# The Mediating Role of Risk, Credibility, and Convenience in the Relationship between Initial Trust and Purchase Intention in Online Shopping

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## Abstract

The concept of e-commerce, or online shopping, has witnessed significant growth in recent years, driven by factors such as convenience and cost-effectiveness. However, concerns related to initial trust, perceived risks, credibility of online platforms, and convenience have hindered some consumers from making purchases online. This study aims to investigate the relationship between initial trust and purchase intention among online shoppers, with a focus on the mediating factors of risk, credibility, and convenience. The research will be conducted in the Klang Valley region of Malaysia, targeting trainees who are active online shoppers. Data will be collected through a structured questionnaire, and statistical methods such as regression analysis and mediation analysis will be employed for data analysis. The study aims to provide valuable insights into the factors that shape initial trust and their impact on purchase intention, contributing to the existing body of knowledge in the field of e-commerce. The findings of this research will have practical implications for online retailers, enabling them to develop strategies to enhance trust, reduce perceived risk, establish credibility, and improve convenience, ultimately driving purchase intention among online shoppers.

## Keywords

E-Commerce, Online Shopping, Initial Trust, Purchase Intention, Risk, Credibility, Convenience, Malaysia

## 1. Introduction

The growth of e-commerce, or online shopping, has revolutionized the way people purchase goods and services, allowing them to buy directly from sellers

on the Internet without intermediaries (Li & Zhang, 2002). Convenience has been a significant driver of the shift to online shopping, with consumers valuing the ability to shop anytime and enjoy convenient services like curbside pickup and same-day delivery (Lazaris, 2021). The share of total retail sales from online sales has been steadily increasing, reaching over 10% and bringing in billions of dollars in adjusted sales (U.S. Department of Commerce, 2019). The COVID-19 pandemic further accelerated the adoption of online shopping, with a significant increase in online shopping activities reported among consumers in several countries (McKinsey & Company, 2020; Marek, 2021).

Despite the growth in online shopping, concerns about risks, credibility, and convenience have hindered some consumers from making online purchases (Liu & Liang, 2011). Issues such as privacy breaches, online fraud, product quality disparities, and delayed deliveries contribute to a lack of trust in online shopping (Garcia, 2015; Davis, 2016). To address these concerns, online retailers have implemented secure payment systems, encryption technologies, transparent return policies, and prompt customer service (Smith et al., 2019; Jones, 2017).

However, there is a need for comprehensive investigation into how initial trust influences consumers' purchase intention, and the mediating effects of risk, credibility, and convenience in this relationship (Suh & Han, 2003; Al-Debei et al., 2015). Previous research in the Malaysian context has provided limited attention to these factors (Alfhian, Azizi, & Yee, 2009; Leen, Ramayah, & Omar, 2010; Hashim, Ghani, & Said, 2009). This study aims to fill this research gap and gain a deeper understanding of the interplay between initial trust, risk, credibility, convenience, and purchase intention among online shoppers in Malaysia.

The research objectives are to assess the sequential mediated relationships between initial trust and purchase intention through risk, risk and credibility, risk and convenience, credibility and convenience, and risk, credibility, and convenience. Additionally, the direct effect of initial trust on purchase intention will be examined. The research questions focus on understanding the relationships between initial trust, risk, credibility, convenience, and purchase intention among online shoppers in Malaysia.

## 2. Framework of Hypotheses

The research hypotheses are as follows: 1) there is a significant indirect effect of Initial Trust on Purchase Intention through Risk, 2) there is a significant indirect effect of Initial Trust on Purchase Intention through the sequential mediation of Risk and Credibility, 3) there is a significant indirect effect of Initial Trust on Purchase Intention through the sequential mediation of Risk and Convenience, 4) there is a significant indirect effect of Initial Trust on Purchase Intention through the sequential mediation of Credibility and Convenience, 5) there is a significant indirect effect of Initial Trust on Purchase Intention through the sequential mediation of Risk, Credibility, and Convenience, and 6) there is a sig-

nificant direct effect of Initial Trust on Purchase Intention.

## 2.1. The Role of Risk as a Mediator

Hypothesis One: A substantial indirect relationship exists between initial trust and purchase intention, mediated by the consumers' perception of risk. The tenet is grounded in the notion that a trusting environment can potentially allay perceived risks, paving the way for purchase considerations.

## 2.2. Sequential Mediation by Risk & Credibility

Hypothesis Two: Initial trust, in its capacity, shapes purchase intention through a combined mediating effect of risk and credibility. It posits that trust can serve a dual purpose: dampening risk perceptions and augmenting vendor credibility, thereby influencing buying considerations.

## 2.3. Interplay of Risk & Convenience as Mediators

Hypothesis Three: Initial trust carves its influence on purchase intention through the dual mediation of risk and convenience. It suggests that platforms enjoying higher trust may be deemed more convenient, and in conjunction with reduced risk perceptions, may bolster purchase intent.

## 2.4. Credibility & Convenience in Tandem Mediation

Hypothesis Four: Initial trust's sway over purchase intention is molded through the dual mediation of credibility and convenience. Trusted platforms, by virtue of their stature, might be viewed as both credible and user-friendly, thus amplifying purchasing tendencies.

## 2.5. Triple Mediation by Risk, Credibility & Convenience

Hypothesis Five: Initial trust operates a domino effect on purchase intention, mediated sequentially by risk, credibility, and convenience. This hypothesis elucidates the multifaceted pathways through which trust impacts buying behaviors.

## 2.6. Direct Influence on Purchase Intention

Hypothesis Six: Independent of the mediators, initial trust wields a pronounced direct influence on purchase intention, underscoring trust's unmediated potency in guiding consumer choices.

## 2.7. Towards a Comprehensive Understanding

The set of hypotheses, though firmly anchored in Hayes' conceptual underpinnings, offers a more detailed exposition of how trust interfaces with other pivotal constructs in the e-commerce sphere. By weaving this intricate tapestry, the study endeavors to provide a richer academic narrative, aiding scholars and practitioners in the domain of online commerce.

## 3. Method

### 3.1. Research Design

This study employs a quantitative research design to examine the relationship between initial trust and purchase intention, as well as the mediating factors of risk, credibility, and convenience in the context of online shopping. A cross-sectional survey approach will be utilized to collect data from Perkeso Penjana EIS Trainees who engage in online shopping in Malaysia.

### 3.2. Sampling Technique

A combination of probability sampling and non-probability sampling techniques will be used to select the participants. The target population includes Perkeso Penjana EIS Trainees who engage in online shopping. A nested sampling approach will be employed, where sample members selected for each stage of the study will serve as a sampling frame for subsequent stages. The sample size will be determined to ensure adequate representation and minimize potential biases. The research combined both probability and non-probability sampling techniques, using nested sampling as described by Collins, Onwuegbuzie, and Jiao (2007). The sample size was set at 500 respondents out of a target population of 23,206 web shoppers in Malaysia. Power analysis, as recommended by Bruin (2006) and detailed by Faul, Erdfelder, Buchner, and Lang (2009), was employed to finalize the sample size considering parameters such as desired power, alpha significance level, effect size, and the main predictor variable. Convenience and snowball sampling strategies were employed to gather the sample. The study took into account alpha value, power, and effect size, as highlighted by Cohen (1977), when determining the minimum sample size for hypothesis testing. The alpha value was set at 0.05 and power at 0.95. Participants should have a minimum of one year of full-time employment and be currently employed within Malaysia. The Krejcie and Morgan's (1970) sample size table was referenced, suggesting a sample size of 500 for populations exceeding one million convenience sampling strategy was used, leading to 520 responses, of which only 500 were considered suitable for analysis.

### 3.3. Probability and Non-Probability Sampling Techniques in the Study

For the current study, the principle of Krejcie and Morgan's (1970) sample size table was adopted. This table is highly respected in the realm of research for its ability to provide guidance on appropriate sample sizes based on a given population. Given that our study focused on a population exceeding one million individuals, the table recommended a sample size of 500 participants to achieve a representative sample.

### 3.4. Non-Probability Sampling

In non-probability sampling, not all members of the population have a known or

equal chance of being selected. This can lead to biases, but it's often chosen for reasons of convenience, cost-effectiveness, or when a representative sample is not a priority.

In this research, a convenience sampling strategy was applied. Convenience sampling involves collecting data from participants who are conveniently available. This method resulted in a collection of 520 responses. However, given the nature of this sampling method and inherent risks of incomplete or non-representative data, some of the gathered responses had to be excluded. A comprehensive review of the responses revealed that 20 of them were not suitable for various reasons, leaving us with the desired 500 suitable responses. Data Collection:

Data will be collected through an online survey administered to the selected participants. The survey will include validated measurement scales to assess the variables of interest, including initial trust, risk perception, credibility perception, convenience perception, and purchase intention. The survey will be pretested to ensure clarity and validity of the questionnaire items.

## 3.5. Measurement Instruments

To measure the constructs of initial trust, risk, credibility, convenience, and purchase intention, established measurement scales will be utilized. These scales have been validated in previous research and have demonstrated satisfactory reliability and validity. Examples of measurement scales include the Trust Scale (Mcknight et al., 2002), the Perceived Risk Scale (Bauer et al., 2005), the Credibility Scale (Flanagin et al., 2008), the Convenience Scale (Kolsaker & Lee-Kelley, 2008), and the Purchase Intention Scale (Dodds et al., 1991). The scales will be adapted and modified as necessary to align with the specific context of online shopping among Perkeso Penjana EIS Trainees.

## 3.6. Data Analysis

The collected data will be analyzed using the Hayes Process Macro Model 6 for SPSS. This macro enables the examination of multiple mediators in a serial mediation model. The mediation analysis will involve calculating various indirect effects, including the indirect effect of initial trust on purchase intention through specific mediators (e.g., risk, credibility, convenience). The direct effect of initial trust on purchase intention will also be assessed. Descriptive statistics, validity and reliability analyses, and hypothesis testing will be conducted to interpret the findings and evaluate the research hypotheses.

## 4. Results

The mediation analysis conducted using the PROCESS SPSS macro (Hayes, 2013) provided valuable insights into the indirect effects and mediating mechanisms underlying this relationship. The results demonstrated significant positive correlations between initial trust and risk, credibility, and convenience, as well as between purchase intention and these mediating factors. These findings

support the hypothesis that initial trust influences purchase intention both directly and indirectly through the mediating variables.

The analysis revealed a positive correlation between initial trust and risk, indicating that as initial trust increases, so does the perception of risk. This, in turn, influences a higher purchase intention. Similarly, higher levels of initial trust were found to contribute to a greater perception of credibility, which positively influences purchase intention. Additionally, initial trust played a role in perceiving convenience, subsequently influencing purchase intention positively.

The mediation analysis confirmed the presence of significant indirect effects of initial trust on purchase intention through the mediating factors. Specifically, the indirect effect analysis revealed a statistically significant indirect effect of initial trust on purchase intention through risk. This suggests that participants who differed by one unit in their reported initial trust were estimated to differ by. 14 units in initial trust due to risk, subsequently leading to higher purchase intention. The findings also supported the indirect effects of initial trust on purchase intention through the sequential mediation of risk and credibility, as well as through the sequential mediation of credibility and convenience.

These results contribute to the understanding of the relationship between initial trust and purchase intention in the context of online shopping. They emphasize the importance of managing risk, credibility, and convenience as mediating factors to enhance purchase intention. By establishing and maintaining trust, mitigating risk, building credibility, and providing convenient online shopping experiences, businesses can influence consumers' purchase intentions positively.

The findings have theoretical implications, as they provide empirical evidence supporting the proposed mediating mechanisms in the literature. The results expand our understanding of the factors influencing purchase intention and shed light on the underlying processes driving consumer behavior in the online shopping environment. Practically, these findings offer valuable insights for businesses operating in the online marketplace. Understanding the mediating factors and their influence on purchase intention can inform marketing strategies and help businesses design and optimize their online platforms to foster trust, reduce risk, enhance credibility, and provide convenience.

## 5. Future Directions for Research

As we reflect on the ever-evolving landscape of e-commerce and the burgeoning significance of trust, it's evident that the nexus of online commerce and consumer trust remains a dynamic frontier. The following future directions can steer the trajectory of research, promising profound revelations and practical implications:

Adaptive Security Protocols: With the ever-evolving nature of cyber threats, research needs to focus on adaptive security measures that can predict and counteract emerging threats. This includes exploring the convergence of artifi-

cial intelligence and cybersecurity in predicting threats to e-commerce platforms, thereby safeguarding consumer trust.

AR/VR in E-Commerce: As Augmented and Virtual Reality technologies burgeon, their role in the realm of e-commerce remains largely untapped. How might AR/VR enhance online shopping experiences? Can these immersive technologies amplify consumer trust? Investigating these interfaces can open up new horizons.

Hyper-Personalization vs. Privacy: As algorithms get better at understanding consumer preferences, the line between personalization and privacy begins to blur. Future research should delve into this trade-off: how much personalization is too much, and at what point does it start eroding trust?

Neurological Bases of Trust: Advancements in neuroimaging techniques can allow researchers to delve deeper into the neurological substrates of trust. How do different online stimuli affect brain regions related to trust? Neuromarketing, as an interdisciplinary approach, can offer insights into the very physiology of online trust.

Decentralized Trust Systems: The rise of blockchain technologies and decentralized finance heralds a potential shift in how trust is established online. Exploring the intersection of blockchain, smart contracts, and e-commerce can illuminate new paradigms of trust, anchored in transparency and decentralization.

Trust Repair Mechanisms: In cases where trust is breached, how can e-commerce platforms restore it? Delving into post-breach strategies, reparative communication, and tangible actions can offer platforms a roadmap to reclaiming consumer confidence.

Sociocultural Dynamics of Trust: Different cultures may have distinct trust determinants and thresholds. A cross-cultural comparative study can reveal how sociocultural norms and values shape trust perceptions in e-commerce.

Trust in Emerging Technologies: As the Internet of Things (IoT), drones for delivery, and other cutting-edge technologies gain traction, their implications for trust in e-commerce remain largely uncharted. How do consumers perceive and trust these technologies when intertwined with their online shopping experiences?

Regulatory Frameworks and Trust: With increasing scrutiny on e-commerce platforms, how do regulatory frameworks and governmental oversight influence consumer trust? Exploring the balance between regulation and innovation can shed light on trust dynamics in a more structured e-commerce environment.

Generational Shifts in Trust: As digital natives become a larger segment of the consumer base, how might their innate trust determinants differ from older generations? A longitudinal study comparing generational trust dynamics can offer valuable insights.

## 6. Limitations of This Study

However, it is important to acknowledge the limitations of this study. The research relied on self-report measures and a cross-sectional design, which may

limit the ability to establish causality and generalize the findings. Future research should consider employing experimental or longitudinal designs to further examine the causal relationships between the variables. Additionally, exploring cultural and contextual factors can provide a more comprehensive understanding of trust and purchase intention in diverse online shopping contexts.

## 7. Practical Implications

The digital marketplace, vibrant and tumultuous, demands e-businesses to be agile, adaptive, and more importantly, trustworthy. For firms, especially the newcomers in the digital market, navigating the intricate dynamics of trust isn't a mere exercise in strategy but a fundamental cornerstone for brand establishment and growth.

The research here provides e-businesses with a meticulously crafted framework that demystifies the determinants of initial trust and Purchase Intention. This framework isn't just a theoretical model; it is a pragmatic tool that allows businesses, irrespective of their lifecycle stage, to introspect, recalibrate, and refine their digital strategies. With data breaches and cyber threats looming large, trust becomes a tangible asset, influencing customer engagement, loyalty, and market positioning.

This research equips policymakers with nuanced insights, enabling them to strike a harmonious balance between fostering entrepreneurial innovation and ensuring consumer protection. The findings underscore the pervasive anxieties that often mar the online shopping experience, emphasizing the need for robust, responsive, and comprehensive policies. Policymakers are presented with a roadmap that not only addresses current challenges but also anticipates potential pitfalls, ensuring that the e-commerce ecosystem thrives in an environment of trust and security. In the world of e-commerce, trust is the invisible currency that drives every transaction. Trust, being intangible, demands a nuanced understanding of its components and their manifestations in online behavior. This research, while robust in its exploration of trust's theoretical aspects, also endeavors to provide concrete guidelines for online retailers and policymakers. These guidelines, rooted in empirical findings, aim to bridge the gap between theoretical knowledge and its real-world application. For online retailers, the implications underscore the actionable strategies that can enhance user trust, optimize the user experience, and bolster their market position. For policymakers, the implications shed light on crafting responsive policies that not only fuel the growth of e-commerce but also ensure the safety and trust of its users.

## 8. Conclusion

The discussion in this study aimed to investigate the relationship between initial trust and purchase intention, mediated by factors such as risk, credibility, and convenience in the context of online shopping. The results of the analysis shed light on the complex relationships between these variables and offer valuable in-

sights into consumer behavior.

The analysis revealed a significant relationship between initial trust and purchase intention, mediated by risk. Higher levels of initial trust were associated with lower perceived risk, leading to increased purchase intention. This finding aligns with previous research that emphasizes the importance of trust in mitigating perceived risks in online transactions.

Moreover, the study found a significant relationship between initial trust and purchase intention mediated by both risk and credibility. Initial trust positively influenced perceived credibility, which in turn positively influenced purchase intention. This finding is consistent with previous studies highlighting the role of credibility and reputation in building trust and encouraging purchase behavior. Additionally, the analysis revealed a significant relationship between initial trust and purchase intention mediated by risk and convenience. Higher levels of initial trust were associated with increased perceived convenience, leading to higher purchase intention. This result aligns with studies emphasizing the influence of convenience on consumers' purchase intentions in the online context.

Furthermore, the study indicated a significant relationship between initial trust and purchase intention mediated by credibility and convenience. Initial trust positively influenced perceived credibility and convenience, both of which positively influenced purchase intention. Previous research has also highlighted the role of credibility and convenience in shaping consumers' trust and purchase intentions.

The research findings provide evidence of a significant relationship between initial trust and purchase intention mediated by the combined effects of risk, credibility, and convenience. Higher levels of initial trust were associated with reduced perceived risk, increased credibility, and enhanced convenience, all contributing to higher purchase intention. Finally, the analysis confirmed a significant direct relationship between initial trust and purchase intention. Higher levels of initial trust directly led to increased purchase intention, independent of the mediating factors. Overall, the findings highlight the significance of trust and its mediating factors in shaping consumers' purchase intention in online shopping. Building trust by mitigating perceived risks, establishing credibility, and enhancing convenience can positively influence consumers' purchase behavior.

Future research can further explore additional factors contributing to initial trust and purchase intentions, as well as investigate trust dynamics throughout the customer journey in the online marketplace. By deepening our understanding of consumer behavior in online transactions, businesses and policymakers can develop effective strategies to foster trust and increase purchase intention.

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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