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ARTICLE

The impact of perceived financial security in neobanks on customer retention and the cost of switching to a traditional bank: the mediating role of trust in neobanks

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Abstract

Purpose – This research had two objectives: first, to analyze the effect of perceived financial security of neobanking applications on trust, customer retention, and the cost of switching to a traditional bank; second, to analyze the mediating role of trust in neobanks between perceived financial security in the application and customer retention, as well as between trust and the cost of switching to a traditional bank.

Theoretical framework – This research used the stimulus-response (S-R) and stimulus-organization-response (S-O-R) models to study perceived financial security in the application as a stimulus and its effect on trust as an organism and customer retention and switching costs as behavioral responses.

Design/methodology/approach – A quantitative cross-sectional study was conducted. Online surveys were used to collect data from 305 neobank customers in Mexico. Furthermore, the partial least squares approach and bootstrapping resampling method were used to test seven hypotheses.

Findings – The results supported six hypotheses and confirmed that perceived financial security in the neobank application affected customer trust and retention, but did not affect the cost of switching to a traditional bank. In addition, trust was found to play a mediating role between perceived financial security and both customer retention and switching costs.

Practical & social implications of research – This study shows that neobanks need to ensure and communicate to customers the perceived security of their applications for financial transactions, as it has a direct impact on customer retention. Moreover, the development of mechanisms that increase customer trust is key to retaining customers and building barriers to prevent the loss of users to traditional banking.

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Originality/value – This research contributes to the advancement of knowledge in the field of neobank management, as it deepens the understanding of perceived financial security and trust as key aspects of customer retention and switching costs.

Keywords: Neobank, perceived financial security, customer retention, cost of switching to a traditional bank, trust.

1 Introduction

In recent years, the acceptance of neobanks has increased worldwide (Banga et al., 2023). The term was developed in the fintech space and refers to banks that exclusively provide digital financial services, which is why they are also known as app-only banks, virtual banks, or challenger banks (Bhatnagr & Rajesh, 2024). Their growth in markets such as Latin America is associated with the opportunity to expand financial inclusion to millions of unbanked consumers in countries such as Brazil, Mexico, Argentina, and Colombia (Mordor Intelligence, 2022).

Neobanks are considered to have several advantages over traditional banks related to technology, operational efficiency in opening and managing an account, absence of commissions for using financial products, personalization of financial products and services, support through a website or app, unlimited ATM withdrawals, and organizational structure (Indra & Mohan, 2023). However, many consumers still perceive them as a risky innovative service whose use may involve unexpected financial losses (Garg & Sahu, 2024), especially in the context of cybersecurity and financial service provision (Indra & Mohan, 2023).

Moreover, some consumers of financial services perceive neobanks as less reliable than traditional banks (Meijer et al., 2023), which can affect aspects such as acquisition, retention, growth, and even the cost of switching to another type of financial institution. For example, in order to be more competitive against fintech, some traditional banks have innovated in financial products and services and adopted technologies that help reduce their operating costs in order to expand their market share (Boustani, 2020). Therefore, it is still necessary to deepen our understanding of the antecedents and effects of user trust in neobanks (Meijer et al., 2023).

This article uses the stimulus-response (S-R) and stimulus-organization-response (S-O-R) models because the complex relationships between the fundamental variables of these models have not yet been fully identified. It is still necessary to incorporate different variables that could contribute to predicting the responses of customer behavior in different aspects and contexts (Alcántara-Pilar et al., 2024; Fakfare et al., 2024). In this research, two objectives are considered: first, to analyze the effect of the perceived financial security of neobanking applications on trust, customer retention, and the cost of switching to a traditional bank; second, to analyze the mediating role of trust in neobanks in the relationship between perceived financial security in the application and customer retention, as well as between trust and the cost of switching to a traditional bank.

In addition, this research contributes to the development of the line of research associated with understanding consumer behavior in financial services, particularly in relation to reducing access barriers, improving retention strategies, and attracting new customers in the sector (Bhatnagr & Rajesh, 2024; Garg & Sahu, 2024; Meijer et al., 2023; Mogaji & Nguyen, 2024). It enriches the literature on external stimuli in relation to individual perceptions in the neobank financial sector by explaining subsequent behaviors based on the frameworks of the S-R and S-O-R models (Aslam & Luna, 2021; Qiu et al., 2023). The structure of the article is as follows. In addition to the introduction, a literature review is presented to support the proposed hypotheses. Subsequently, the methodology is presented, followed by the results of the structural model and mediation analyses, and finally the discussion and conclusion sections.

2 Literature review

2.1 Stimulus-response (S-R) and stimulus-organism-response (S-O-R) theories

Stimulus-response (S-R) theory is based on behavioral psychology (Pavlov, 1957; Shulley & Shake,

2016; Woodworth & Schlosberg, 1954) and essentially focuses on understanding how environmental variables influence human behavior (Janiszewski & Laran, 2024). In marketing, this theory has been extensively applied in the study of individual consumer behavior, indicating that there can be a direct effect between stimuli and behavior (Lu et al., 2018). This theory is considered effective in explaining the simple conditioned reflexes of consumers (Liu et al., 2024).

Later, from a functionalist perspective, the stimulus-organism-response (S-O-R) theory was proposed (Mehrabian & Russell, 1974). It holds that perceptual factors in a specific external environment (stimulus) cause changes in the internal states of individuals, such as their emotions, experiences, and cognitive mechanisms (organism), and influence their behavior (response) (Ali Abumalloh et al., 2025; Li et al., 2012; Mehrabian & Russell, 1974). Because of its characteristics, some marketing experts consider S-O-R to be a behavioral response theory of information processing (Roh et al., 2024; Tan et al., 2019).

Due to the flexibility of these models, it is possible to examine different external stimuli, internal perceptual factors, and responses (Elsotouhy et al., 2024; Sultan et al., 2021). Therefore, this article uses S-R and S-O-R as guiding frameworks to examine consumers in neobanks in Mexico. Thus, the stimulus is represented by perceived financial security (Andriani et al., 2021), while the organism is framed by the consumer's trust in the neobank, given that it has been found to allow cognitive and emotional processing of the consumer's reaction to different stimuli (Ho & Chow, 2024; Kumar et al., 2022). Lastly, responses to external stimuli (S-R) or to the organism (S-O-R) are represented by two variables that are considered to be strategic in retail banking (Augusto de Matos et al., 2009; Dangaiso et al., 2024; Islam et al., 2020): customer retention and neobank switching costs.

2.2 Hypothesis development

Customers' value perceptions of e-services are closely related to the e-servicescape concept, which refers to the dimensions that stimulate the desired customer response (Tankovic & Benazic, 2018). Harris and Goode (2010) adapted the servicescape approach to the virtual sphere and identified three dimensions: aesthetic appeal, online design and functionality, and financial security. In this article, the perception of financial security in a neobank application is included as a critical external stimulus that operates during the online exchange through the ease of payment and the perceived security of the platform (Harris & Goode, 2010).

Ease of payment means that the infrastructure and technical aspects focus on user-friendly processes (Behera & Kumra, 2024; Leong et al., 2021) to conduct payment transactions anytime and anywhere (Venkatesh et al., 2012; Wang et al., 2021). Perceived security is also based on users' appreciation that the information provided to the neobank will not be used inappropriately by the organization or third parties (Cui et al., 2018). This aspect can be one of the main barriers to the acceptance of digital financial services, which involves ensuring that the system can prevent intrusions or attacks that compromise the data and services offered to customers (Damghanian et al., 2016).

In addition, customer retention is a critical outcome for the success of a company, as it can contribute to increasing the organization's profits and growth (Dawes Farquhar, 2004; Thangeda et al., 2024). It refers to a customer's future propensity to continue using a service provider (Ranaweera & Prabhu, 2003). From an S-R perspective, a specific stimulus, such as the security provided by a financial platform, is expected to lead to a positive response in terms of customer retention (Moreno-García, 2023). Previous research in other fields has also found that perceived security influences customer retention; for instance, a study conducted in Indonesia on buyers of a digital commerce platform found that perceived security positively influenced customer retention (Novita & Budiarti, 2022). Therefore, it is proposed that:

> H1: Perceived financial security in the neobank application positively affects customer retention.

According to the S-R model, the stimuli associated with the perception of the benefits of financial security provided by neobank apps might also influence the cost of switching to a traditional bank. The switching cost for a customer is a complex phenomenon that includes the expenses or losses that must be assumed by abandoning one supplier in favor of another, such that a customer would be willing to cover them if the benefits offered by a competitor are greater (Kim & Kim, 2024; Yang & Peterson, 2004). It has been noted that these types of costs are critical in service industries, and when they are high, they act as a barrier to entry for competitors and provide an opportunity for the company to maintain

long-term relationships with its customers (Morgan & Hunt, 1994), which may lead them to decide to stay with the same supplier (Rizkiah et al., 2021).

In several fields of knowledge, a significant effect of perceived security on switching costs has been found. For example, a study of Taiwanese e-commerce found a positive effect of perceived security on switching costs (Chang & Chen, 2009). A study of technology consumption also found that perceived security had a strong effect on switching behavior (Ye et al., 2008). Similarly, in the banking sector, it was found that customers perceived higher costs of switching to competitors when they perceived high levels of security to protect their capital (Khedmatgozar & Shahnazi, 2018). Therefore, it is proposed that:

> H2: Perceived financial security in the neobank app positively affects the cost of switching to a traditional bank.

In the S-O-R theory, the stimulus (S) is an external signal that significantly affects the internal cognitive states of individuals (Pham et al., 2024), i.e., the organism (O). In this research, it is represented by trust in the neobank. Given the innovation of fintech and the digital nature of its services, many people are concerned and uncertain about its effectiveness (Roh et al., 2022). Therefore, developing elements that build customer trust can become an added value for this type of firm (Wang et al., 2019). Previous research has shown that user trust in fintech platforms plays a key role in the adoption of the services offered (Aldboush & Ferdous, 2023) and the establishment of lasting customer relationships (Morgan & Hunt, 1994). In this paper, we address cognitive trust, which is understood as a rational state associated with the consumer's certainty about their interaction with the neobank, based on the perception that it is reliable and responsible for both the interests and welfare of its customers (Ha & Perks, 2005). Cognitive trust is formed by values, facts, and previous experiences shared with the other party; thus, it can reduce uncertainty in the customer-firm relationship (Aslam et al., 2024; Wang et al., 2023; Xia et al., 2023). Perceived financial security (stimulus) is expected to positively influence neobank trust (organism). Previous studies on perceived financial security indicate that it fosters customer trust (Ekow Kelly & Palaniappan, 2022; Widiana & Kerti Yasa, 2021). Research on fintechs maintains that financial security in these types of organizations is key to fostering customer confidence in their services (Harsono & Suprapti, 2024). Therefore, the following hypothesis is postulated:

> H3: Perceived financial security in the neobank app positively affects trust in the neobank.

Customers are likely to establish behavioral responses under the influence of organisms that are formed by cognitive and/or affective systems (Zhai et al., 2023). Thus, cognitive trust can be considered as an organism that responds to environmental cues and can shape a response or behavior (Pahrudin et al., 2023). Likewise, trust is often an important aspect for customers conducting online financial transactions (Aljaafreh et al., 2021; Royo-Vela et al., 2024), particularly for neobanks, given that in many contexts people trust conventional banks more than neobanks for financial transactions, despite their increasing availability (Bhatnagr & Rajesh, 2024). Therefore, neobanks must attract and retain a broad customer base, which would enable them to reduce their transaction costs and achieve profitability (Meijer et al., 2023).

As a response variable, customer retention is understood as the propensity of a customer to remain with the same provider of a product or service in the future (Danesh et al., 2012). Previous research in other fields has shown that trust is a driver of the intention to remain a customer of a firm (Qureshi et al., 2009; Sullivan & Kim, 2018). Likewise, in the context of Chinese fintech, the effect of customers' trust on their intention to continue using the platform was confirmed (Wang et al., 2019). Therefore, it can be proposed that:

> H4: Trust in the neobank positively affects customer retention.

Trust is a crucial aspect of fintech because consumers need to have confidence in its ability, integrity, and benevolence (Al Nawayseh, 2020; Hermenegildo-Chávez et al., 2023). Likewise, previous works have considered the effect of trust on switching costs (Carter et al., 2014). From the perspective of the S-O-R model, the cost of switching to another firm is considered as a response variable when faced with a choice (Tan et al., 2019). Trust (organism) has been identified as a barrier to entry against competitors in the financial sector (Yang, 2023), which can increase the cost of switching to another company (response). For instance, research focused on young Thai Muslims found that trust in fintech transactions positively influenced switching intentions (Hassama et al., 2024). Similarly, a study conducted among German consumers

found that high levels of trust in fintech increased their switching costs compared to other alternatives (Jünger & Mietzner, 2020). Therefore, it can be proposed that:

> H5: Trust in the neobank positively affects the cost of switching to a traditional bank.

Unlike the S-R model, which postulates a direct stimulus-response effect, the S-O-R model framework proposes that individuals' internal states (organism) mediate the impact of the stimulus on behavioral responses (Qiu et al., 2023). Previous research has found that trust positively affects customer retention (Lee et al., 2024; Sullivan & Kim, 2018). Similarly, perceived financial security is expected to influence trust (Harsono & Suprapti, 2024). If fintech users' trust is a key variable in adopting services and carrying out transactions on the platforms (Aldboush & Ferdous, 2023; Aljaafreh et al., 2021), then it is expected to be a mediator in the relationship between perceived financial security and other variables, such as customer retention or the cost of switching to traditional banking. Previous research has found trust to be a mediator between some antecedent variables and customer retention (Saoula et al., 2023) and the cost of switching (Chomvilailuk & Butcher, 2016). Therefore, the following two hypotheses are proposed for neobanks:

> H6: Neobank trust mediates the effect between perceived financial security in the neobank app and neobank customer retention.

> H7: Neobank trust mediates the effect between perceived financial security in the neobank app and the cost of switching to a traditional bank.

Thus, on the one hand, this research studies the effect of the perceived financial security in the neobank app on trust, customer retention, and the cost of switching to a traditional bank. On the other hand, it tests the mediating role of trust in neobanks on the relationship between perceived financial security in the neobank app and customer retention, as well as between trust and the cost of switching to a traditional bank.

3 Methodology

A quantitative, explanatory, and cross-sectional study was conducted among clients of neobanks that operate in Mexico who agreed to respond to an electronic survey conducted through Google Forms. Non-probabilistic convenience sampling was used and 305 surveys were valid.

3.1 Survey and measurement scales

A questionnaire was developed based on scales that were adapted from the academic literature to the subject of the study. Neobank trust and customer retention were measured using the scales of Islam et al. (2020), the first of which consists of four items and the second of three items. Neobank financial app security was evaluated using the Harris and Goode (2010) scale through two dimensions, ease of payment and perceived security, with five items each (Supplementary Data 1 – Questionnaire). The cost of switching to a traditional bank was also evaluated using the Clemes et al. (2010) scale, which consisted of five items. All items were measured on a five-point Likert scale ranging from strongly disagree = 1 to strongly agree = 5 (Table 1).

3.2 Data collection

During the data collection process, the researchers administered the questionnaires directly in commercial areas of the city of Puebla and Mexico City and indirectly through social media platforms (email, WhatsApp, and Facebook). Participation was voluntary, and it took between 8 and 10 minutes to complete the questionnaire (Supplementary Data 2 – Database). Fieldwork was conducted between September and November of 2023. The analysis was performed using SmartPLS version 4 software and included common method bias analysis, a measurement model, a structural model, and testing for mediation effects in the model.

The average age of the participants was 26.99 years with a standard deviation of 10.57 years; the youngest participant was 18 years old and the oldest was 78 years old. 43.6% were women and 56.4% were men. Most of the respondents had a bachelor's degree (59.3%), followed by high school (25.6%), a postgraduate degree (14.4%), and primary school (0.7%). Among the most used neobanks were Mercado Pago (39.7%), Nu Bank (22.6%), Rappi Card (11.1%), Spin by Oxxo (8.5%), Fondeadora (5.9%), Didi Pay (4.9%), Hei Banco (4.9%), followed by others (2.4%).

4 Results

4.1 Common method bias

Since the data were collected from the same source, it was necessary to test for the possible presence

Table 1
Scale and convergent validity

Indicators	Standardized loading	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Perceived financial security in the neobank app (PFS)					
Ease of payment					
EP1. The payment procedures of this application are efficient	0.827**	0.910	0.914	0.933	0.737
EP2. Financial transactions (e.g., sending money, making payments, shopping, etc.) in this application do not take a lot of time	0.834**				
EP3. Financial transactions (e.g., sending money, making payments, shopping, etc.) in this application are user-friendly	0.927**				
EP4. Financial transactions (e.g., sending money, making payments, shopping, etc.) in this application are easy to carry out	0.910**				
EP5. Financial transactions (e.g., sending money, making payments, shopping, etc.) in this application do not require a lot of data entry	0.786 **				
Perceived security					
PS1. This neobank seems to be very secure	0.870 **	0.915	0.920	0.936	0.747
PS2. I feel confident performing financial transactions (e.g., sending money, making payments, shopping, etc.) through this application	0.888 **				
PS3. The security systems of this application seem to be rigorous	0.785 **				
PS4. I feel comfortable making financial transactions using this application because of its security procedures	0.906 **				
PS5. In general, this application seems to be concerned about security	0.867 **				
Neobank trust					
T1. I trust this company	0.901**	0.902	0.904	0.932	0.774
T2. I trust this company's advice	0.855**				
T3. I consider this company to be honest	0.905**				
T4. This company's application is safe to use	0.857**				
Cost of switching to a traditional bank					
CSTB1. It would take me too long to switch from this neobank to a traditional bank (e.g., Banamex, BBVA, HSBC, Santander, Banorte)	0.731**	0.889	0.922	0.916	0.686
CSTB2. It would take me too long to switch to a traditional bank (e.g., Banamex, BBVA, HSBC, Santander, Banorte)	0.847**				
CSTB3. It would take me too long to learn the policies of a traditional bank (e.g., Banamex, BBVA, HSBC, Santander, Banorte)	0.850**				
CSTB4. It would take me too long to complete the forms to switch to a traditional bank (e.g., Banamex, BBVA, HSBC, Santander, Banorte)	0.891*				
CSTB5. I am not sure if I would receive any benefits if I switched to a traditional bank (e.g., Banamex, BBVA, HSBC, Santander, Banorte)	0.815*				
Neobank customer retention					
CR1. I often recommend that other people use the services of this neobank	0.870**	0.852	0.852	0.910	0.772
CR2. In the future, I will continue to make financial transactions through this company	0.861**				
CR3. I would recommend this neobank to friends, family and acquaintances	0.904**				

**p < 0.001; * p < 0.01

of common method bias using two techniques, Harman's single factor and variance inflation factors (VIFs). Harman's single factor test is conducted through an exploratory factor analysis in which the non-rotated solution in a single factor of all the items of the instrument must account for less than 50% of the variance (Kock et al., 2021). The results showed a unique Harman factor of 41.54%, which is below the cut-off point. Furthermore, the VIF values were less than 3.3, which indicates the absence of collinearity (Kock, 2017), and therefore the model does not present common method bias.

4.2 Evaluation of the measurement model

The value and significance of the factor loadings, the reliability of the items and constructs, as well as the convergent and discriminant validity of the model were examined. The items showed loadings greater than 0.701, ranging from 0.73 to 0.93, and t values greater than 1.96 (Table 1). Furthermore, the items were reliable as the squared factor loadings exceeded the minimum cut-off point of 50%. The results showed that there was convergent validity, since the Cronbach's alpha (α) and composite reliability [rho_a and rho_c] values were greater than 0.70, and all the average variance extracted [AVE] values were greater than 0.50.

Discriminant validity was determined using the heterotrait-monotrait ratio (HTMT) and the Fornell-Larcker criteria. The former requires a maximum cut-off point value of 0.90 (Henseler et al., 2015). The second compares the square root of the average variance extracted (AVE) with the correlations of the latent variables and requires the square root of the AVE of each construct to be greater than its highest correlation with any other construct to achieve discriminant validity (Afthanorhan et al., 2021). The results showed that the measurement model met the recommended criteria since the HTMT ratios were lower than the suggested cut-off point and the Fornell-Larcker values explained the variance of its indicator (Table 2).

4.3 Structural model

To evaluate the structural model, the following were examined: the VIF values of the constructs, the paths of the proposed relationships, as well as the capacity and predictive relevance of the model through R^2, f^2, and Q^2. The VIF values of the structural model were lower than the recommended criterion of being less than or equal to 3.3 (Kock, 2015). Then, the path coefficients of the model were examined, which showed that four out of the five proposed hypotheses were supported, since the perceived financial security in the neobank app did not influence the cost of switching to a traditional bank ($\beta = 0.030$, $p = 0.745$). However, it was found that the perceived financial security in the neobank app had a positive impact on customer retention ($\beta = 0.240$, $p < 0.001$) and trust in the neobank ($\beta = 0.708$, $p < 0.001$), and this positively influenced customer retention ($\beta=0.595$, $p<0.001$) and the cost of switching to a traditional bank ($\beta = 0.173$, $p < 0.05$). Table 3 presents the results of the tests of these hypotheses, and Figure 1 shows the contrasted structural model.

In addition, the effect size f^2 and the coefficient of determination R^2 were evaluated, where f^2 is considered a small effect when it takes values between 0.02 and 0.14, a medium effect when it takes values between 0.15 and 0.35, and a strong effect when it takes values greater than 0.35 (Hair et al., 2019). In this research, there was no effect of perceived financial security in the neobank app on the cost of switching to a traditional bank ($f^2 = 0.0001$); however, two small effects were identified, one of financial security in the neobank app on customer retention ($f^2 = 0.074$) and another of trust on the cost of

Table 2
Discriminant validity with Fornell-Larcker criterion and HTMT

	Customer retention	Ease of payment	Perceived security	Cost of switching to a traditional bank	Trust
Customer retention	0.879	0.622	0.738	0.268	0.871
Ease of payment	0.548	0.859	0.740	0.112	0.599
Perceived security	0.656	0.681	0.864	0.196	0.808
Cost of switching to a traditional bank	0.238	0.099	0.176	0.829	0.206
Trust	0.765	0.546	0.739	0.194	0.880

Table 3
Structural model path coefficients

Hypotheses	β	Sample mean	Standard deviation	t statistics	p values	Decision
H1: PFS -> NCR (+)	0.240	0.242	0.064	3.750	0.000***	Supported
H2: PFS -> CSTB (+)	0.030	0.034	0.093	0.326	0.745 n.s.	Not supported
H3: PFS -> NT (+)	0.708	0.708	0.036	19.465	0.000***	Supported
H4: NT -> NCR (+)	0.595	0.594	0.061	9.732	0.000***	Supported
H5: NT -> CSTB (+)	0.173	0.179	0.087	1.978	0.048**	Supported

***p ≤ 0.001; **p ≤ 0.05; n.s. = not significant.

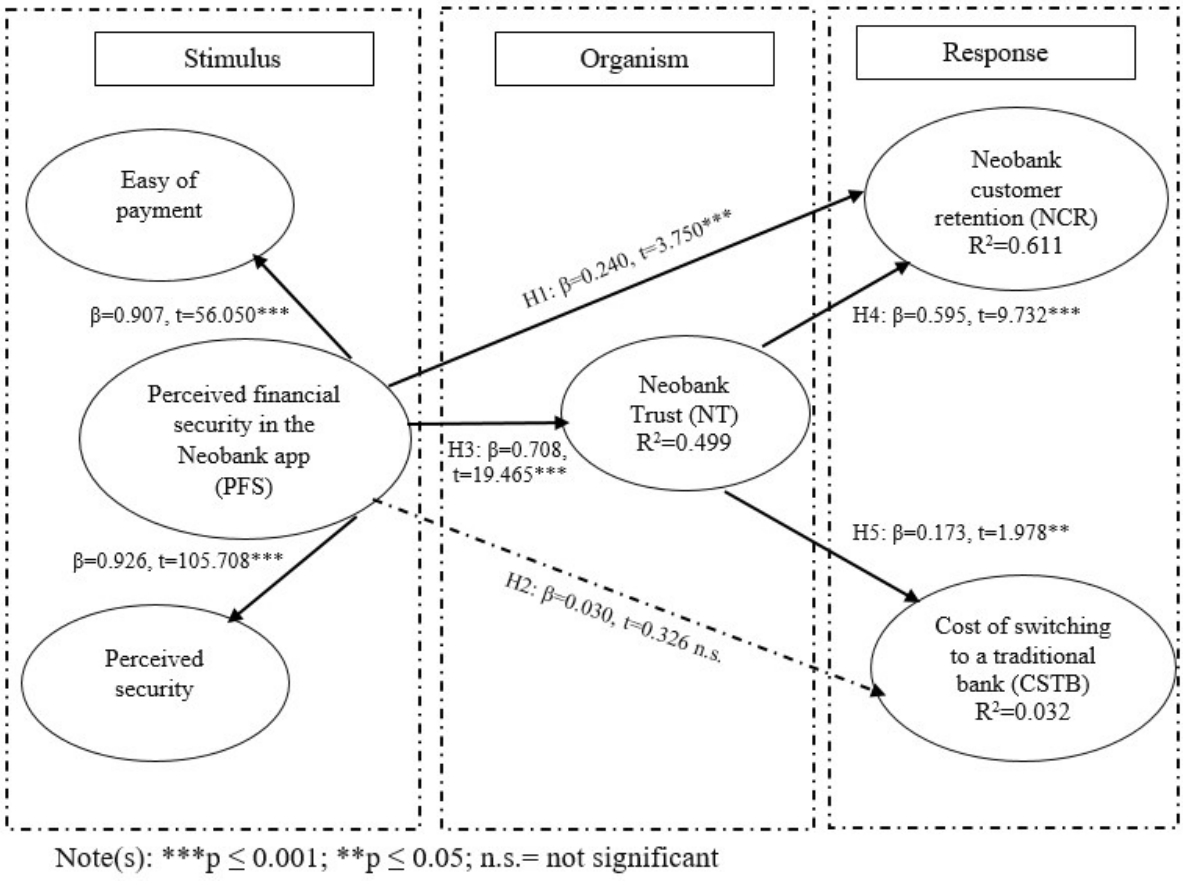

Figure 1. Structural model

switching to a traditional bank (f^2 = 0.015). Furthermore, there were two large effects, one of financial security in the neobank app on trust (f^2 = 1.003) and another of trust on customer retention (0.457).

Regarding R^2, the criteria imply that values around 0.25 are weak, 0.50 moderate, and 0.75 substantial (Hair et al., 2019). The results showed a weak effect on the cost of switching to a traditional bank (R^2 = 0.032), and two moderate effects on trust (R^2 = 0.499) and customer retention (R^2 = 0.611).

Predictive relevance was evaluated through Q^2. It is estimated that values close to Q^2 = 0 indicate minor relevance, around 0.25 indicates moderate relevance, and greater than 0.50 indicates major relevance (Hair et al., 2019). The results showed minor relevance for the cost of switching to a traditional bank (Q^2 = 0.014), and moderate relevance for trust (Q^2 = 0.497) and customer retention (Q^2 = 0.433).

4.4 Mediation

An analysis of the two existing mediations in the model was conducted, examining the mediating role of neobank trust (NT) on the relationship between perceived

financial security in the neobank app (PFS) and neobank customer retention (NCR) and the cost of switching to a traditional bank (CSTB).

To this end, the three-step approach proposed by Nitzl et al. (2016) was applied. First, the specific indirect effect was calculated; second, the significance of the indirect effects was determined using the PLS bootstrapping procedure; and finally, the nature and magnitude of the mediations were analyzed. The variance accounted for (VAF) was used to measure the size of the total indirect effects on the total effect and was calculated through the quotient between the total indirect effect and the total effect (Hair Jr. et al., 2014; Zhao et al., 2010). The criteria for interpreting the results are the following: if VAF < 0.20, there is no mediation; if 0.20 < VAF < 0.80, there is partial mediation; and if VAF > 0.80, there is full mediation (Hair Jr. et al., 2013).

The results showed that both the direct effect of PFS on NCR and the indirect effect in the presence of NT as a mediator were significant; therefore, H6 was supported. Consequently, the result showed that PFS had predictive power to explain NCR. Furthermore, the VAF value was 0.637, which means that there is partial mediation in the structural model (Nitzl et al., 2016). On the other hand, the direct effect of PFS on CSTB was not significant. However, indirectly, in the presence of NT as a mediator, the effect of PFS on CSTB was significant, so H7 was supported. Thus, the result showed that PFS had predictive power to explain CSTB through NT. Furthermore, the VAF value was 0.803, which means that there is full mediation in the structural model; that is, the independent variable PFS does not directly contribute to the prediction of CSTB, but indirectly explains it through NT (Cepeda-Carrión et al., 2017). The results are shown in Table 4.

5 Discussion

This research had two main objectives: first, to analyze the effect of perceived financial security of neobanking applications on trust, customer retention, and the cost of switching to a traditional bank; second, to analyze the mediating role of trust in the relationship between perceived financial security in the application and customer retention, as well as between trust and the cost of switching to a traditional bank. The results showed that perceived financial security in neobank applications positively affected neobank customer retention and trust in neobanks, so H1 and H3 were supported, which is consistent with the results of previous work in other fields (Novita & Budiarti, 2022; Harsono & Suprapti, 2024). However, financial security did not influence the cost of switching to a traditional bank, and thus, contrary to expectations, H2 was rejected. Although previous work in traditional banking has found that perceptions of security result in a higher cost of switching to another company (Khedmatgozar & Shahnazi, 2018), this was not the case in this research carried out with neobanks that compete in the Mexican market. Some possible reasons for this result could be that although financial security is considered a critical variable by platform users (Harris & Goode, 2010), neither the ease of making payments or transactions, perceived security, nor the potential returns are sufficient benefits to act as barriers to switching to a traditional bank when their strategies become more attractive.

Furthermore, trust turned out to be a key variable for the strategy of neobanks, since it directly influenced customer retention and the cost of switching to a traditional bank, supporting H4 and H5. On the other hand, it was shown to be a mediating variable between financial security and customer retention and the cost of

Table 4
Mediation analysis

Hypotheses	Effects	Path	Path coefficient	Indirect effect	Standard deviation	Total effect	VAF	t value	p-value	Results
H6	Indirect with mediator	PFS -> NCR	0.240	Not applicable				9.15	0.000***	Partial mediation
		PFS -> NT	0.708	0.421	0.046	0.661	63.69%			
		NT -> NCR	0.595							
H7	Indirect with mediator	PFS -> CSTB	0.030	Not applicable				1.96	0.05**	Full mediation
		PFS -> NT	0.708	0.122	0.062	0.152	80.26%			
		NT -> CSTB	0.173							

***p ≤ 0.001; **p ≤ 0.05

switching to a traditional bank, thus confirming H6 and H7. Trust was not only an added value for fintechs (Wang et al., 2019), but also acted as a differentiator that contributed to customer retention (Sullivan & Kim, 2018) and increased the cost of switching to another firm (Hassama et al., 2024).

In this study, the S-R and S-O-R theories were used to develop the research hypotheses. On the one hand, the S-R model proved to be effective in explaining that the external stimulus represented by the perception of financial security of the application led to one of the two responses analyzed. In other words, it influenced customer retention, although it did not affect the cost of switching to a traditional bank, which showed that not all stimuli had a significant impact on the responses. On the other hand, the functionalist proposal of the consumer decision-making process of neobanks in Mexico, represented by the S-O-R model studied, was empirically verified. It implied that the external stimulus, expressed by perceived security, was directly and indirectly related to consumer trust and to the reactions, represented by retention and switching costs. The results were consistent with the theory, since stimuli – tangible or intangible – are expected to be used as tools to influence consumer perceptions (Alexander & Cano, 2019; Arora, 1982) and psychological or behavioral reactions related to the purchase process (Ed Hsu et al., 2021).

6 Conclusions

6.1 Theoretical implications

This study provides relevant theoretical contributions by examining, from an S-R theory perspective, the effect of an external stimulus variable – perceived financial security of neobanking applications – on two response variables: customer retention and the cost of switching to a traditional bank. Also, from an S-O-R theory perspective, the importance of trust as a cognitive factor was verified in three ways: being affected by the stimulus of perceived financial security, influencing customer retention as an organism, and verifying its mediating capacity between the stimulus (perceived financial security in the application) and the responses (customer retention and cost of switching to a traditional bank). Thus, this work contributes to the understanding of the functioning of behavioral models supported by consumers' perceptual information processing (Roh et al., 2024) and their effect on cognitive responses that can lead to behavioral reactions (Elsotouhy et al., 2024) in the field of fintech.

Also, unlike previous studies, this study proposed and evaluated a model that introduced the perceived financial security of neobanking applications as an external stimulus variable. The study of financial security was relevant for its related dimensions, the clarity of payment procedures and security attributes provided by the platform (Liao et al., 2024), but mainly for its ability to influence trust in neobanking, which proved that trust is a cornerstone in the customer-company relationship (Wang et al., 2023), and in the interest to continue using the services of this financial technology.

Academic work has identified customer trust in the firm as a relevant mediating variable and constitutes a key aspect for the acceptance of financial services such as blockchain (Vazquez Melendez et al., 2024) and electronic and mobile banking (Haider et al., 2024). Similarly, our findings confirmed the mediating role of trust between financial security, customer retention in neobanking, and the cost of switching to a traditional bank. This deepened the understanding of the application of S-R and S-O-R models in neobanking consumer behavior. Thus, this work makes a conceptual and empirical contribution to the field of financial services.

6.2 Managerial implications

This research provides neobank professionals with some key aspects to consider in order to strengthen their strategies when competing in the market. First, in the digital environment in which customers experience neobank services, empirical work has shown that it is necessary to ensure a high level of financial security of the platform, as this acts as a technological signal that affects customers' usage experiences (Melnychenko, 2020) and, therefore, trust (Harsono & Suprapti, 2024) and response behavior related to security (Dangaiso et al., 2024).

Second, it is imperative that gaining and maintaining customer trust becomes a key element of the service strategy of neobanks. Then, in practice, the S-O-R mechanism studied would imply a high probability that users will trust the neobank and remain customers if they perceive it as secure. In addition, it has been found that customers who fully trust a fintech develop a positive attitude and increase their intention to use it (Roh et al., 2024). Our result provides empirical support for the idea that trust contributes to customers' continued use

of services (retention) and increases the cost of switching to a traditional bank.

In this study, we worked with the cognitive or rational components of trust, which include facts and previous experiences with the platform (Wang et al., 2023); however, other work has found that both cognitive and affective components of trust are essential for customer relationship management in the service sector (Isaeva et al., 2020). Our results suggest that neobank platform service strategies may be based on developing mechanisms related to cognitive trust, which has been shown to mediate the effects between perceived financial security and retention and the cost of switching to traditional banking.

6.3 Limitations and avenues for future research

This work has some limitations because of the use of a non-probabilistic convenience sample and the cross-sectional nature of the study, which limits the ability to generalize the results and examine how trust develops over time. Given the complexity of some social contexts, future work could explore the utility of an extended S-O-R model that includes other internal or external stimulus variables that influence the cognitive or affective processes as indicators or proxies of the organism. In this way, the evolution of trust over time could be examined, and the effect of other antecedent variables – such as customer experience and personalization – on trust and its mediating effect on commitment, loyalty, as well as word-of-mouth (WOM) and electronic word-of-mouth (e-WOM) among customers in the sector could be further explored.

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Supplementary Data 2 – Database
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