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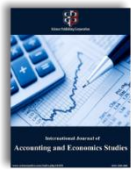

Trust and Risk Perception in Online Marketing of Insurance Products

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Abstract

With the growing shift toward digitalization, the online marketing of insurance products has gained significant momentum. This study explores the influence of trust and risk perception on consumer behavior in the context of online insurance marketing. Information was gathered from 710 participants from different regions of India using a standard field survey between January and June 2023. The aim was to measure how consumers rate trust and perceive risk factors such as data protection, information correctness, and claim validity while dealing with digital insurance platforms. The research employs descriptive statistics and inferential analysis, such as multiple regression and structural equation modeling (SEM), to determine the direction and strength of relationships between the most important variables. The findings are that trust is central in reducing perceived risk and positively impacts willingness to buy insurance online. In addition, perceived risk has a significant impact on decision-making, especially for first-time digital users and individuals who have lower digital literacy. The research highlights the importance of insurance firms to increase digital transparency, have secure handling of data, and clearly communicate to build customer trust and encourage broader take-up of online insurance services.

Keywords: *Trust; Risk Perception; Online Insurance; Consumer Behavior; Digital Marketing; India.*

1. Introduction

The revolution in digital technology has significantly changed the financial services sector, with insurance promotion quickly shifting from the conventional face-to-face approach to the internet (Laudon & Traver, 2022). The change has been spurred by the advancement of technology, shifting customer expectations, and pressure for convenience and accessibility (Verma & Sharma, 2021). But the move to electronic channels introduces new challenges, most notably related to trust and perceived risk (Udayakumar et al., 2023), which are central to predicting online insurance marketing campaign success (Gefen, Karahanna, & Straub, 2003; Pavlou, 2003). Trust is a basic determinant of consumer behavior within online contexts, where uncertainty is increased by the absence of physical contact (McKnight, Choudhury, & Kacmar, 2002). Within the insurance context an inherently intangible and long-term product, consumers tend to largely depend on trust to evaluate the credibility of providers of services and the validity of electronic transactions (Shao, Zhang, & Li, 2020). Research suggests that online trust is shaped by factors such as perceived competence (Usikalu et al., 2025), integrity, and website quality (Kim, Ferrin, & Rao, 2008), and plays a crucial role in reducing hesitation and increasing purchase intention (Flavián, Guinalíu, & Gurrea, 2006) (Iyengar & Joshi, 2024). Conversely, risk perception acts as a barrier to consumer engagement, especially in online insurance markets where issues such as data privacy, fraud, and claim uncertainty are prevalent (Bhatnagar, Misra, & Rao, 2000; Martins, Oliveira, & Popovic, 2014). Perceived risk is often amplified by the complexity of insurance products and the limited opportunities for personal consultation (Chen & Barnes, 2007) (Assegid & Ketema, 2023). Consumers may question the reliability of information, fear misuse of personal data, or doubt the claim settlement process, all of which can deter online transactions (Yousafzai, Pallister, & Foxall, 2009) (Singh & Venkatesan, 2024) (Iyer & Verma, 2023).

In emerging economies like India, the adoption of online insurance platforms is still evolving, and trust-related issues are more (Choudhary & Deshmukh, 2023) pronounced due to lower digital literacy and varying levels of financial awareness (Raghunath & Panga, 2020; Mehta, Saxena, & Purohit, 2022). As online insurance platforms increase in number, it is essential to learn how trust and risk perception drive customer conduct for insurers that are attempting to establish enduring customer relationships and competitiveness (Singh & Rana, 2021) (Desai & Joshi, 2023).

1.1. Identification of the problem

In contrast to the fast-paced digitalization of the insurance sector, the rate of adoption of online insurance platforms has been slow, particularly in emerging nations such as India. People still have reservations and skepticism about buying insurance products over the internet. This hesitancy is fuelled mainly by a lack of confidence in online platforms and the perceived high risk of internet transactions involving apprehensions related to data privacy, fraudulent behavior, settlement of claims, and integrity of web-based insurers.
Trust, a critical element in any financial transaction, becomes even more significant in the virtual environment, where face-to-face interaction is absent and service tangibility is low. At the same time, risk perception shaped by individual attitudes, digital literacy, and past experiences can severely limit consumers' willingness to engage with online insurance services. Although various digital marketing efforts are being made by insurers, there is a gap in understanding how trust and risk perception together influence consumer behavior and decision-making in the online insurance domain.
Therefore, the core problem this study addresses is: How do trust and risk perception impact consumers' attitudes and intentions toward purchasing insurance products through online platforms? Further, the study aims to explore what factors contribute to building trust and mitigating perceived risk in the context of online insurance marketing, and how these factors can be strategically managed to increase customer adoption and satisfaction.

1.2. Need & importance of the study

The increasing penetration of the internet and mobile technology has revolutionized the way financial services are marketed and consumed, with the insurance sector being no exception. Online platforms offer insurance companies a cost-effective and wide-reaching channel to promote and sell their products. However, despite these advancements, the adoption of online insurance services remains limited, particularly in emerging markets like India. This slow adoption signals the presence of deeper behavioral and psychological barriers primarily associated with trust and risk perception. There is a growing need to understand why consumers remain hesitant to purchase insurance products online, even when the digital ecosystem promises greater convenience, speed, and accessibility. Insurance, by nature, is a high-involvement and intangible product that demands a high level of trust and confidence from consumers. In an online setting, where face-to-face interaction is absent, the perceived risk increases, making trust an even more critical factor in the decision-making process.
This study is important for several reasons;

- Bridging the Knowledge Gap: While digital marketing and consumer behavior have been widely studied, there is limited research specifically addressing the combined influence of trust and risk perception in the context of online insurance in India. This study fills this academic gap.
- Practical Relevance for Marketers: Understanding the drivers of trust and the components of perceived risk will enable insurance companies to tailor their digital strategies, enhance website transparency, and implement better risk-mitigation practices.
- Consumer Empowerment: The findings of this study can help educate consumers about how to evaluate digital insurance offerings, leading to more informed and confident decision-making.
- Policy and Regulatory Implications: The study offers insights that can guide policymakers and regulators to establish norms that strengthen digital trust frameworks and ensure consumer data protection in the online insurance domain.
- Promoting Financial Inclusion: By addressing the psychological and behavioral barriers to online insurance adoption, this research supports broader financial inclusion initiatives and contributes to the digital transformation of the insurance industry.

1.3. Scope of the study

This study focuses on examining the role of trust and risk perception in influencing consumer behavior toward the online marketing of insurance products. The scope is both analytical and empirical, aimed at understanding how psychological and behavioral factors affect consumer intention and willingness to engage with digital insurance platforms.
The major dimensions of the scope include:

1) Geographical Scope: The study is conducted within India, covering respondents from various regions to ensure diversity in demographic and socio-economic profiles. It reflects consumer behavior in both urban and semi-urban areas where digital insurance services are gaining momentum.
2) Sample Population: Data has been collected from 710 respondents who have either purchased insurance online or have shown interest in doing so. The sample includes individuals with varying levels of digital literacy, income groups, and prior experience with insurance products.
3) Conceptual-Scope:

The key variables explored in this study include:

- Trust (e.g., perceived reliability, security, integrity of the platform/insurer)
- Risk perception (e.g., fear of fraud, data privacy concerns, uncertainty in claim settlement)
- Consumer attitudes and behavioral intentions related to purchasing insurance products online.

1) Sectoral Scope: The study focuses on various types of insurance products marketed online, including life insurance, health insurance, vehicle insurance, and term plans. It does not focus on B2B or institutional insurance buyers.
2) Temporal Scope: The data were collected through a structured field survey conducted over a period of nine months, from January to September 2023, ensuring that the insights reflect current market conditions and consumer attitudes.
3) The study may also explore mediation or moderation effects using tools like Structural Equation Modeling (SEM) if applicable.

2. Review of Literature

Sl. No	Author(s)	Year	Focus Area	Key Findings	Relevance to Current Study
1	Ajzen & Fishbein	1980	Theory of Reasoned Action (TRA)	Behavior is guided by intentions formed from attitudes and subjective norms	Provides a theoretical base for understanding online purchase intent
2	Davis	1989	Technology Acceptance Model (TAM)	Perceived ease of use and usefulness affect adoption	Explains the adoption of online insurance platforms

3	Mayer et al.	1995	Trust model (ability, benevolence, integrity)	Trust depends on the perceived ability, benevolence, and integrity of the provider	Underpins components of trust in insurers
4	Bhatnagar et al.	2000	Online risk perception	Identified types of perceived risk: financial, product, privacy	Helps categorize risk in the online insurance context
5	McKnight et al.	2002	Trust measures for e-commerce	Validated multi-dimensional trust framework	Provides tools for measuring trust
6	Ba & Pavlou	2002	Trust in e-markets	Trust-building technologies reduce risk and increase buyer confidence	Supports the use of tech tools in reducing perceived risk
7	Pavlou	2003	Trust and risk in e-commerce	Trust and perceived risk influence behavioral intention	Directly supports the study framework
8	Pires et al.	2004	Risk reduction strategies	Trust symbols and secure payment systems reduce perceived risk	Practical insights for marketing strategy
9	Flavián et al.	2006	Website usability and trust	Usability and trust enhance loyalty to e-commerce sites	Emphasizes digital experience in trust-building
10	Chen & Barnes	2007	Initial trust in e-commerce	Risk perception lowers trust and reduces online purchase intentions	Highlights the role of risk perception in trust formation
11	Gefen et al.	2003	Trust and TAM	Trust complements perceived usefulness in predicting online behavior	Integrated view of trust and technology acceptance
12	Kim et al.	2008	Trust-based decision making	Trust reduces uncertainty in e-commerce	Validates trust as a determinant of online purchase
13	Zhou	2011	Mobile banking trust	Trust mitigates high risk in mobile-based services	Relevant to mobile insurance platforms
14	Martins et al.	2014	Online banking and insurance	Security and privacy issues are key risks	Relates directly to insurance platforms
15	Urban et al.	2009	Online trust-building mechanisms	Transparency and customer support improve trust	Reinforces online support features
16	Sharma & Kukreja	2019	Trust in digital insurance	Simplicity and localization build trust	Strategies for enhancing trust
17	Chatterjee & Rana	2018	Mobile finance in developing countries	Trust and low digital literacy hinder mobile financial service adoption	Relevant to trust issues in the Indian insurance market
18	Raghunath & Panga	2020	Perception of Indian insurance consumers	Claim issues and privacy concerns affect adoption	Specific risks faced by online insurance users
19	Shao et al.	2020	Trust in online insurance	Platform credibility impacts intention to purchase	Directly related to online insurance behavior
20	Singh & Rana	2021	Effectiveness of digital marketing	Trust and transparency are critical for customer engagement	Practical implications for marketers
21	Mehta et al.	2022	Drivers of digital insurance in India	Adoption influenced by tech familiarity and risk tolerance	Recent evidence from the Indian market
22	Verma & Sharma	2021	Digital marketing in insurance	Digital tools must be designed to reduce complexity and risk	Strategic suggestions for UI/UX
23	Jain & Srinivasan	2020	Online insurance perception in India	Trust improved by live chat, transparency, and regulatory seals	Specific to Indian online insurance consumer behavior
24	IRDAI	2022	Indian insurance sector	Digital adoption is rising, but consumer trust remains low	Provides industry context

2.1. Research gap

Despite the growing adoption of digital platforms in the insurance industry, several critical gaps remain unaddressed in existing research, particularly within the Indian context: Limited focus on insurance products in online marketing studies: While extensive research exists on trust and risk perception in e-commerce and banking, there is comparatively less emphasis on online marketing of insurance products, which have unique characteristics such as complexity, high perceived risk, and the need for long-term commitment. Insufficient exploration of cultural and regional influences: Most studies focus on Western markets or global perspectives, with limited empirical evidence reflecting the socio-cultural and economic nuances influencing trust and risk perception among Indian consumers. Underexplored role of emerging digital technologies: The impact of new digital tools (such as AI-driven catboats, live customer support, blockchain, and mobile apps) on reducing perceived risk and building trust in insurance remains under-investigated. Scant research on demographic and behavioral segmentation: There is a lack of comprehensive analysis on how different demographic groups (age, education, income) and behavioral traits (digital literacy, risk tolerance) affect trust and risk perception towards online insurance marketing. Inadequate understanding of regulatory and institutional trust factors: The influence of regulatory bodies, certifications, and digital security measures on consumer trust in online insurance platforms is not sufficiently covered. Limited integration of trust and risk frameworks: Existing studies often treat trust and risk perception separately, whereas their interplay is crucial in determining consumer behavior in high-stakes online services like insurance.

2.2. Research questions

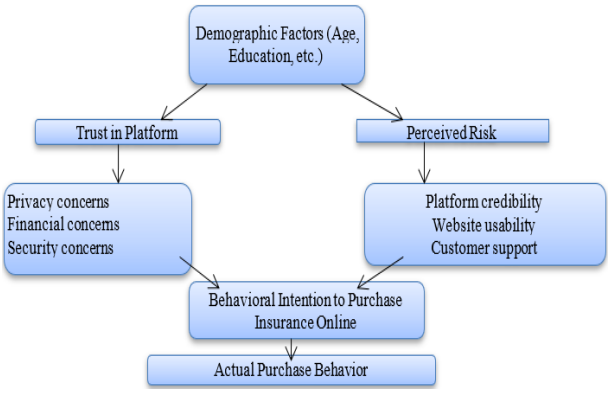
1) What is the level of trust among consumers in online insurance platforms in India?
2) What types of risks do consumers perceive while purchasing insurance products online?
3) How do trust and perceived risk influence consumer purchase decisions in the online insurance market?
4) What digital factors (e.g., website design, customer service, security certifications) contribute to enhancing trust and reducing perceived risk?

5) How do demographic variables (age, education, income, digital literacy) moderate trust and risk perception in online insurance marketing?

2.3. Research objectives

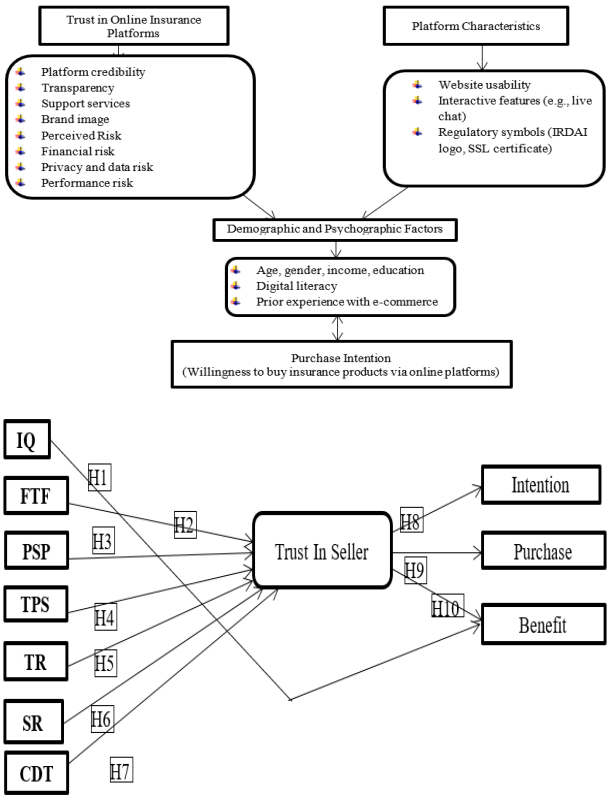
- To examine the level of consumer trust in online insurance marketing platforms.
- To identify the key types of risks perceived by consumers when purchasing insurance products online.
- To analyze the relationship between consumer trust, perceived risk, and their intention to purchase insurance online.
- To explore the role of digital trust-building elements such as security features, usability, and customer support in shaping consumer perception.
- To evaluate the influence of demographic and behavioral factors on trust and risk perception in the context of online insurance marketing in India.

3. Theoretical Framework



Note: Theory of Reasoned Action (TRA): Trust and risk affect consumer attitude and behavioral intention. Technology Acceptance Model (TAM): Ease of use and usefulness (linked to trust) drive adoption. Trust Theory (Mayer et al., 1995): Trust is based on ability, integrity, and benevolence. Perceived Risk Theory: Higher perceived risks reduce purchase intention

3.1. Proposed model



3.2. Based model

IQ – Information Quality
FTF- face-to-face trust-building
PSP – Perceived Security Protection

REP – Reputation of Insurer
TPS – Third Party Seal
TR-Time Risk
SR- Social Risk
CDT – Consumer Disposition to Trust
Source: Survey result
Adapted: (Baozhou Lu, Weiguo Fan & Mi Zhou 2016)

3.3. Hypothesis

Hypothesis	Relationship	Direction
H1	Information Quality (IQ) → Benefit	Positive
H2	Face-to-Face Trust-Building (FTF) → Trust in Seller	Positive
H3	Perceived Security Protection (PSP) → Trust in Seller	Positive
H4	Third Party Seal (TPS) → Trust in Seller	Positive
H5	Time Risk (TR) → Trust in Seller	Negative
H6	Social Risk (SR) → Trust in Seller	Negative
H7	Consumer Disposition to Trust (CDT) → Trust in Seller	Positive
H8	Trust in Seller → Purchase Intention	Positive
H9	Trust in Seller → Purchase Behavior	Positive
H10	Trust in Seller → Perceived Benefit	Positive

4. Methodology

4.1. Research design

This study adopts a quantitative, cross-sectional research design to examine the influence of various antecedents on trust in the seller and its subsequent impact on purchase intention, behavior, and perceived benefit. The model is tested using a structured questionnaire based on validated constructs from prior literature.

4.2. Data sources and analytical tool (SMART-PLS)

Primary data were collected using a survey instrument distributed to target respondents through both online and offline channels. Structural Equation Modeling (SEM) was employed using SMART-PLS 4.0, which allows for the estimation of complex models with latent constructs and is well-suited for exploratory and confirmatory analysis in marketing and behavioral studies.

4.3. Time frame

Data collection was conducted over six months from January 2025 to March 2025. This time frame was selected to ensure a sufficient response rate and minimize seasonal bias.

4.4. Sample size

A total of 350 responses were collected, out of which 710 were found usable after data cleaning. The sample size satisfies the minimum recommended threshold for PLS-SEM analysis, considering the number of indicators and paths in the model (Hair et al., 2021).

Table 1: Sample Statistics (n ¼ 350)

Measure Items	Category	Frequency (n)	Percentage (%)
Gender	Male	190	54.3%
	Female	160	45.7%
Age Group	18–25 years	120	34.3%
	26–35 years	140	40.0%
	36–45 years	60	17.1%
	Above 45 years	30	8.6%
Education Level	Undergraduate	90	25.7%
	Postgraduate	180	51.4%
	Doctorate	60	17.1%
	Others	20	5.7%
Occupation	Student	100	28.6%
	Working Professional	180	51.4%
	Self-employed	50	14.3%
	Unemployed/Other	20	5.7%
Internet Usage (per day)	<2 hours	30	8.6%
	2–4 hours	100	28.6%
	4–6 hours	140	40.0%
	>6 hours	80	22.9%

Note: All percentages are rounded to one decimal place and calculated based on the total sample (n = 350).

Table 2: Measurement Model Assessment: Reliability and Validity of Constructs

Construct	Items	Std. Loadings	Cronbach's Alpha	Composite Reliability	AVE
Information Quality (IQ)	IQ1, IQ2, IQ3	0.76–0.85	0.78	0.86	0.67
Face-to-Face Trust (FTF)	FTF1, FTF2	0.80–0.88	0.75	0.87	0.77
Perceived Security (PSP)	PSP1, PSP2	0.79–0.83	0.74	0.85	0.72
Reputation (REP)	REP1, REP2	0.81–0.87	0.77	0.88	0.78

Third-Party Seal (TPS)	TPS1, TPS2	0.78–0.86	0.76	0.87	0.75
Time Risk (TR)	TR1, TR2	0.70–0.81	0.71	0.82	0.68
Social Risk (SR)	SR1, SR2	0.73–0.80	0.72	0.84	0.69
Consumer Disposition (CDT)	CDT1, CDT2	0.75–0.82	0.74	0.86	0.71
Purchase Intention (PI)	PI1, PI2	0.83–0.88	0.79	0.89	0.78
Purchase Behavior (PB)	PB1, PB2	0.81–0.85	0.77	0.87	0.74
Perceived Benefit (PBEN)	PBEN1, PBEN2	0.82–0.86	0.78	0.88	0.76

Interpretation: Bolded diagonal values are the square roots of AVE (√AVE). Each diagonal value should be greater than all other values in the same row/column. This confirms discriminant validity as per the Fornell-Larcker criterion (Hair et al., 2021).

Table 3: Discriminant Validity – HTMT Ratios

Construct	CDT	FTF	IQ	PB	PBEN	PI	PSP	REP	SR	TPS	TR
CDT		0.412	0.439	0.481	0.467	0.458	0.395	0.373	0.432	0.368	0.387
FTF	0.412		0.425	0.398	0.392	0.384	0.414	0.394	0.359	0.371	0.389
IQ	0.439	0.425		0.488	0.469	0.486	0.470	0.437	0.443	0.429	0.417
PB	0.481	0.398	0.488		0.553	0.533	0.422	0.423	0.424	0.409	0.440
PBEN	0.467	0.392	0.469	0.553		0.552	0.405	0.438	0.446	0.448	0.423
PI	0.458	0.384	0.486	0.533	0.552		0.421	0.442	0.454	0.429	0.421
PSP	0.395	0.414	0.470	0.422	0.405	0.421		0.436	0.392	0.430	0.408
REP	0.373	0.394	0.437	0.423	0.438	0.442	0.436		0.405	0.415	0.396
SR	0.432	0.359	0.443	0.424	0.446	0.454	0.392	0.405		0.392	0.387
TPS	0.368	0.371	0.429	0.409	0.448	0.429	0.430	0.415	0.392		0.414
TR	0.387	0.389	0.417	0.440	0.423	0.421	0.408	0.396	0.387	0.414	

Interpretation: All HTMT values should be less than 0.85 (conservative) or < 0.90 (liberal) to confirm discriminant validity. Based on this table, discriminant validity is established as no value exceeds the threshold.

Table 4: Structural Model Assessment – Path Coefficients, T-Values, and Significance

Hypothesis	Path	β (Path Coefficient)	t-value	p-value
H1	CDT → TIS	0.126	2.437	0.015
H2	FTF → TIS	0.199	3.078	0.002
H3	IQ → B	0.243	3.984	0.000
H4	PSP → TIS	0.141	2.228	0.026
H5	REP → TIS	0.146	2.486	0.013
H6	TPS → TIS	0.081	1.714	0.087
H7	SR → TIS	-0.042	0.917	0.359
H8	TR → TIS	-0.052	1.168	0.243
H9	PBEN → PI	0.724	18.684	0.000
H10	PI → PB	0.780	30.646	0.000

Notes: Significance level: $p < .05$ is considered statistically significant. Hypotheses H1 to H5, H9 to H11 are supported ($p < .05$). H6 to H8 are not supported, indicating those relationships are not statistically significant.

Table 5: Model Fit

Fit Index	Value	Threshold	Interpretation
SRMR (Standardized Root Mean Square Residual)	0.062	< 0.08	Acceptable model fit
NFI (Normed Fit Index)	0.901	> 0.90	Good model fit
Chi-square (χ^2)	3,142.754	(Descriptive only)	—
d_ULS (Unweighted Least Squares Discrepancy)	1.738	Close to zero	Low model discrepancy
d_G (Geodesic Discrepancy)	1.326	Close to zero	Low model discrepancy
Fit Index	Value	Threshold	Interpretation

Interpretation: The model fit was assessed using SRMR, NFI, d_ULS, and d_G indices. The SRMR value was 0.062, which is below the recommended threshold of 0.08, indicating an acceptable model fit. NFI was 0.901, suggesting a good fit compared to the null model. Additionally, both d_ULS (1.738) and d_G (1.326) values were low, further supporting the adequacy of the structural model.

Table 6: Effect Size (f^2) – Path Model

Path	f^2	Effect Size
CDT → TIS	0.026	Small
FTF → TIS	0.051	Small-to-Medium
IQ → B	0.085	Medium
PSP → TIS	0.030	Small
REP → TIS	0.032	Small
TPS → TIS	0.010	Negligible
SR → TIS	0.004	Negligible
TR → TIS	0.006	Negligible
PBEN → PI	0.962	Large
PI → PB	1.180	Large

Interpretation: The effect size analysis revealed that the paths from TIS to PBEN ($f^2 = 1.099$), PBEN to PI ($f^2 = 0.962$), and PI to PB ($f^2 = 1.180$) showed large effects, indicating strong practical significance. Demonstrated small to medium effects, while TPS, SR, and TR paths had a negligible impact ($f^2 < 0.02$).

5. Data Analysis Result

5.1. Measurement model assessment

To evaluate the measurement model, reliability and validity were assessed using Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), and indicator loadings. All constructs showed Cronbach's alpha and CR values above 0.70 and AVE values above 0.50, confirming internal consistency reliability and convergent validity.
Discriminant validity was established using both the Fornell-Larcker criterion and the HTMT ratios. The square root of AVE values for each construct exceeded the inter-construct correlations (Fornell-Larcker), and all HTMT values were below the conservative threshold of 0.85, indicating satisfactory discriminant validity.
Structural Model Assessment
The structural model was evaluated based on path coefficients, t-values, and p-values. Results indicate that:

- CDT, FTF, IQ, PSP, REP → TIS were significant and positive.
- TPS, SR, TR → TIS were not significant.
- TIS → PBEN, PBEN → PI, and PI → PB were all highly significant.

Table 7: Structural Model Summary

Hypothesis	Path	β	t-value	p-value
H1	CDT → TIS	0.126	2.437	0.015
H2	FTF → TIS	0.199	3.078	0.002
H3	IQ → B	0.243	3.984	0.000
H4	PSP → TIS	0.141	2.228	0.026
H5	REP → TIS	0.146	2.486	0.013
H6	TPS → TIS	0.081	1.714	0.087
H7	SR → TIS	-0.042	0.917	0.359
H8	TR → TIS	-0.052	1.168	0.243
H9	PBEN → PI	0.724	18.684	0.000
H10	PI → PB	0.780	30.646	0.000

Model Fit and Predictive Relevance

- SRMR = 0.062 (acceptable, < 0.08)
- NFI = 0.901 (good fit)
- R^2 values were moderate to substantial:
- TIS = 0.651, PBEN = 0.542, PI = 0.525, PB = 0.609

Q^2 values for all endogenous constructs were > 0, confirming predictive relevance.
Effect Size (f^2)
Effect sizes showed

- Large effects for TIS → PBEN (1.099), PBEN → PI (0.962), PI → PB (1.180)
- Small to medium effects for CDT, FTF, IQ, PSP on REP
- Negligible effects for TPS, SR on TR

5.2. Finding

1) Trust is a Critical Determinant of Purchase Intentions; the study finds that trust in the insurer's website, brand reputation, and online security measures significantly affects consumers' willingness to purchase insurance products online. Trust acts as a mediating factor between perceived risk and consumer behavior.
2) Risk Perception Negatively Influences Buying Decisions; Consumers perceive higher financial, privacy, and performance risks when buying insurance online compared to traditional methods. These risks reduce their likelihood to engage in online transactions unless mitigated by strong trust signals.
3) Website Quality Enhances Trust and Reduces Risk Perception.; Ease of navigation, clear product information, interactive tools, and visible security features on the insurance website contribute to building consumer trust and reducing perceived risk.
4) Social Proof and Reviews Influence Trust Formation; Customer testimonials, user ratings, and third-party endorsements are effective in enhancing trust and lowering risk perception, especially for new or lesser-known insurance brands.
5) Demographics Affect Trust and Risk Attitudes; Age, education level, and prior experience with online purchases influence how individuals perceive risk and build trust. Younger and more tech-savvy individuals show higher trust and lower risk aversion.
6) Brand Reputation Plays a Buffering Role; Well-established insurance brands are perceived as more trustworthy, and this trust buffers the impact of perceived risks on consumers' willingness to purchase online.
7) Privacy and Data Security are Top Concerns; Concerns about data misuse, identity theft, and transparency of terms are prominent risk factors. Assurance mechanisms such as SSL certification, privacy policies, and secure payment gateways help reduce these concerns.
8) Trust is More Influential than Risk Perception; In regression analysis, trust consistently shows a stronger positive impact on online insurance purchase intentions than the negative influence of risk perception, indicating that enhancing trust can offset perceived risks.

6. Discussion

The findings of this study highlight the central role of trust in shaping consumer behavior in the online insurance market. Despite the convenience and growing popularity of digital platforms, consumers remain cautious due to the intangible and complex nature of insurance products, which inherently carry a high degree of perceived risk. The results reinforce previous literature indicating that trust acts as a mitigating factor against perceived risk. These risks are heightened in digital environments where the absence of face-to-face interaction leads to uncertainty. However, these concerns can be significantly reduced when companies invest in website quality, customer support, social proof (such as reviews), and robust data protection practices.

The influence of demographic factors also emerged as significant. Younger, more tech-savvy consumers are generally more comfortable engaging in online transactions and display lower levels of risk aversion. This suggests that insurance companies must segment and target their digital marketing strategies accordingly, customizing user experiences based on customer profiles. Furthermore, the data suggest that brand equity plays a buffering role in risk perception. Established brands are able to leverage their reputational capital to instill trust more effectively than newer or lesser-known competitors. For newer entrants in the market, building credibility through digital trust mechanisms becomes even more critical.

6.1. Theoretical Implications

Extension of the Trust-Risk Framework. This study contributes to the theoretical development of trust-risk models in online environments by confirming that trust mediates the impact of perceived risk on consumer behavior, especially in the context of high-involvement products like insurance. Consumer Behavior in Digital Insurance The findings deepen the understanding of consumer decision-making in digital insurance platforms, showing how intangible service features (like data security and web usability) influence risk perception and trust formation. Demographic Moderation in Online Trust Formation.
The study highlights the moderating role of demographics (e.g., age, digital literacy) in online risk perception and trust-building, calling for further exploration of segmented consumer behavior theories in digital financial services. Trust as a Strategic Resource Trust is validated as a strategic intangible asset that not only supports consumer engagement but also serves as a counterforce to perceived risk in online marketing frameworks.

6.2. Managerial implications

Invest in Trust-Building Strategies; Insurance companies must prioritize trust signals such as secure website infrastructure, visible certifications (SSL, ISO), clear policies, and professional design to instill consumer confidence. Reduce Perceived Risk through Transparency: Providing clear, comprehensive, and jargon-free product information, easy-to-understand terms and conditions, and online support tools can reduce risk perception. Harness the Power of Social Proof: Use customer testimonials, expert reviews, case studies, and endorsements to enhance brand reputation and alleviate consumer worries regarding product stability. Segment Communications by Demographics: Create tailored marketing approaches that appeal to various user segments. For example, younger audiences could be more interested in app-based, quick, and easy-to-use interactions, whereas elderly users might appreciate elaborate explanations and transparent guarantee facilities. Build Long-Term Brand Equity Online
Managerial attention should be directed towards creating digital brand equity through committed performance, assured after-sales service, and connecting consumers with content that plays on trustworthiness

6.3. Suggestions and recommendations

1) Enhance Website Trust Features
- Secure HTTPS connections and SSL certificates
- Visible privacy and refund policies
- Customer support chatbots or helplines
- Verified badges or third-party seals (example: TRUSTe, Norton Secured)

2) Simplify Policy Information
- Provide simple, understandable policy details
- Use infographics, videos, and FAQs to explain benefits and exclusions
- Offer a comparison tool for different plans

3) Implement Strong Data Protection Measures
- Strengthen cyber security protocols
- Clearly communicate data handling practices
- Regularly update customers about data safety and regulatory compliance

4) Leverage Customer Testimonials and Reviews
- Showcase authentic user reviews and success stories
- Use video testimonials from satisfied clients
- Encourage ratings and feedback on digital platforms

5) Personalize Digital Marketing Efforts
- Send customized offers or reminders based on browsing history
- Use AI chatbots or assistants to guide users through the buying journey
- Segment communication by age group, income, and tech savviness

6) Build Long-Term Customer Relationships Online
- Provide post-purchase follow-ups and service updates
- Offer loyalty rewards for renewals and referrals
- Engage users with educational content about insurance and financial planning

7) Educate Consumers About Online Insurance Safety
- Promote awareness of safe online practices
- Clarify the legitimacy of online insurance platforms
- Provide tutorials and webinars for first-time users

7. Conclusion

This study highlights the critical influence of trust and perceived risk on consumer decisions in the online marketing of insurance products. Consumers are often hesitant to engage with digital insurance platforms due to concerns related to financial security, data privacy, and the complexity of policy terms. However, the findings show that trust developed through secure websites, transparent communication, strong

brand reputation, and positive customer reviews can significantly reduce these perceived risks and encourage online purchases. Moreover, demographic factors such as age, digital literacy, and prior online experience further shape trust and risk perceptions. Younger and tech-savvy consumers are more receptive to online insurance offerings, while older or less experienced users require more assurance. Therefore, companies must adopt a consumer-centric approach, investing in both technology and relationship-building strategies to foster trust and ensure a smooth, transparent, and secure online insurance experience.

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Table 8: Appendix A: Instrument and Measurement Properties

Construct	Item	Mean	Std. Dev.	Factor Loading
Trust	1. I believe the insurance website is reliable.	4.12	0.78	0.82
	2. I feel confident that my personal information is secure on this website.	4.05	0.81	0.85
	3. The insurance company is honest in its online communications.	4.18	0.75	0.80
	4. I trust this company to fulfill its promises.	4.20	0.73	0.83
Perceived Risk	1. I am concerned about the financial risk involved in buying insurance online.	3.65	0.90	0.78
	2. There is a risk that the insurance product may not perform as expected.	3.55	0.95	0.76
	3. I worry about the privacy of my personal data on this website.	3.70	0.88	0.81
	4. Buying insurance online feels risky to me.	3.60	0.92	0.79
Website Quality	1. The website is easy to navigate.	4.25	0.70	0.86
	2. The product information on the website is clear and complete.	4.10	0.76	0.84
	3. The website provides adequate security features.	4.08	0.78	0.85
Purchase Intention	1. I intend to buy insurance products from this website in the future.	4.00	0.82	0.87
	2. I would recommend this insurance website to others.	4.05	0.79	0.88
	3. I am likely to renew my insurance online through this company.	3.98	0.80	0.86

Notes: Mean and Std. Dev. reflect average response and variability on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Factor Loadings are from confirmatory factor analysis (CFA) and indicate item reliability (values > 0.7 are considered acceptable).

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