pakistan and comparable emerging market settings, the shift to digital channels accelerated during the pandemic and since, but challenges remain uneven trust in digital systems, concerns about security and service disruptions, and mixed findings on whether improved digital services automatically produce loyalty. This makes it important to empirically test how electronic banking affects customer loyalty through perceived value and trust in the local context (Ahmad et al., 2021; Prodanova et al., 2019; Shankar & Jebarajakirthy, 2019)

Although banks invest heavily in electronic banking platforms, investment alone does not guarantee customer retention. Empirical studies show that, although service quality and digital characteristics increase the usage, the transfer to long-term customer loyalty depends on the presence of psychological mediators like perceived value and trust (Lee, 2023; Yum and Kim, 2024). Scarcity of reliable data in Pakistan is available on mechanisms by which electronic banking can affect loyalty, especially whether the perceived value and trust have a joint influence on the relationship. In the absence of an understanding of these mediators, the banks may be misusing the resources and failing to attain desired retention results. This

research fills that gap by experimenting empirically the mediating roles of perceived value and trust in the correlation between electronic banking and customer loyalty.

The research is not only exploring the direct impact of the quality and functionality of electronic banking services on customer loyalty, but also the research questions are whether perceived value is a mediator between electronic banking and customer loyalty, and whether trust is a mediator between electronic banking and customer loyalty. It also investigates the joint mediating influence of perceived value and trust in electronic banking loyalty relationship and gives managerial suggestions to banks, particularly in Pakistani banking industry, on how electronic banking features and communications should be developed to enhance the perceived value, trust and consequently loyalty.

2 Literature Review and Hypotheses Development

2.1 Theoretical Support

The study has theoretical basis of Cognitive-Motivational-Relational (CMR) theory (Lazarus, 1991) that provides a strict conceptual framework of the way customers convert service judgement into behavioural results. CMR theory assumes that people initially carry out a mental review of the stimuli in the environment and this creates relational and motivational reactions that eventually influence emotional responses and future behaviours. Service quality dimensions are included in salient environmental cues in the e-banking context, including reliability, privacy and security, web design, and customer support (Shankar and Jebarajakirthy, 2019). Customers who communicate with an e-banking platform constantly evaluate the service as promising, maintaining their personal data, and ensuring ease of transactions (Dewi and Zulkifli, 2024). These judgments constitute the first stage of cognitive appraisal that is identified as a part of the CMR theory.

The existing research using CMR theory in e-banking has established that the quality of service is a cognitive stimulus which influences the psychological response of customers (Shankar and Jebarajakirthy, 2019). After such appraisal, customers develop relational judgment towards the service provider. In the digital financial settings, two major relational constructs that transpire include e-trust and perceived value. E-trust indicates the conviction of the customers that the bank is trustworthy, safe, and is operating in the best interest of the customer (Zia et al., 2022; Mazhar et al., 2025). Perceived value refers to the general estimation of the advantages obtained in comparison to expenses incurred (Blut et al., 2024). Studies on mobile banking have demonstrated that perceived value serves as a major cognitive assessment of further use (Prodanova et al., 2019). In the CMR model, trust and perceived value are motivational and relational conceptualizations of the original service assessment.

According to CMR theory, behavioural responses are not direct results of stimuli per se, but occur through cognitive-relational processes. The final behavioural result of such an appraisal process in e-banking is loyalty, which is an intention to reuse the platform, a preference to use the platform instead of other channels, and positive word-of-mouth (Dangaiso et al., 2024). In case customers feel that the service has high quality, they will tend to trust the platform and feel more value in using the platform. These evaluations in relations

bring about less uncertainty, greater confidence, and commitment, which lead to e-loyalty. Therefore, this theory promotes a sequential process: e-banking service quality (stimulus) to cognitive appraisal to relational appraisals (e-trust and perceived value) to behavioural reaction (e-loyalty). This framework explains why the quality of service in itself might not ensure loyalty unless it can evoke trust and value perception and combines both rational (value-based) and relational (trust-based) streams of a single theoretical focus.

2.2 Electronic Banking Service Quality and Customer Loyalty

Electronic banking (e-banking) can be understood as the use of digital platforms to provide financial intermediation and transactions such as internet banking, mobile applications, and online platforms (Etim et al., 2023). As competition mounts up in the banking industry, customer loyalty has become a fundamental strategic consideration as loyal customers bring about long-term receivables and reduce retention expenses. A thorough analysis of the banking sector literature shows that the historical factors of loyalty namely customer satisfaction, trust, perceived value, quality of service, commitment are still requisite in electronic settings. These factors are further transformed by changing customer expectations that are guided by digitalisation and adoption of Fintech that provide customers with 24/7 access, convenience, and faster transactions, which also affect their perceptions of value and loyalty to the banks significantly (Rahi et al., 2017). E-banking gives customers 24/7 access, convenience, and quicker processing of transactions, which will greatly affect their perception of value and loyalty towards banks (Rahi et al., 2017).

CMR theory argues that customers' behaviors emerge from cognitive appraisals of an environment (stimulus) that shape subsequent relational and motivational responses and, ultimately, behavior (Lazarus, 1991). In e-banking, customers continuously evaluate service quality cues (e.g., reliability, security/privacy, ease of use, responsiveness). When these cues signal competence and goal-congruence, customers are more likely to maintain the relationship and repeatedly use the bank's digital channel—an outcome reflected as e-loyalty. Empirical evidence in online banking shows that e-service quality is positively related to e-loyalty, including evidence from Pakistan in the COVID-period where stronger e-service quality translated into stronger loyalty outcomes (Khan et al., 2023). Similarly, recent comparative evidence across emerging markets indicates that internet banking service quality significantly predicts loyalty-related outcomes through customers' positive evaluations of digital service performance (Patel, 2024). Therefore, higher e-banking service quality should strengthen customer loyalty.

H1: Electronic banking service quality has a positive effect on customer loyalty

2.3 Electronic Banking Service Quality and Perceived Value

Perceived value is defined as the customer's evaluation of the benefits received relative to the costs, effort, and risks associated with using a service (Kim et al., 2024). In the context of e-banking, perceived value is influenced by several factors, including convenience, speed, cost-effectiveness, and personalization of services. Research shows that electronic banking positively affects perceived value because digital services reduce transaction time, minimize travel, and increase overall service affectionately and efficiency., Rahi et al., (2017)

found that internet banking services significantly enhance perceived value, which in turn manage adoption and customer loyalty. Similarly, Bursan (2023) demonstrated that mobile banking service quality has a strong positive effect on perceived value among users.

Within CMR, perceived value is a cognitive evaluation of benefit–cost trade-offs after interacting with the service environment (Lazarus, 1991). In e-banking, service quality enhances functional and psychological benefits (convenience, speed, reduced effort, greater control), while lowering non-monetary costs (time, uncertainty, mental load). As a result, customers judge the service as "worth it," forming higher perceived value. Recent banking research shows that perceived value in digital banking is built through quality-related cues and is central in shaping customer evaluations and downstream outcomes (Kim et al., 2024). There is also evidence of mobile banking-provided customers that the perceived value is enhanced by the efficiency and reliability of the service, which makes them feel encouraged to use it continuously and record the effects of retention (Bui, 2022; Prodanova et al., 2019; Ikram et al., 2025). In this way, the quality of service must be converted into more perceived value.

H2: There is a positive impact of electronic banking to perceived value of the customer

2.4 Electronic Banking service Quality and Trust

Another critical factor that defines customer loyalty in electronic banking is trust. It refers to the dependence of the customer on the fact that the bank is trustworthy, safe and in their best interest. The lack of personal contacts in e-banking makes trust more and more complicated. Empirical evidence shows that the connection between perceived value and loyalty is mediated by trust; with high perceived value increasing trust, which in turn increases loyalty (Kim, 2024; Menidjel and Bilgihan, 2023). Essentially, customers who feel valued by the electronic banking services will feel more obligated to trust the bank hence increasing their loyalty.

Trust is a relational judgment encompassed in Customer-Mediated Relationships (CMR): once customers have made an assessment based on service cues, they determine whether the service provider is reliable and would protect their interests (Lazarus, 1991). Trust is especially reliant on reliability and security/privacy cues in e-banking since the customers are exposed to technological and financial risk. In case service quality is uniform (correct transactions, reliable systems, understandable error management, strong security), the customers will have less uncertainty and develop an impression of provider competence and integrity, thus developing trust. Recent literature on creating trust in the context of the mobile financial services indicates that the enduring trust of the customers is determined by the platform/service features that reduce the perception of risk and enhance the trust in the provider (Che et al., 2023). Related e-banking evidence also frames service quality as a key antecedent that helps customers feel safe and confident in digital transactions (Shankar & Jebarajakirthy, 2019). Therefore, stronger e-banking service quality should increase e-trust.

H3: Electronic banking has a positive effect on customer's trust

2.5 Perceived Value and Customer Loyalty

Perceived value acts as a censorious predictor of customer loyalty in the banking sector. When customers perceive high value in banking services, they are more likely to continue using the services and recommend them to others (Kim et al., 2024). This relationship is particularly strong in electronic banking because digital channels bring down friction in service delivery and provide tangible benefits to customers. Studies have frequently reported that perceived value mediates the relationship between e-banking usage and customer loyalty (Rahi et al., 2017; Bursan, 2023). Recent banking evidence highlights perceived value as a strong driver of loyalty-related outcomes in the banking sector, shaping sustained preference and repeat usage (Mainardes et al., 2023). Likewise, perceived value has been shown to be a key mechanism behind customers' intentions to reuse mobile banking services (Prodanova et al., 2019). Hence, higher perceived value should lead to stronger e-loyalty.

H4: Perceived value has a positive effect on customer loyalty

2.6 Trust and Customer loyalty

In electronic banking, trust is certain element for customer loyalty, serving as both a direct driver and a mediator in the relationship between service quality, perceived value, and loyalty. Customers who trust that their banking service (digital) platforms are secure, reliable, and accurate are more likely to continue using these services and recommend them to others. Trust reduces uncertainty and perceived risk linked with online transactions, thereby strengthening loyalty behaviors. Research shows that trust not only directly influences loyalty but also mediates the effect of electronic banking service quality and perceived value on customer loyalty, meaning that higher trust develop positive effect of digital services on sustained customer commitment (; Ishfaq, Raza, & Farooq, 2022; Rahi, Ghani, & Alnaser, 2017). In CMR, trust is a relational state that reduces uncertainty and strengthens commitment, allowing customers to continue engagement even under risk (Lazarus, 1991). Recent evidence on continuous trust in mobile contexts supports the idea that trust sustains long-term customer relationships and continued engagement (Che et al., 2023). Prior e-banking research similarly positions trust as a key loyalty driver when customers evaluate digital banking experiences as secure and dependable (Shankar & Jebarajakirthy, 2019). Therefore, trust should positively influence e-loyalty.

H5: Trust has a positive effect on customer loyalty

2.7 Perceived value as a mediator between e-banking and customer loyalty

Electronic banking positively influences customer perceived value, which strengthens customer loyalty. When customers use digital banking services, such as internet or mobile banking, they experience benefits like convenience, time savings, cost efficiency, and ease of transaction. These benefits increase their perceived value the evaluation of the advantages received relative to effort, cost, or risk which motivates them to continue using the banking services and suggest them to others. Research specify that perceived value acts as a mediator between electronic banking usage and loyalty, meaning that the more value customers perceive from e-banking, the higher their trust, satisfaction, and long-term loyalty toward the bank (Rahi et al., 2017; Bursan, 2023; Kim et al., 2024). As a result, perceived value is an

essential element that intermediates the digital service adoption with the promotion of customer commitment and retention.

CMR offers a rational basis of mediation: stimulus (service quality) --- cognitive appraisal (value) --- behavior (loyalty) (Lazarus, 1991). e-banking service quality improves the benefits (speed, convenience, reliability) and costs (time, effort, perceived risk) of the customers, hence increasing perceived value. This value judgment turns out to be the force behind re-use and continuity of relations. In current digital banking studies, the focus on perceived value is presented as a process by which the quality-related impressions and signals can be transformed into the maintenance of behavioral effects (Kim et al., 2024; Mainardes et al., 2023). Service quality should therefore build loyalty, at least partially, through the initial increase of the perceived value.

H6: There is an intermediate relationship between electronic banking and customer loyalty through perceived value

2.8 Trust as a mediator between e-banking and customer loyalty

Trust has been found to be a determining factor of customer loyalty in electronic banking, as both a cause and an intermediary between the quality of service, perception of value, and the customer loyalty factor. Clients who believe that the digital services provided by their bank are safe, reliable, and correct will have a better chance to use the services and refer their friends and family members to the bank. Trust reduces the uncertainty and the perceived risk during the online transactions which bonds the loyalty behaviors. The study proves that the impact of the quality of electronic banking services and perceived value on customer loyalty is mediated by trust, which means that an increase in trust increases the positive effect of digital services on long-term customer commitment (Rahi et al., 2017).

CMR implies a second channel: stimulus (quality of service) - relational appraisal (trust) - behavior (loyalty) (Lazarus, 1991). The high quality of e-banking services shows the competence, reliability, and safety, thus decreasing the customer uncertainty and generating the trust. Confidence, in its turn, increases the readiness to further use the platform and to continue the relationship in the long run. Recent mobile service studies also suggest that trust is not only a consequence of system/service characteristics but also an important mechanism that leads to continued use (Che et al., 2023). Trust is another empirical variable of e-banking research that supports digital service evaluation to loyalty behavior bridging (Shankar & Jebararakirthy, 2019). Thus, the quality-loyalty relationship of services ought to be mediated by trust.

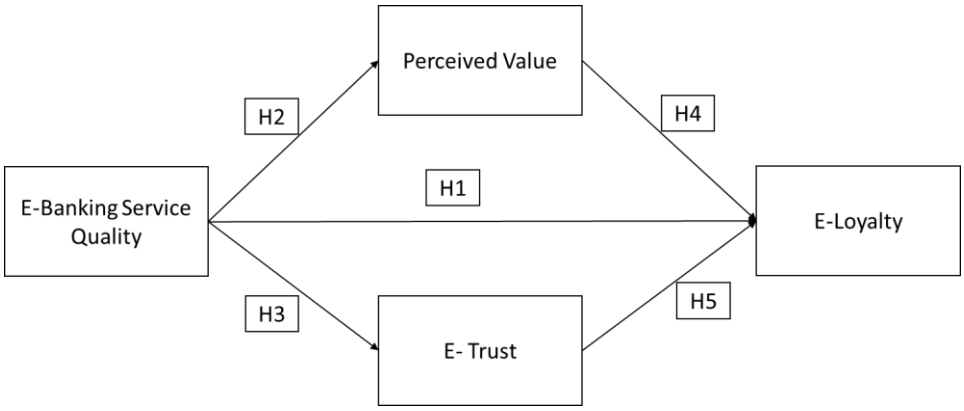
H7: There is no relationship between electronic banking and customer loyalty through trust

2.9 Conceptual Model

A sequential or mediated connection is suggested in several studies: electronic banking increases the perceived value, which leads to trust, and both of these aspects increase customer loyalty (Kim et al., 2024; Rahi et al., 2017; Bursan, 2023). This combined model emphasizes that banks that aim to enhance loyalty have to focus not only on the quality of

digital services provided to users but also on the perceived value maximization and the development of trust among the latter.

Figure No1: Conceptual Model



Source: Author generated

3. Research Methodology

3.1 Methods

This research will make use of a quantitative and cross-sectional research design in order to test the correlation of the quality of e-banking services, perceived value, trust, and customer loyalty. The use of a survey-based approach was considered the best suited due to the goal of empirically testing the hypotheses based on the Cognitive-Motivational-Relational (CMR) theory. Since the study will involve capturing the evaluations, perceptions, and the relational intentions of customers regarding the e-banking services, primary data will be gathered through direct observation of users of electronic banking platforms.

3.2 Population and Sampling

The target market was e-banking customers that actively used the services of commercial banks. Instead, a screening question at the beginning of the questionnaire was to assure that the respondents had a substantive experience with digital banking platforms by asking that they confirm that they had used internet or mobile banking in the last six months. Those who responded in the affirmative were only allowed to continue. A non-probability purposive sampling method was used, which is suitable when the participants should be individuals with specific characteristics, in this case, experience in the use of e-banking in the past. Data collection method was made by the means of online distribution (through the digital platforms and email networks) and face-to-face distribution to a limited extent within the urban banking settings, increasing the diversity of responses. Two hundred and eighty questionnaires were distributed; 193 of them were maintained as useful returns after screening of the data. Found patterned or inconsistent responses in questionnaires and incomplete responses were eliminated.

3.3 Data Collection

The questionnaire was divided into two major parts. The initial part included the demographic information about the respondents (e.g., age, gender, education, and frequency of using e-banking). The measurement of the study constructs was in the second section. Each of the measurement items was based on the well-known and tested scale to ensure the protection of content validity and allow making comparisons with previous studies. E-banking Service Quality, E-trust, and E-loyalty items were modified based on Shankar and Jebararakirthy (2019), but Perceived Value items were modified based on (Prodanova et al., 2019). A five-point Likert scale was applied to each construct with a value ranging between 1 (strongly disagree) and 5 (strongly agree). The use of five-point scale was based on the fact that it provides an adequate variance, at the same time maintaining the clarity of responses and minimizing fatigue in respondents.

Ten weeks were used in data collection. The respondents were made aware of the academic objective of the research and guaranteed anonymity and confidentiality of their responses. The ethics was voluntary, and no personal identification information was taken. To reduce the social desirability bias, the respondents were assured that no questions had the correct and incorrect answers and they were advised to answer honestly basing on their own experience with e-banking services. The questionnaire was given online to participants through a secure survey platform in case of online distribution, and through paper-based method where respondents filled printed questionnaires in a self-administered method in case of physical distribution.

4. Results and Analysis

Analysis of data was done through Structural Equation Modeling (SEM). Due to the forecast orientation of the research and the presence of the mediation effects, Partial Least Squares Structural Equation Modeling (PLS-SEM) has been chosen. PLS-SEM can be applied to a complicated model of a large number of mediators and latent constructs and does not involve high normativity requirements (Hair et al., 2022). It is particularly suitable in those situations when the aim of the research is prediction and theory formulation instead of validation of a covariance structure. Preliminary data screening was conducted prior to SmartPLS analysis. The dataset comprised 193 valid responses and no missing values were detected. Outlier analysis revealed no extreme values which suggest that the dataset was free from influential observations. Normality was assessed using skewness and kurtosis statistics and the values were found within the acceptable thresholds of ±2 (Hair et al., 2022). Lastly, descriptive statistics indicate mean values ranging from 3.98 (PS) to 4.75 (CS). The standard deviations ranged between 1.77 and 2.01 that reflect moderate variability in responses.

The sample size of the analysis was a sample of 193 active e-banking users. Most of the respondents were young adults, 51.3% between the ages of 18-25 years and 36.3% between the ages of 26-35 years, which means that the digital banking services are mostly used among younger and digitally active groups of the population. The proportion of the respondents who were between 36-45 years is only 12.4 percent indicating that the participation of older users was relatively lower. Occupation wise, employees made the most

significant percentage (45.1%, 35.2% and 19.7%) with entrepreneurs and students coming next. This distribution shows that e-banking has been widely penetrated among people of economic activity that conducts regular financial transactions.

Table No1: Demographic Analyses

Demographic Statistics			
Demographic	Description	Frequency	Percentage
Age	18-25	99	51.3
	26-35	70	36.3
	36-45	24	12.4
Occupation	Employee	87	45.1
	Entrepreneurship	68	35.2
	Students	38	19.7
Gender	Male	132	68.4
	Female	61	31.6
Qualification	Matric or Below	37	19.2
	Intermediate	51	26.4
	Bachelor	72	37.3
	Masters or above	33	17.1
Frequency of E-Banking	Daily	84	43.5
	Weekly	71	36.8
	Monthly	21	10.9
	Occasionally	17	8.8

The sample was mostly male (68.4%) in comparison with female (31.6%). Notable, 43.5 percent of the respondents stated that they used it daily and 36.8 percent stated that they used it weekly, meaning that most of them are regular users. This tendency increases the validity of their judgments because judgments are grounded on experience, not on the occasional contact.

The descriptive analysis illustrates that the respondents have a generally positive view of electronic banking services. Each variable produced mean scores over the midpoint of the 17 scale, which depict favourable assessments. Customer service (CS) had the greatest mean (M=4.75) which means that people tend to believe that digital banking services are fairly accommodating and receptive. The level of perceived value (M=4.59), and electronic e-trust (M=4.48) also had significant positive perceptions, which implies that users are aware of the usefulness of e-banking and are confident in the reliability of e-banking.

Website design (M = 4.31) and reliability (M = 4.05) rates were also above average, and it means that there was sufficient technical performance. The customer loyalty (M=4.11) implies moderate or strong intentions to be loyal. The standard deviations, which lie between 1.77 and 2.01 demonstrate a fairly fair distribution of the responses, which indicates diversity in perceptions of the users and is not extremely variable. In general, the results of the description indicate that the respondents tend to view e-banking services as useful, credible,

and helpful in general- the conditions, which are favorable to the formation of loyalties.

Table No 2: Descriptive Statistics

Descriptive Statistics					
Variables	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
RE	193	1	5	4.05	1.90
PS	193	1	5	3.97	1.91
WD	193	1	5	4.31	2.01
CS	193	1	5	4.75	1.77
ET	193	1	5	4.48	1.82
PV	193	1	5	4.59	1.80
CL	193	1	5	4.11	1.80

Table No 3: Correlation Analyses

	RE	**PS**	**WD**	**CS**	**ET**	**PV**	**CL**
RE	1	.365**	.423**	.439**	.616**	.424**	.453**
		.000	.000	.000	.000	.000	.000
	193	193	193	193	193	193	193
PS	.365**	1	.262**	.348**	.287**	.301**	.398**
	.000		.000	.000	.000	.000	.000
	193	193	193	193	193	193	193
WD	.423**	.262**	1	.506**	.491**	.471**	.334**
	.000	.000		.000	.000	.000	.000
	193	193	193	193	193	193	193
CS	.439**	.348**	.506**	1	.508**	.421**	.339**
	.000	.000	.000		.000	.000	.000
	193	193	193	193	193	193	193
ET	.616**	.287**	.491**	.508**	1	.388**	.497**
	.000	.000	.000	.000		.000	.000
	193	193	193	193	193	193	193
PV	.424**	.301**	.471**	.421**	.388**	1	.408**
	.000	.000	.000	.000	.000		.000
	193	193	193	193	193	193	193
CL	.453**	.398**	.334**	.339**	.497**	.408**	1
	.000	.000	.000	.000	.000	.000	
	193	193	193	193	193	193	193

The correlation table 3 provides the preliminary empirical evidence of the proposed theory framework. To begin with, the high and positive correlations between the e-banking

service-quality dimensions and the perceived value and trust are indicative of the fact that the customers perceive quality signals as valuable signifiers of value and reliability. Second, the comparatively closer association between e-trust and e-loyalty than perceived value and e-loyalty is indicative of the possibility that relational confidence can somewhat be a more dominant influencer than value-based considerations when it comes to affecting digital banking loyalty. Third, no very high correlations (there are no correlations above 0.80) indicate that the multicollinearity is not a significant issue, and the constructs are conceptually different. The combination of these results suggests that electronic banking loyalty cannot be ascribed to any single factor but it is a product of a series of performance assessment, perceived advantages and relational assurance. The customers also seem to be staying there not because the system itself works correctly, but because customers believe it, and see real value of using it.

The measurement model was assessed in terms of indicator reliability, internal consistency reliability, convergent validity, and multicollinearity for both first-order and second-order constructs (see Table 4.4). For the first-order constructs, all factor loadings exceeded the recommended threshold of 0.70, except CL4 (0.687), which was retained as it was close to the acceptable level and did not adversely affect reliability (Hair et al., 2022). VIF values were found below the critical value of 5 which show the absence of multicollinearity issues. Internal consistency reliability was established as both Cronbach's alpha and composite reliability values were exceeded the 0.70 benchmark. Convergent validity was confirmed with AVE values, surpassing the 0.50 threshold (Hair et al., 2022).

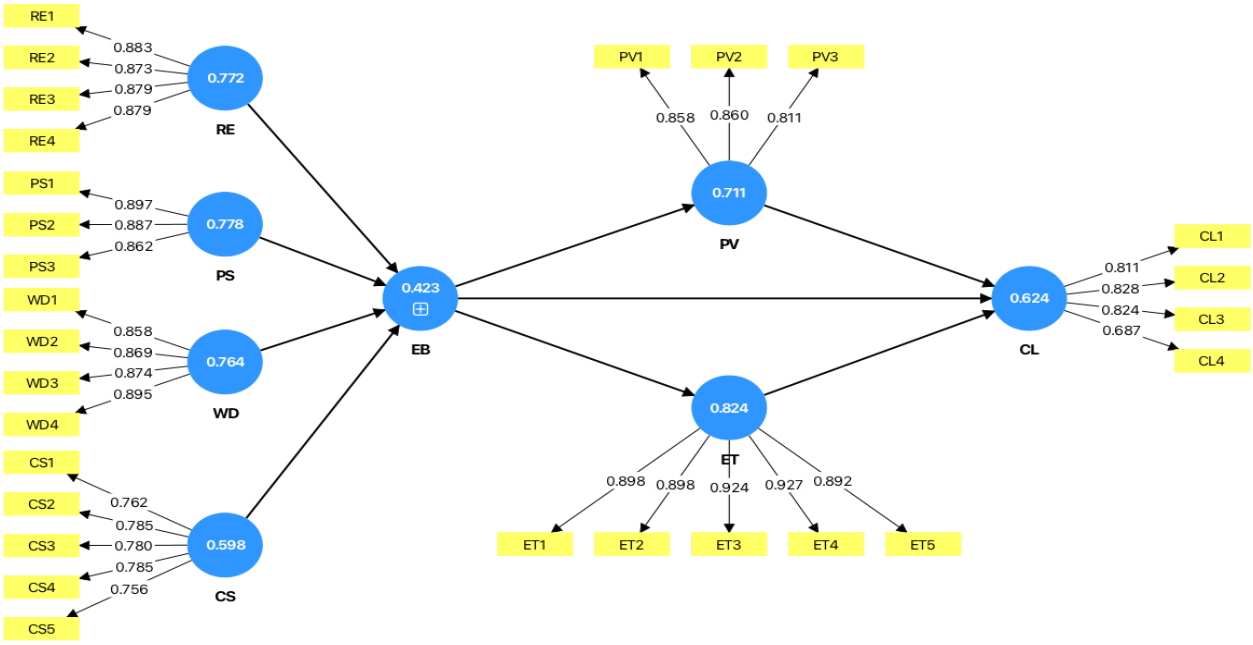
For the second-order construct (E-Banking), loadings ranged from 0.651 to 0.811, with acceptable reliability ($\alpha = 0.758$; $\rho c = 0.846$) and AVE (0.580), confirming adequate reliability and convergent validity of the higher-order construct (Hair et al., 2022). Overall, the measurement model demonstrates satisfactory psychometric properties. The Figure 2 and Figure 3 present the SmartPLS output of measurement models.

Table No 4: Measurement Model Assessment

Construct	Item	VIF	Loadings	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
First Order Reliability and Validity						
Customer Loyalty	CL1	1.706	0.811	0.797	0.868	0.624
	CL2	1.827	0.828			
	CL3	1.761	0.824			
	CL4	1.331	0.687			
Customer Service and Support	CS1	1.622	0.762	0.832	0.882	0.598
	CS2	1.741	0.785			
	CS3	1.78	0.78			
	CS4	1.747	0.785			
	CS5	1.618	0.756			
E-trust	ET1	3.517	0.898	0.947	0.959	0.824

	ET2	3.485	0.898			
	ET3	4.64	0.924			
	ET4	4.743	0.927			
	ET5	3.164	0.892			
Privacy and Security	PS1	2.115	0.897	0.858	0.913	0.778
	PS2	2.337	0.887			
	PS3	2.068	0.862			
Perceived Value	PV1	1.702	0.858	0.798	0.881	0.711
	PV2	1.786	0.86			
	PV3	1.632	0.811			
Reliability	RE1	2.644	0.883	0.901	0.931	0.772
	RE2	2.472	0.873			
	RE3	2.594	0.879			
	RE4	2.678	0.879			
Website Design	WD1	2.324	0.858	0.897	0.928	0.764
	WD2	2.48	0.869			
	WD3	2.493	0.874			
	WD4	2.838	0.895			
Second Order Reliability and Validity						
Electronic Banking	LV scores - CS	1.725	0.803	0.758	0.846	0.580
	LV scores - PS	1.302	0.651			
	LV scores - RE	1.493	0.811			
	LV scores - WD	1.615	0.771			

Figure No 2: First Order Measurement Model

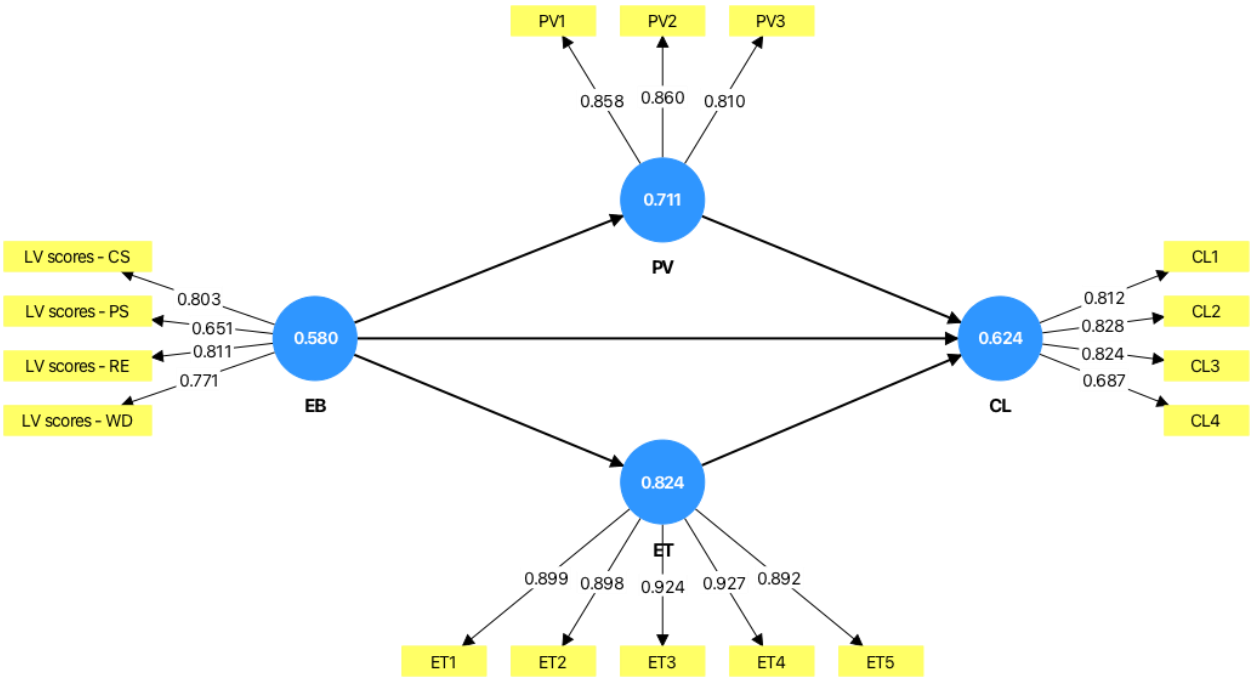


Discriminant validity was assessed using the Heterotrait–Monotrait ratio (HTMT). As shown in the Table 5, all HTMT values are below the conservative threshold of 0.85 and well below the liberal criterion of 0.90 (Hair et al., 2022). These results indicate that each construct is empirically distinct from the others and captures a unique conceptual domain. Therefore, discriminant validity is satisfactorily established and confirms that the measurement model demonstrates adequate construct distinctiveness.

Table No 5: Discriminant Validity

Construct	CL	CS	ET	PS	PV	RE	WD
CL	–						
CS	0.480	–					
ET	0.637	0.588	–				
PS	0.558	0.465	0.309	–			
PV	0.583	0.576	0.490	0.419	–		
RE	0.644	0.545	0.750	0.476	0.573	–	
WD	0.430	0.669	0.522	0.336	0.626	0.507	–

Figure No 3: Second Order Measurement Model



4.1 Structural Model Assessment

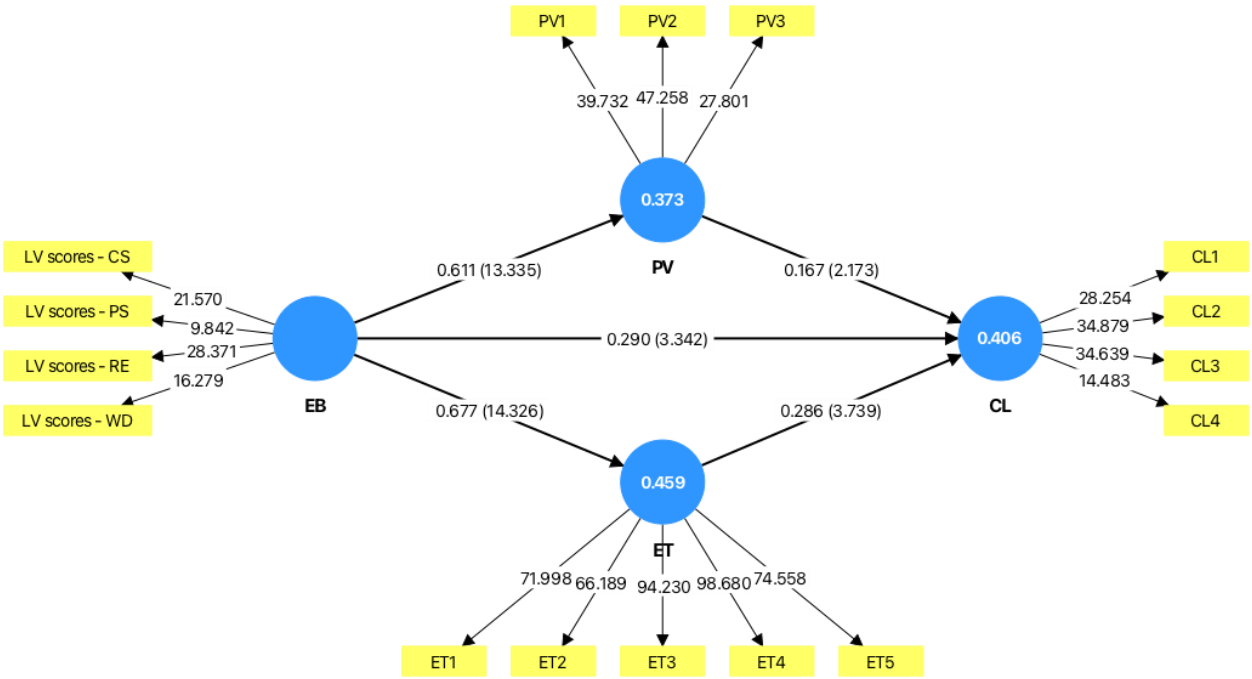
The structural model results indicate that electronic banking (EB) has a significant positive effect on customer loyalty (CL) ($\beta = 0.290$, $p < 0.001$), although the effect size is small ($f^2 = 0.059$). EB strongly influences perceived value (PV) ($\beta = 0.611$, $p < 0.001$, $f^2 = 0.596$) and E-trust (ET) ($\beta = 0.677$, $p < 0.001$, $f^2 = 0.847$), demonstrating large effect sizes. PV ($\beta = 0.167$, $p = 0.015$) and ET ($\beta = 0.286$, $p < 0.001$) also significantly predict CL, though with small effect sizes ($f^2 = 0.029$ and 0.075, respectively). Mediation analysis reveals that

both PV (β = 0.102, p = 0.018) and ET (β = 0.194, p < 0.001) significantly mediate the relationship between EB and CL. Overall, the findings confirm both direct and indirect effects, highlighting the critical role of perceived value and trust in strengthening customer loyalty. The results are tabulated in Table 6.

Table No 6: Hypotheses Testing

Relationship	Path Coefficient	SD	t-value	p-value	f^2
EB -> CL	0.290	0.087	3.342	0.000	0.059
EB -> PV	0.611	0.046	13.335	0.000	0.596
EB -> ET	0.677	0.047	14.326	0.000	0.847
PV -> CL	0.167	0.077	2.173	0.015	0.029
ET -> CL	0.286	0.077	3.739	0.000	0.075
EB -> PV -> CL	0.102	0.049	2.093	0.018	–
EB -> ET -> CL	0.194	0.058	3.359	0.000	–

Figure No 4: Structural Model Assessment



Furthermore, the coefficient of determination (R^2) indicates that the model explains 46.4% of the variance in E-trust (ET), 37.6% in perceived value (PV), and 37.1% in customer loyalty (CL), demonstrating moderate explanatory power (Hair et al. 2022). The Q^2predict values for ET (0.457), PV (0.364), and CL (0.315) are all greater than zero, confirming the model's predictive relevance. Furthermore, the RMSE and MAE values are within acceptable ranges, indicating reasonable prediction errors (Hair et al. 2022). Overall, the PLS-Predict results suggest that the model not only exhibits satisfactory in-sample explanatory capability but also demonstrates adequate out-of-sample predictive performance, supporting the

robustness and practical relevance of the proposed structural model.

Table No 7: PLS predict and R^2

Construct	R^2	Q^2predict	RMSE	MAE
ET	0.464	0.457	0.744	0.568
PV	0.376	0.364	0.805	0.638
CL	0.371	0.315	0.835	0.687

4.2 Discussion

The main aim of the current study was to explore the impact of the quality of the electronic banking service on the customer loyalty taking into consideration the mediating role of the perceived value and trust. The study was based on Cognitive-motivational-relational (CMR) theory in which the hypothesis was that a consumer would initially evaluate the quality of digital banking services, and later form a cognitive and relational appraisal, which entails perceived value and trust, and finally develop loyalty intent. The empirical findings confirmed all the seven hypotheses, hence providing both theoretical and practical information. The empirical results support the existence of a strong positive relationship between the quality of electronic banking services and customer loyalty. This finding is consistent with previous studies that indicate the existence of stronger loyalty intentions when digital banking platforms are of high quality (Shankar and Jebarajakirthy, 2019). Similarly, according to Khan et al. (2023), e-service quality is also a strong predictor of e-loyalty in online banking. In a CMR approach (Lazarus, 1991), the quality of service is the first cognitive stimulus that determines the development of further relational outcomes.

The data also reveal that the quality of electronic banking services impresses a substantial impact on the perceived value. This result is also in line with Prodanova et al. (2019), who showed that the perception of value in the digital banking settings only becomes enhanced when the users perceive both the functional and experiential advantages. Similarly, Kim et al. (2013) stressed that the perceived value is generated when digital services deliver sufficient benefits and sufficiently reduce the costs. These findings confirm the cognitive appraisal level of CMR theory where individuals assess a service environment in relation to their objectives and anticipations (Lazarus, 1991).

It was also found that service quality and trust had a positive and statistically significant correlation as it has been previously observed in the context of online financial services. As Shankar and Jebarajakirthy (2019) emphasized, the dimensions of service quality, especially security and privacy, have a positive impact on the customer trust in the e-banking platform. Zhou (2012) also established that the formation of trust in mobile banking greatly depends on the perceptions of reliability and performance of a certain system. It was revealed that perceived value has a significant impact on customer loyalty, which also substantiates the previous study that reveals that the opinion of value is at the core of sustained use and retention in digital banking (Prodanova et al., 2019). This was also confirmed by Chang et al. (2009) who opined that the loyalty in online service setting is positively predicted by the perceived value. The current results indicate that clients will be

retained when they feel that e-banking provides them with some tangible advantages like convenience, efficiency and saving of time. According to the CMR theory, positive cognitive appraisals are changed into committed behavioural commitment (Lazarus, 1991). Trust also showed a high positive influence on customer loyalty, which supported its essential role in financial services. It is not a novel finding because trust has been shown to directly reinforce loyalty in e-banking situations by Shankar and Jebarajakirthy (2019). Zhou (2012) also noted that further use intentions of mobile banking are largely predicted by trust.

The mediation analysis has established that the perceived value is a partial mediator of the relationship between the service quality and loyalty. That is why the loyalty of the customers is not only due to the performance of the system, but also to the fact that they regard this performance as good. This is in line with Kim et al. (2013) who have underscored that value is a psychological process that connects service experiences with behavioural intentions. The result also builds upon Prodanova et al. (2019), by proving perceived value to be a mediating variable between quality assessment and formation of loyalty. This is a stimulus to motivational appraisal in the CMR framework. Trust also mediates the association between quality of services and loyalty and is in line with moderated-mediation results by Shankar and Jebarajakirthy (2019), where trust acted as a strategic relationship channel between service quality and loyalty. The current findings support the fact that trust is a psychological middle ground that converts favourable service experiences into a long term customer commitment. In line with CMR theory, despite perceived risk levels, relational appraisals reduce the perceived risk and increase behavioural stability (Lazarus, 1991).

5. Conclusion

This research is aimed to test the impact of the quality of e-banking services on customer loyalty mediated by the perceived value and trust. Using the CMR theory, the study conceptualized the concept of loyalty as the result of a systematic process of appraisal where the customers initially assess the performance of the services, then make value and relational judgments, and finally decide whether to continue with an online banking system or not. The results indicate that the level of service quality positively impacts the perceived value and trust that, in their turn, increases customer loyalty. Notably, loyalty is not just an immediate response to the performance of the service, but the process shaped by customer conceptualizations of the value and trust in the provider. The study validates the mediating effects of perceived value and trust by confirming the significance of both functional and relation mechanisms in digital banking settings.

5.1 Theoretical Implications

This research provides a number of theoretical insights into the increasingly popular body of research on digital banking and customer loyalty. First, it boosts the knowledge on the formation of e-loyalty as the model is based on the Cognitive-Motivational-Relational (CMR) theory. Unlike the other studies done on e-banking before, this study presents loyalty as the result of a systematic process of psychological appraisal. The study offers a more unified account of the way loyalty is formed in digital financial settings by indicating the quality of e-banking services as a cognitive stimulus that affects relational (trust) and

evaluative (perceived value) appraisals.

Second, the results prove that e-loyalty is not the result that can appear after the immediate analysis of the quality of the services. Rather, perceived value and trust are considered as the major psychological mechanisms by which the service quality would translate to the loyalty. This supports the thesis that the digital loyalty cannot be called solely a performance-based phenomenon because it is determined through the wider cognitive and relational interpretations of the services that the customers have. The study confirms the mediating results of the perceived value and trust by providing empirical evidence of the two variables as opposed to the past research that expressed the two variables as independent and isolated variables but not as a single unit.

Third, the paper helps to add to the existing discussion about functional and relational motivation behind online banking loyalty. Despite the fact that online space is usually reviewed based on the technical performance, the outcomes reveal the long-term significance of trust in financial services. Relational confidence is in the center even when the platform is highly technologically advanced. The perceived value and trust as parallel mediators are intertwined with each other, which gives more theoretical frameworks in the subject of e-loyalty and a more sophisticated representation of customer behaviour within digital banking ecosystems.

5.2 Practical Implications

The results have significant implications to managers in the banking industry and digital strategy teams. First, to maintain customer loyalty, technical features of e-banking facilities like speed, reliability, and security have to be enhanced but this is not enough. The improvement in service quality should be planned effectively and experienced in a manner that leads to the perceived value and cultivating trust. Banks ought to consider the best approach of providing real value to the customers by ensuring that, therefore, they make the transactional processes as simple as possible, reduce mistakes and provide time-saving features. Customers are more likely to become loyal to the e-banking platform when they feel that the service of this system simplifies and streamlines their financial management. Thus, perceived value could be enhanced through usability improvements, smooth interface design, and clear fee structure.

Second, initiatives to build trust should be of priority. Fundamentally financial services are associated with the perceived risk, and consumers are still sensitive to the issue of privacy and security. The banks should continuously strengthen their security functions, explain the data-protection policies, and react instantly to service outages. Regular performance, being proactive in customer support and keeping them informed about system updates or disruptions can also be used to build trust.

Third, the mediation outcome implies that the loyalty-building practices are supposed to be holistic. The digital infrastructure investments should be supported by the relationship practices that would give the customers the confidence that the bank can be trusted and that it has a long-lasting relationship. Relational links can be further enhanced with dedication programs, customized financial analysis, and responsive web support.

5.3 Limitation and Future Research Directions

This research has various limitations notwithstanding the contributions it makes that can be explored in the future. First, the cross-sectional design limits the capacity to cause the associations of causation. Despite the fact that the theoretical framework implies the existence of directional relationships in accordance to the CMR theory, longitudinal research would be more effective in providing the evidence about the way in which trust and perceived value change over time. In future studies, it is possible to use designs of panel data to track the variations in the loyalty behaviour at different stages of use.

Second, there might be bias in responsiveness because of the use of self-reported measures. Although procedural and statistical remedies have been applied in an attempt to reduce the common-method bias, future research may apply behavioural data like the actual transaction frequency or platform use rates to supplement the perceptual ones.

Third, the research is narrowed down to the users of e-banking in a particular geographical setting. The environment in which the customers compare digital banking services may be cultural norms, technological maturity, and regulatory environments. The question that could be examined in a comparative cross-country study is whether the mediation effects of perceived value and trust in developed and emerging economies are the same.

Fourth, despite the fact the model describes loyalty by two mediators, there are other psychological processes that could contribute to enriching the knowledge. The constructs that can act in concert with trust and value towards the results of loyalty include, e.g., customer satisfaction, perceived risk, digital engagement, or emotional attachment. Extended models to include these variables can be tested in future studies.

Lastly, the fast change in technology (the introduction of artificial intelligence, biometrics authentication, competition in fintech, etc.) could transform customer experience when assessing digital banking services. The question of the effect of the developing technologies on the formation of trust and on the perceptions of value is an encouraging area to further research.

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