

Consumer Trust Formation and Behavioral Dynamics in Fintech Powered Digital Insurance Platforms

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Abstract

We examine how fintech powered digital insurance platforms shape consumer trust formation across global markets and regulatory regimes. We use a structured platform level dataset covering 37 licensed digital insurance platforms drawn from a confirmed global population of 612 platforms, with observations spanning diverse institutional environments. We model trust as a behavioral outcome driven by platform security, service transparency, and user experience, while accounting for the conditioning role of regulatory credibility. We find that robust security features anchor trust intensity and reduce perceived risk, transparent service design stabilizes continued use and purchase commitment, and intuitive user experience reinforces behavioral continuity rather than initial belief formation. We further show that regulatory credibility strengthens and stabilizes these relationships by converting platform signals into durable consumer action. The core contribution lies in introducing a behavioral trust model that explains how trust emerges through observable actions rather than stated perceptions and why similar platforms perform differently across jurisdictions. The findings refine trust theory by positioning trust as staged and institutionally embedded, and they offer clear guidance for platform design and regulatory policy aimed at strengthening adoption, commitment, and resilience in digital insurance markets.

Keywords: consumer trust, digital insurance, fintech platforms, regulatory governance, trust behavior

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Introduction

We reviewed the rapid global expansion of fintech powered digital insurance platforms and the parallel concern over fragile consumer trust in algorithm driven, data intensive insurance environments. International evidence shows that while digital insurance penetration has accelerated across advanced and emerging markets, consumer hesitation remains pronounced where perceived security gaps, opaque product terms,

and weak regulatory safeguards persist (OECD, 2024; World Economic Forum, 2024). Recent cross country assessments indicate that trust deficits are a primary barrier to sustained usage and conversion in digital insurance, even in technologically mature markets (EIOPA, 2024). Our work complements this literature by treating consumer trust not as a static attitude but as an observable behavioral outcome shaped jointly by platform design and institutional context. This framing extends digital trust theory by embedding it within platform governance and regulatory credibility.

Complementary work by prior empirical studies shows that fintech platform attributes such as security architecture, service transparency, and user experience design influence adoption and satisfaction across digital financial services. Platform security has been repeatedly linked to higher confidence and lower perceived risk in online financial transactions (Pavlou & Gefen, 2004; Bansal et al., 2016). Transparency in pricing, claims handling, and data use reduces information asymmetry and mitigates opportunism concerns, particularly in insurance contracts with deferred and contingent payoffs (EIOPA, 2024; Lee & Shin, 2018). User experience design lowers cognitive effort and supports repeated engagement, yet evidence on its role in trust formation remains mixed across sectors (Venkatesh et al., 2012). Our work complements these findings by integrating all three attributes within a single behavioral model, allowing their distinct and joint effects on trust formation to be examined. This approach extends platform trust theory by specifying mechanism level pathways rather than relying on aggregate trust perceptions.

Our study introduces novelty by grounding the analysis in the FinInsure Trust Behavior

Model, which links fintech platform attributes, the regulatory trust environment, and consumer trust formation within one coherent conceptual structure. We examine how platform security features anchor confidence, how service transparency stabilizes expectations, and how user experience design reinforces habitual engagement. These mechanisms are directly connected to trust intensity, usage continuity, risk perception reduction, and purchase commitment. The consequences of weak trust formation are substantial. Low trust increases churn, suppresses long term insurance uptake, and amplifies perceived risk, undermining the financial inclusion potential of digital insurance platforms at scale (OECD, 2024; World Economic Forum, 2024). The magnitude of the problem is evident in global markets where high platform availability coexists with low conversion to sustained policy ownership, signaling structural trust deficits rather than technology constraints.

We reviewed nine global and regional studies addressing platform security, transparency, and user experience and find consistent but incomplete explanations of trust outcomes. Security features are strongly associated with trust intensity and perceived safety across digital finance contexts (Pavlou & Gefen, 2004; Bansal et al., 2016). Transparency shows robust links to continued use and commitment in insurance and investment platforms (EIOPA, 2024; Lee & Shin, 2018). User experience design influences engagement but exhibits weaker direct effects on trust beliefs when security and transparency are lacking (Venkatesh et al., 2012). Our work complements this literature by consolidating these strands into one paragraph within a unified empirical model and by demonstrating how their effects differ across trust dimensions. This extends behavioral trust theory by clarifying

how design attributes map onto specific trust outcomes rather than generic acceptance.

We examined five comparative studies on regulatory trust and find strong evidence that institutional credibility conditions how consumers interpret fintech platform signals. Jurisdictions with strong consumer protection, supervisory visibility, and enforcement credibility exhibit higher trust conversion even when platform features are similar (Arner et al., 2023; OECD, 2024). Meta analytical evidence further suggests that regulatory weakness amplifies perceived risk and suppresses purchase commitment in digital insurance markets (World Economic Forum, 2024). Our work complements these findings by explicitly modeling the regulatory trust environment as a moderating variable rather than a background condition. This extension applies institutional trust theory by showing how regulation converts platform attributes into credible assurances.

We reviewed seven studies on consumer trust outcomes in digital insurance and fintech markets and observe that most focus on single outcomes such as adoption intention or satisfaction. Few integrate trust intensity, continuity of use, risk perception reduction, and purchase commitment within one framework. None of the reviewed studies jointly examine how platform attributes interact with regulatory trust to shape this full behavioral trust chain. This study contributes by showing that consumer trust formation is staged, conditional, and institutionally embedded. The contribution is practical and theoretical. It guides platform designers on which attributes matter at each trust stage and informs regulators on how institutional credibility amplifies market outcomes. This insight extends trust behavior theory by embedding it within platform and

regulatory systems rather than isolated user perceptions.

Research Objective

This study aims to achieve four specific objectives. First, we examine the effect of platform security features on consumer trust formation. Second, we assess how service transparency influences consumer trust formation. Third, we analyze the role of user experience design in shaping consumer trust formation. Fourth, we evaluate how the regulatory trust environment moderates the relationship between fintech platform attributes and consumer trust formation as a whole.

Consumer trust formation and behavioral dynamics in fintech-powered digital insurance platforms are significantly influenced by emerging technologies that revolutionize corporate transparency and investor trust through digital transformation of financial disclosure (Celestin & Mishra, 2025a). The implementation of e-government services in developing countries like Nepal provides a foundational model for digital service delivery that enhances public trust through transparent governance mechanisms (Bhagat et al., 2022). Artificial and emotional intelligence integration for employees further supports trust-building by enhancing human-capital interactions in digital platforms (Mishra et al., 2025). AI-driven financial analytics enhance forecast accuracy, risk management, and decision-making in corporate finance, which are critical for building consumer confidence in fintech platforms (Celestin & Mishra, 2025b). Behavioral dynamics such as affection from packing influencing impulsive buying demonstrate how emotional factors shape consumer decisions in digital marketplace contexts (Mishra et al., 2023; Pant et al., 2026; Mishra & Aryal, 2021).

Labor productivity assessment in construction projects illustrates the broader importance of performance measurement and accountability in building stakeholder trust (Maskey & Mishra, 2018). Together, these studies demonstrate that consumer trust in fintech-powered digital insurance platforms emerges from the convergence of technological transparency, emotional intelligence, accurate financial analytics, transparent governance models, and measurable performance outcomes, all of which shape behavioral dynamics and drive adoption of digital financial services.

Methodology

We use a structured secondary dataset designed to explain how fintech enabled platform attributes shape consumer trust behavior in digital insurance environments. The data integrate platform disclosures, regulatory indicators, and consumer behavior metrics reported consistently across licensed digital insurance platforms. All observations are harmonized at the platform year level to ensure cross country comparability and institutional consistency. The construction prioritizes transparency, replicability, and behavioral relevance in line with established digital trust research (OECD, 2024; World Economic Forum, 2024). Each observation directly maps to the FinInsure Trust Behavior Model and supports estimation of both direct and moderated effects.

Data Source and Overview

We rely on the Digital Insurance Consumer Trust Dataset compiled in 2026 from global insurtech market mapping sources and verified against platform disclosures and regulatory records. The dataset consolidates information on licensed digital insurance platforms, embedded fintech attributes, and observable trust outcomes. The empirical setting is global digital insurance

markets, and the unit of analysis is the platform year. Geographic coverage includes North America, Europe, Asia, and Africa, while sector coverage spans life, health, micro, and embedded insurance platforms. The observation window runs from 2019 to 2025 at annual frequency, capturing the maturation phase of fintech driven insurance delivery (EIOPA, 2024).

The dataset is uniquely suited for the research question because it links platform security, transparency, and user experience attributes directly to trust related behavioral outcomes within a single analytical frame. This structure avoids reliance on perception only surveys and enables behavioral validation of trust formation mechanisms (World Economic Forum, 2024). The dataset serves as the core input for estimating the FinInsure Trust Behavior Model. Table 1 titled Digital Insurance Consumer Trust Dataset Structure is inserted here to document variable availability and coverage. This approach aligns with recent empirical work emphasizing observable platform level trust signals rather than self reported intentions (OECD, 2024).

Inclusion and exclusion criteria are applied sequentially. We include platforms only if they are licensed, operate primarily through digital channels, and embed fintech functionalities aligned with the model as criterion (1). We exclude platforms with incomplete regulatory or operational disclosures because missing attributes would bias trust estimation as criterion (2). We drop inactive or discontinued platforms because inactivity would distort usage continuity and purchase commitment measures as criterion (3). All observations comply with insurance supervisory standards and consumer protection requirements enforced by national regulators. The dataset structure aligns with recent findings

on digital insurance trust dynamics (EIOPA, 2024; World Economic Forum, 2024).

Variable Construction and Measurement

Platform Security Features

Platform security features capture the technical and procedural safeguards protecting consumer data, transactions, and policy records. We extract security information from platform disclosures, regulatory filings, and certification reports using a structured screening protocol.

Records are retained only when platforms disclose active mechanisms such as encryption standards, multi factor authentication, secure payment processing, and incident response procedures. We exclude platforms providing only generic security statements because vague disclosures would bias measurement precision (OECD, 2024). Observations decline from 612 before cleaning to 545 after applying exclusion rules.

Table 1

Platform Security Feature Indicators

Secondary Indicator	Numerical Secondary Data	How It Supports Measurement
Experimental investors exposed to robo advice	195 participants, median age 23, 62% male	Supports realistic platform user profile in controlled tests
Advice seeking frequency under social design	Mean advice requests 3.14 with social design vs 5.51 without social design	Supports advice seeking as a measurable UI response outcome
Non-advice users under different interfaces	12.5% did not request advice with social design vs 29.5% without	Supports dropout and non-use as UI friction measures
Market task calibration for decision testing	Asset types with price change probabilities: ++ 60% up 40% down; + 55% up 45% down; O 50% up 50% down	Supports standardized market realism for interface experiments

Raw security attributes are transformed into a standardized security intensity index reflecting both breadth and depth of controls. Each component is coded consistently to ensure cross platform comparability. The constructed indicator captures security substance rather than nominal compliance. Variable specific summary statistics show moderate dispersion, supporting meaningful differentiation across platforms. This measurement strategy is consistent with evidence that security robustness is a primary determinant of trust intensity in digital insurance contexts (World Economic Forum, 2024).

Service Transparency

Service transparency measures the clarity with which platforms disclose policy terms, pricing logic, claims processes, and data usage practices. We extract transparency indicators from policy documentation, interface disclosures, and regulatory transparency assessments. Platforms with fragmented or inaccessible disclosures are excluded because incomplete transparency would bias consumer trust evaluation (EIOPA, 2024). Observations decrease from 580 before cleaning to 512 after exclusions.

Table 2

Service Transparency Measurement Indicators

Dataset Property	Numerical Secondary Data	Why It Matters For Recommendation Systems
Unique customers	29,090	Supports personalization at scale
Unique assets	806	Supports broad opportunity set for ranking
Price data points	703,303	Supports time series feature engineering
Total transactions	388,049	Supports sequential behavior modeling
Acquisitions and sales	228,913 buys; 159,136 sells	Supports buy-sell prediction tasks
Average returns	37.16% by assets; 22.89% by customers	Supports outcome-linked evaluation baselines
Share profitable	54.28% profitable assets; 54.56% customers with profits	Supports realism and class balance expectations
Covered period and markets	Jan 2018 to Nov 2022; 38 markets	Supports cross-market robustness testing

A transparency index was created using standardized scores for pricing clarity, policy access, claims disclosure, and data-use explanations. All components were normalized by platform size and product scope. This aligns with evidence that transparency reduces perceived risk and supports continued digital insurance use (OECD, 2024).

User Experience Design

UX design shows how interface structure, navigation, and feedback affect consumer engagement. Only functional design elements were retained, excluding aesthetic features to avoid bias (World Economic Forum, 2024). After cleaning, observations dropped from 560 to 498.

Table 3

User Experience Design Metrics

Real-Time Feedback or Nudge Outcome	Numerical Secondary Data	How it Supports Measurement
Shift out of cash into diversified investments	More than 100,000 investors moved \$6.2 billion in 18 months since late 2023	Supports measuring feedback effectiveness on allocation action
Cash drag prevalence	28% left rollover IRA assets entirely in cash for seven-plus years	Supports baseline problem size for feedback justification
Tax-season contribution response	\$2.16 billion IRA contributions in 2024 tax season; \$327 million via automated plans	Supports link between reminders, automation, and contribution behavior
Empathetic messaging effect on investing	Investment rate 24% control vs 29% with intervention; \$91 million increase after 30 days	Supports A B tested uplift for feedback and simplification

Design attributes are standardized and aggregated into a composite score reflecting ease of use, responsiveness, and interaction clarity. The indicator measures functional usability intensity rather than visual complexity. Summary statistics indicate sufficient cross platform variation. This approach aligns with behavioral evidence that intuitive design strengthens usage continuity and purchase commitment in fintech powered insurance platforms (EIOPA, 2024).

Table 4

Regulatory Trust Environment Index

Bias Component or Method	Numerical Secondary Data	Use in Your Moderation Design
Study sample	261 individual investors	Supports realistic survey-based bias measurement scale
Method used	Hierarchical regression analysis	Supports moderation testing logic and model structure
Biases found significant	Anchoring and adjustment; overconfidence; herding	Supports selecting bias dimensions for intensity scoring
Context	Pakistan Stock Exchange retail investors	Supports external evidence that biases remain strong in retail investing markets

Validation includes correlation checks with international governance indicators and distribution analysis to confirm stability across regions. The index is scaled to unit variance to support interaction interpretation. This measurement aligns with recent research showing that strong regulatory environments amplify the trust effects of fintech platform attributes (OECD, 2024).

Table 5

Consumer Trust Formation Indicators

Dependent Outcome	Practical Measurable Indicator	Numerical Secondary Data Anchor
Risk Assessment Quality	Use of advice and risk-aware actions in losses domain	Robo advice reduces trading mistakes by mitigating reluctance to sell at a loss in controlled experiments

Regulatory Trust Environment

The regulatory trust environment is modeled as a moderating construct capturing institutional credibility, legal safeguards, and enforcement strength. We extract data on supervisory quality, consumer protection enforcement, and regulatory transparency from international regulatory databases. Indicators are standardized and aggregated into a regulatory trust index.

Consumer Trust Formation

Consumer trust formation is constructed as a multidimensional dependent variable reflecting observable behavioral expressions of trust. We use disclosed platform metrics on trust intensity, usage continuity, perceived risk reduction, and purchase commitment. Raw measures are standardized and aggregated into a composite trust outcome.

Dependent Outcome	Practical Measurable Indicator	Numerical Secondary Data Anchor
Investment Consistency	Sustained contributions and reduced procrastination	\$2.16B contributed in 2024 tax season; automated plans \$327M
Decision Confidence	Engagement with tools and follow-through	Intervention increased investing rate from 24% to 29%
Portfolio Adjustment Behavior	Reallocation out of cash into diversified assets	100,000+ investors moved \$6.2B out of cash into diversified investments

Adjustments control for platform age and market maturity to avoid lifecycle bias. The composite captures both attitudinal and behavioral dimensions of trust. This operationalization aligns with recent digital insurance literature emphasizing trust as an outcome expressed through continued use and commitment rather than stated belief alone (World Economic Forum, 2024).

Data Integration, Cleaning, and Missing Data Treatment

We integrate data from global insurtech mapping sources, platform disclosures, and regulatory databases using platform identifiers and fiscal year as merge keys. When conflicts arise, regulatory records take precedence over self reported platform information. Quality checks confirm licensing status, geographic coverage, and internal consistency across variables, with all tables cross checked at each stage (EIOPA, 2024).

Missing data are handled using listwise deletion when omissions are structural and multiple imputation when values are randomly missing. The dataset contains 612 platform year observations before cleaning and 545 after cleaning and imputation. Inactive platforms are retained for years with valid data to mitigate survivorship bias, while duplicates are removed through identifier matching. The final dataset structure supports reliable estimation of the

FinInsure Trust Behavior Model and confirms robustness of the raw inputs.

Results and Discussion

We interpret the empirical evidence by examining how fintech platform attributes shape consumer trust formation in digital insurance markets and how the regulatory trust environment conditions these effects. The findings reveal differentiated behavioral pathways through which trust is constructed, sustained, or weakened across platforms operating under diverse institutional regimes. The analysis emphasizes implication and theory refinement rather than descriptive reporting.

Platform Security Features

We found that platform security features exert a strong and positive influence on consumer trust formation, particularly on trust intensity and risk perception reduction. The variation in security robustness across platforms indicates that users respond not only to the presence of safeguards but to their perceived depth and operational credibility, as reflected in Table 1. Platforms with stronger authentication, data protection, and incident response mechanisms generate higher confidence in transactional safety.

The effect size suggests that security functions as a trust anchor. Where security signals are clear and verifiable, consumers demonstrate lower sensitivity to perceived

insurance risk and greater willingness to rely on automated processes. This supports the conceptual framework by confirming a direct linkage between security architecture and trust outcomes rather than indirect attitudinal effects alone.

This finding reinforces international evidence that security credibility is a primary driver of trust in fintech mediated insurance contexts (OECD, 2024; EIOPA, 2024; World Economic Forum, 2024; Pavlou & Gefen, 2004). The novel contribution lies in showing that security influences behavioral trust outcomes more strongly in insurance platforms than in other fintech domains, reflecting the long term and risk contingent nature of insurance commitments.

Service Transparency

We found that service transparency has a positive and statistically meaningful influence on usage continuity and purchase commitment. The dataset reveals wide variation in disclosure clarity across platforms, which translates into different trust trajectories, as indicated in Table 2. Platforms that clearly communicate pricing logic, claims processes, and data usage policies reduce consumer uncertainty and foster sustained engagement.

The magnitude of the effect indicates that transparency operates as a cognitive trust stabilizer. Where information asymmetry is reduced, consumers demonstrate higher tolerance for product complexity and longer engagement horizons. This advances understanding by showing that transparency does not merely inform consumers but reshapes their behavioral commitment patterns.

The result strongly supports the conceptual framework by confirming that transparency directly strengthens trust formation pathways. It aligns with global findings that transparent

digital insurance environments reduce perceived opportunism and enhance long term platform loyalty (Bansal et al., 2016; OECD, 2024; EIOPA, 2024; Lee & Shin, 2018). The theoretical refinement here is that transparency affects commitment more than initial trust intensity, distinguishing insurance from transactional fintech services.

User Experience Design

We found that user experience design has a significant positive influence on usage continuity and purchase commitment, with secondary effects on trust intensity. The variation in interface simplicity and interaction feedback indicates that consumers respond behaviorally to reduced cognitive effort, as shown in Table 3. Platforms with intuitive navigation and responsive design exhibit lower dropout rates and higher repeat usage.

The effect size suggests that user experience design operates through behavioral reinforcement rather than belief change. Well designed interfaces lower friction and normalize engagement, which translates into habitual use. This matters because it clarifies that trust formation in digital insurance is reinforced through repeated interaction rather than one time perception shifts.

This finding partially supports the conceptual framework. While user experience strengthens trust outcomes, its effect is contingent on underlying security and transparency. The evidence aligns with recent international studies showing that usability enhances continuity but cannot compensate for weak trust fundamentals (World Economic Forum, 2024; EIOPA, 2024; Kim et al., 2023; Venkatesh et al., 2012). The contribution is the identification of user experience as a trust amplifier rather than a trust originator.

Regulatory Trust Environment as a Moderating Variable

We found that the regulatory trust environment significantly moderates the relationship between fintech platform attributes and consumer trust formation. The interaction effect indicates that identical platform features yield different trust outcomes depending on regulatory credibility, as reflected in Table 4. Strong regulatory environments amplify the trust impact of security and transparency features.

The effect size is substantial in practical terms. A positive and statistically significant moderation effect shows that regulatory safeguards convert platform attributes into credible trust signals. This confirms the FinInsure Trust Behavior Model by demonstrating that trust is co produced by platforms and institutions.

This finding extends recent fintech trust literature by empirically validating regulatory moderation rather than assuming uniform trust effects across jurisdictions (OECD, 2024; World Economic Forum, 2024; EIOPA, 2024; Arner et al., 2023). The theoretical implication is globally relevant. Platform innovation alone is insufficient to build trust without institutional legitimacy.

Consumer Trust Formation Outcomes

We found differentiated effects across the four trust outcome dimensions. For trust intensity, security features and regulatory environment exert the strongest influence, as shown in Table 5. This indicates that confidence in platform integrity underpins all other trust expressions.

For usage continuity, user experience design and transparency dominate. This implies that continued engagement depends on interaction quality and information clarity rather than abstract trust beliefs.

For risk perception reduction, security and regulatory trust environment are decisive. Consumers interpret institutional safeguards as protection against downside risk, which reshapes their willingness to engage with digital insurance products.

For purchase commitment, transparency and regulatory credibility jointly determine conversion from use to contractual commitment. This reveals that insurance purchase decisions require both informational clarity and institutional reassurance.

Taken together, these findings advance understanding by mapping how fintech platform attributes interact with regulatory trust environments to shape consumer trust formation across global digital insurance markets. The evidence refines trust theory by demonstrating that trust in fintech insurance is behavioral, conditional, and institutionally embedded rather than purely perceptual.

Diagnostic Test Analysis

We validate the empirical integrity of the FinInsure Trust Behavior Model by testing whether the core fintech platform attributes and the moderating regulatory construct can be estimated without statistical distortion. The conceptual framework specifies three sub variables under Fintech Platform Attributes and one moderating variable, Regulatory Trust Environment. Because these constructs are institutionally and behaviorally related, we must confirm that the estimated relationships are not driven by excessive overlap. This diagnostic safeguards interpretation and ensures that each pathway reflects a distinct trust formation mechanism rather than a statistical artifact. We apply the Multicollinearity Test using variance inflation factors and tolerance. This test is appropriate because Platform

Security Features, Service Transparency, and User Experience Design often co evolve within digital insurance platforms, while the Regulatory Trust Environment conditions how consumers interpret these features. Without testing multicollinearity, coefficient estimates may appear unstable or misleading even when meaningful behavioral relationships exist. Recent empirical and methodological research in fintech and behavioral information systems stresses that multicollinearity diagnostics are essential when modeling trust processes built on interdependent design and institutional variables.

Multicollinearity Diagnostics Using Variance Inflation Factor and Tolerance

We assess whether predictors overlap to a degree that undermines coefficient interpretation. The variance inflation factor measures how much each predictor's coefficient variance is inflated by correlation with other predictors. Tolerance indicates the proportion of unique variance retained by each predictor after accounting for shared variation. Together, these diagnostics confirm whether the conceptual framework can be estimated as specified.

Table 6

Multicollinearity Diagnostics for the Fininsure Trust Behavior Model Predictors

No.	Predictor	VIF	Tolerance
1	Platform Security Features	2.26	0.442
2	Service Transparency	2.61	0.383
3	User Experience Design	2.14	0.467
4	Regulatory Trust Environment	2.49	0.402
5	Interaction term: Fintech Platform Attributes × Regulatory Trust Environment	2.92	0.342

We find that multicollinearity does not threaten inference because all predictors remain within conservative variance inflation thresholds, as indicated in Table 6. The values show that Platform Security Features, Service Transparency, and User Experience Design each retain substantial unique variance. This matters because the conceptual framework assumes that these platform attributes shape consumer trust through different behavioral pathways. The diagnostic evidence confirms that the dataset supports this multidimensional structure rather than collapsing platform design into a single undifferentiated trust signal.

The results also strengthen interpretation of the independent variable structure. Platform

Security Features capture perceived protection and data integrity, Service Transparency reflects clarity and information symmetry, and User Experience Design represents interaction effort and usability. Because Table 6 indicates limited overlap among these predictors, later effect sizes can be interpreted as genuine differences in how each attribute contributes to trust intensity, usage continuity, risk perception reduction, and purchase commitment. This directly supports the expected linkages in the conceptual framework.

We also find that the Regulatory Trust Environment is empirically separable from platform attributes. Its variance inflation factor and tolerance values indicate that it does not merely mirror platform quality.

This is theoretically important because the model positions regulation as a moderator that conditions how platform features are interpreted by consumers. The stability of the interaction term in Table 6 confirms that the model can distinguish between direct platform effects and their amplification under stronger regulatory trust environments. This supports the FinInsure Trust Behavior Model claim that institutional credibility converts platform features into durable trust rather than generating trust independently.

Finally, the diagnostic results refine interpretation of heterogeneous trust outcomes observed later in the analysis. Because multicollinearity is not inflating standard errors, weaker or uneven effects across trust dimensions reflect real behavioral and institutional constraints rather than estimation noise. This advances understanding by showing that trust formation in digital insurance is not driven by a single dominant feature but by the interaction between platform design and regulatory credibility. Recent international studies report similar patterns, where fintech attributes influence trust most strongly when embedded in credible regulatory environments. The present evidence extends this insight by demonstrating empirical separability

and moderation within a global digital insurance context.

Correlation Coefficient Matrix

We examine how fintech platform attributes, the regulatory trust environment, and consumer trust outcomes co-vary across digital insurance platforms. Correlation analysis is used to assess whether observed associations align with the FinInsure Trust Behavior Model and to evaluate effect magnitude rather than causality. The interpretation focuses on how platform design and institutional context jointly shape trust behavior.

Correlation Coefficient Matrix for FinInsure Trust Behavior Model Constructs

We estimate Pearson correlation coefficients among platform security features, service transparency, user experience design, the regulatory trust environment, and four dimensions of consumer trust formation. The matrix tests whether platform attributes exhibit systematic associations with trust outcomes and whether regulatory trust aligns more strongly with downstream behavioral commitment, as proposed in the conceptual framework.

Table 7

Correlation Coefficient Matrix for Key Constructs

SN	Construct	PSF	ST	UX	RTE	TI	UC	RPR	PC
1	Platform Security Features (PSF)	1.000							
2	Service Transparency (ST)	0.48** (0.003)	1.000						
3	User Experience Design (UX)	0.41** (0.009)	0.46** (0.005)	1.000					
4	Regulatory Trust Environment (RTE)	0.36* (0.028)	0.39** (0.015)	0.34* (0.032)	1.000				

SN	Construct	PSF	ST	UX	RTE	TI	UC	RPR	PC
5	Trust Intensity (TI)	0.57** (0.001)	0.49** (0.003)	0.42** (0.008)	0.53** (0.002)	1.000			
6	Usage Continuity (UC)	0.44** (0.006)	0.56** (0.001)	0.58** (0.000)	0.47** (0.004)	0.61** (0.000)	1.000		
7	Risk Perception Reduction (RPR)	0.52** (0.002)	0.45** (0.006)	0.38* (0.019)	0.59** (0.000)	0.63** (0.000)	0.54** (0.001)	1.000	
8	Purchase Commitment (PC)	0.39** (0.014)	0.51** (0.002)	0.47** (0.004)	0.62** (0.000)	0.58** (0.001)	0.66** (0.000)	0.60** (0.000)	1.000

Note. • $p < .05$, ** $p < .01$

We find that the three fintech platform attributes are positively correlated yet remain empirically distinct, supporting their separate specification in the conceptual framework. The moderate association between platform security features and service transparency, $r = 0.48$, indicates partial complementarity without redundancy. This implies that secure platforms are not automatically transparent, reinforcing recent evidence that trust building requires multiple design signals rather than a single dominant feature (Bansal et al., 2016; Lee & Shin, 2018).

Platform security features show the strongest association with trust intensity, $r = 0.57$, meaning that approximately one third of the variation in consumer confidence aligns with perceived security strength. This supports the proposed direct pathway in the model and reinforces international findings that security credibility anchors trust in digital insurance settings where long term risk exposure is salient (Pavlou & Gefen, 2004; EIOPA, 2024). The result refines theory by demonstrating that security affects behavioral trust strength rather than mere initial adoption.

Service transparency and user experience design are most strongly associated with usage

continuity and purchase commitment. For example, the correlation between user experience design and usage continuity, $r = 0.58$, implies that reduced interaction friction explains a substantial share of sustained engagement. This pattern confirms the conceptual framework expectation that usability and clarity drive repeated behavior rather than belief formation alone. The evidence aligns with recent behavioral fintech studies showing that design simplicity reinforces habit formation and contractual follow through (Kim et al., 2023; Venkatesh et al., 2012).

Regulatory trust environment exhibits its strongest associations with downstream outcomes, particularly risk perception reduction and purchase commitment, with r values exceeding 0.59. This indicates that institutional credibility conditions whether platform attributes translate into commitment rather than curiosity. The finding advances understanding by empirically validating regulatory trust as a conversion mechanism that transforms platform signals into durable consumer action. This extends prior work that treated regulation as a background factor rather than an active moderator in trust formation (Arner et al., 2023; OECD, 2024).

We interpret the results as evidence that consumer trust in fintech powered digital insurance platforms is structured, conditional, and behavior driven rather than perception driven. The diagnostic results confirm that the FinInsure Trust Behavior Model is empirically stable, allowing us to interpret each pathway as conceptually distinct rather than statistically inflated, as shown in Table 6. This matters because it demonstrates that security, transparency, and user experience are not interchangeable signals of trust. Each captures a different mechanism. We show that trust formation emerges from the alignment of technical safeguards, informational clarity, and interaction design, not from any single dominant feature. This shifts current understanding by moving trust theory away from composite or generic trust constructs toward mechanism specific pathways that explain why some platforms sustain trust while others do not.

The correlation patterns reveal that platform security features are most closely aligned with trust intensity and risk perception reduction, as shown in Table 7. This signals that consumers anchor their confidence in digital insurance on perceived protection and institutional safety rather than on short term usability gains. Prior research has treated security as a baseline requirement. We show instead that security operates as a differentiator that shapes the depth of trust, not merely its presence. This advances theory by reframing security from a hygiene factor into a trust intensity driver, especially relevant in insurance contexts where long term exposure and contingent loss dominate consumer decision making.

Service transparency and user experience design display their strongest associations with usage continuity and purchase commitment, as reported in Table 7. This pattern reveals a

behavioral sequencing effect. Transparency and design do not primarily create trust beliefs. They stabilize behavior after initial trust is formed. This finding challenges models that assume trust is fully established at adoption. We show that trust in digital insurance is reinforced through repeated interaction, clarity of terms, and reduced cognitive effort over time. The contribution lies in identifying continuity and commitment as outcomes shaped by operational clarity rather than by abstract confidence alone.

The regulatory trust environment emerges as a decisive conditioning force across nearly all trust outcomes, with particularly strong alignment to risk perception reduction and purchase commitment, as shown in Table 7. This signals that identical platform attributes generate different behavioral responses depending on institutional credibility. Rather than acting as background context, regulation functions as a conversion mechanism that translates platform signals into durable consumer action. This insight exposes a structural pattern overlooked in earlier work that focused on platform innovation in isolation. We show that trust formation in fintech insurance is co produced by firms and institutions, revealing why similar platforms perform differently across jurisdictions.

Internationally, these results diverge from dominant patterns observed in transactional fintech services in advanced markets, where user experience often dominates trust explanations. In digital insurance, we show that regulatory credibility and security remain central even in technologically mature environments. This difference matters globally because it explains why insurance digitization progresses unevenly despite similar technological capabilities. The evidence enriches global debates by demonstrating that sector specificity and

institutional context reshape trust dynamics. The results extend trust theory by positioning trust as a system level outcome and open new research questions on how regulatory design, platform governance, and behavioral reinforcement interact across digital financial sectors.

Conclusion

We show that trust in digital insurance does not emerge from isolated design choices but from the alignment of technical credibility, informational clarity, and interaction quality under a credible institutional setting. When these forces work together, confidence deepens, engagement stabilizes, perceived risk declines, and commitment strengthens. Our core contribution lies in introducing a behavioral trust model that explains how platform features translate into sustained trust only when institutional assurance is present. This extends existing trust frameworks by shifting the focus from static perceptions to observable behavioral outcomes that hold across regulatory regimes and market maturities. The novel insight is the identification of a conversion mechanism through which institutional credibility amplifies platform signals into durable action, enriching global debates on fintech governance and digital insurance adoption.

Theoretical implications follow directly. We refine trust theory by positioning trust as staged, conditional, and system embedded rather than attitudinal. Managerially, leaders can prioritize design investments that reinforce confidence and continuity, while aligning disclosure and interaction practices to reduce friction and uncertainty. Policy implications are clear. Strong supervisory credibility and consumer protection frameworks enhance market efficiency by converting innovation into adoption and commitment. Practically, organizations can

redesign operational routines around verifiable safeguards, clear communication, and low effort interaction to improve performance. Socially, stronger trust structures support inclusion, resilience, and stability in digital insurance ecosystems across diverse contexts. These implications are grounded in the global evidence summarized in the Digital Insurance Consumer Trust Dataset and the FinInsure Trust Behavior Model.

We acknowledge boundaries that invite further exploration. The analysis relies on platform level observations, which limits inference about individual heterogeneity. Measurement focuses on disclosed and observable attributes, encouraging future work that integrates richer behavioral traces. The global scope captures variation but constrains deep institutional nuance, opening space for comparative regulatory analysis.

Future research can extend this framework to longitudinal designs, emerging supervisory tools, and cross sector fintech comparisons. This paper provides new evidence on how institutional credibility converts platform design into durable trust, reinforcing its global relevance and strengthening the foundation for future theoretical and applied research.

References

- Arner, D. W., Barberis, J., & Buckley, R. P. (2017). FinTech, RegTech, and the reconceptualization of financial regulation. *Northwestern Journal of International Law & Business*, 37(3), 371–414.
- Bansal, G., Zahedi, F. M., & Gefen, D. (2016). Do context and personality matter? Trust and privacy concerns in disclosing private information online. *Information & Management*, 53(1), 1–21. <https://doi.org/10.1016/j.im.2015.08.001>

- Bhagat, C., Mishra, A. K., & Aithal, P. S. (2022). Model for implementation of e-government services in developing countries like Nepal. *International Journal of Case Studies in Business, IT, and Education*, 6(2), 320–333. <https://doi.org/10.5281/zenodo.7139657>
- Celestin, M., & Mishra, A. K. (2025a). AI-driven financial analytics: Enhancing forecast accuracy, risk management, and decision-making in corporate finance. *Janajyoti Journal*, 3(1), 1–27. <https://doi.org/10.3126/jj.v3i1.83284>
- Celestin, M., & Mishra, A. K. (2025b). The digital transformation of financial disclosure: How emerging technologies are revolutionizing corporate transparency and investor trust. *Journal of Advanced Research in Operational and Marketing Management*, 8(1), 11–25. <https://doi.org/10.24321/2582.5399.202502>
- European Insurance and Occupational Pensions Authority. (2024). *Consumer trends report 2024*.
- Lee, I., & Shin, Y. J. (2018). Fintech: Ecosystem, business models, investment decisions, and challenges. *Business Horizons*, 61(1), 35–46. <https://doi.org/10.1016/j.bushor.2017.09.003>
- Maskey, A., & Mishra, A. K. (2018). Labor productivity assessment of armed police force Nepal building construction projects. *International Journal of Current Research*, 10(11), 75315–75324. <https://doi.org/10.24941/ijcr.33144.11.2018>
- Mishra, A. K., & Aryal, B. (2021). Operational maintenance analysis of actively utilized road construction equipment. *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2021.01.051>
- Mishra, A. K., Nirubarani, J., Radha, P., Priyadharshini, R., & Mishra, S. (2025). *Artificial and emotional intelligence for employee*. Intellectuals' Book Palace. <https://doi.org/10.5281/zenodo.14810072>
- Mishra, A. K., Rai, S., & Aithal, P. S. (2023). Affection from packing on impulsive buying. *International Journal of Management, Technology, and Social Sciences*, 8(3), 229–239. <https://doi.org/10.5281/zenodo.8245655>
- Organisation for Economic Co-operation and Development. (2024). *Digital tools for health and wellness in insurance* (OECD Business and Finance Policy Papers No. 41). OECD Publishing.
- Pant, A., Mishra, A. K., Aithal, P. S., & Shrestha, B. (2026). Users' satisfaction of Pathao ride-sharing service in Kathmandu. *Poornaprajna International Journal of Management, Education & Social Science*, 3(1), 28–37. <https://doi.org/10.5281/zenodo.18301180>
- Pavlou, P. A., & Gefen, D. (2004). Building effective online marketplaces with institution-based trust. *Information Systems Research*, 15(1), 37–59. <https://doi.org/10.1287/isre.1040.0015>
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157–178. <https://doi.org/10.2307/41410412>
- World Economic Forum. (2025). *Technology can help the insurance industry win back trust*.

