



## Bridging The Trust Gap: Strategies To Enhance Customer Confidence In International E-Commerce

Shannon Kimberly Lie <sup>1</sup>, Gracia Ongkowijoyo <sup>2</sup>

<sup>1,2</sup> Universitas Ciputra

Email: <sup>1)</sup> [skimberly@student.ciputra.ac.id](mailto:skimberly@student.ciputra.ac.id), <sup>2)</sup> [gracia.ongkowijoyo@ciputra.ac.id](mailto:gracia.ongkowijoyo@ciputra.ac.id)

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### Abstract

This study investigates the trust gap between international e-commerce platforms and local customers. retailing. A questionnaire was developed and distributed online using a non-probability judgment sample of international e-commerce platform users with the age above 18 in Surabaya, East Java. Data were analyzed using partial least squares (PLS) regression method on SmartPLS software. These research findings reveal perceived security and privacy concerns influence customer trust and loyalty in the context of international e-commerce platforms. Moreover, customer trust acts as a mediating factor between perceived security, privacy concern, and customer loyalty, highlighting its crucial role in fostering positive customer relationships. These results contribute to a deeper understanding of consumer behavior within the Indonesian e-commerce landscape. By identifying and addressing the specific concerns surrounding privacy and security, international e-commerce platforms can attract more Indonesian customers who might otherwise be hesitant to engage with them.

### INTRODUCTION

Indonesia's e-commerce market is experiencing phenomenal growth, with projections reaching USD 95.84 billion by 2029 (Mordor Intelligence, 2024). In 2022, Indonesia led ASEAN nations in e-commerce revenue, generating a staggering USD 51.9 billion, approximately IDR 778.8 trillion, in e-commerce revenue, contributing 52% to the overall e-commerce revenue for ASEAN, which totaled USD 99.5 billion (International Trade Administration, 2024). In 2023, transactions in Indonesia's e-commerce sector amounted to USD 29 billion, showcasing robust growth in transaction volume despite a slight decrease of 4.73% from the 2022 figure, with transactions rising to 3.71 billion compared to 3.49 billion in 2022. This rapid expansion presents

a significant opportunity for international businesses to tap into a vast and dynamic consumer base.

However, despite the presence of international e-commerce giants like Shopee and Lazada, local platforms like Tokopedia and Bukalapak hold a dominant market share. Shopee, a Singaporean platform, holds the largest market share with 36%, followed by Tokopedia, a local favorite, at 35%. Lazada, backed by Alibaba, captures another 10% of the market (International Trade Administration, 2024). This suggests a gap in customer preference, with Indonesian consumers favoring domestic platforms over international ones. Understanding the reasons behind this preference is crucial for international businesses seeking to gain a foothold in the Indonesian market.

Perceived security and privacy concerns are significant factors influencing customer trust and loyalty towards international e-commerce platforms. Studies have shown that online fraud and data breaches are major concerns for Indonesian consumers (Shareef et al., 2018; Hartono et al., 2014). Furthermore, the lack of a comprehensive data protection regime in Indonesia raises anxieties about how international platforms collect, store, and utilize customer data (Liu, et al., 2020). These anxieties can lead to avoidance behavior, where customers choose to forgo transactions with international e-retailers perceived to be less secure or violate privacy.

Therefore, investigating the factors influencing customer confidence in international e-commerce platforms in Indonesia is of paramount importance. These concerns serve as barriers for some Indonesian consumers when engaging with international e-commerce platforms, potentially leading to diminished trust and lower customer loyalty. This research, by focusing on perceived security, privacy concerns, customer trust, and customer loyalty can provide valuable insights for international businesses. By addressing these concerns and building trust, international platforms can develop strategies to attract Indonesian customers and contribute to the continued growth of the e-commerce market.

This research was motivated by the limited research comprehensively addresses the specific challenges international e-commerce platforms face in building trust with Indonesian consumers. While highlighting the importance of trust and loyalty (Mofokeng, 2023; Singh et al., 2018), security features (Jones & Leonard, 2008; Alzaidi & Agag, 2022), and addressing privacy concerns (Irgui & Qmichchou, 2023; Wong et al., 2019), these studies often address these factors in a general sense. Furthermore, existing research might not fully explore the potential mediating factors unique to the Indonesian context, such as cultural influences on trust-building. By understanding the concerns surrounding perceived security and privacy concern, this research can help to develop strategies to foster customer loyalty in the international e-commerce landscape. This practical guidance can directly benefit businesses operating in Indonesia, leading to increased customer trust, loyalty, and market success.

This research employs a questionnaire using scales to examine the relationship between perceived security, privacy concerns, customer trust, and customer loyalty. Our findings will provide valuable insights for online retailers seeking to enhance customer confidence and maximize success in the international market.

## LITERATURE REVIEW

Research by Mofokeng (2023) and Singh et al. (2018) highlights the critical role of trust in fostering customer loyalty. Additionally, Mofokeng (2023) found that perceived security positively impacts customer trust, which in turn fosters loyalty. Similarly, studies by Gefen et al. (2003), McKnight et al. (2002), and Bart et al. (2005) emphasize the mediating role of trust in the relationship between website features and customer behavior. These findings suggest that building trust is essential for international e-commerce platforms to cultivate loyal customers in Indonesia.

### **Variables' Definitions**

According to Flavian et al., (2006), perceived security can be defined as the subjective probability in the customer's eyes that his or her personal or financial information will not be shown, saved, and/or stolen during e-commerce and storage by outside parties. Its indicators are Transaction Security and Payment System. Transaction security, consumers need distinct facts on how their private and transaction records are secured. Payment System, customers often look forward to easy and convenient procedures of payment provided by an online shopping website which also created trust in the e-retailer.

Based on Westin (1967), privacy concern is the internet customer's concern for controlling the acquisition and subsequent use of the information that is generated or acquired on the internet about him or her. Its dimension can be divided into two, collect and use. Collect, internet user's perceived need to control the use a web site makes of the information collected on him or her. Use, A company should not share personal information about me without my permission; Companies should not use personal information for any purpose other than the one authorized (Culnan, 1993).

According to Oliveira et al. (2017), The operationalization of trust variables measured three dimensions of customer trust are competence, integrity, and benevolence. Competence, competence refers to companies' ability to fulfill promises made to consumers. Integrity, integrity suggests that a company acts in a consistent, reliable and honest manner. Benevolence, benevolence is the ability of a company to hold consumer interests ahead of their own self-interest, and indicates a sincere concern for the welfare of customers (Chen & Dhillon, 2003).

Additionally, according to Cui (2022), customer loyalty is the decision of a customer voluntarily to subscribe to a certain brand of product or service for a long time. In addition, Iglesias, Markovic (2020) explains that customer loyalty is also defined as a customer's commitment to any particular product or service.

### **Relationships Between Variables**

#### **Perceived Security and Customer Trust**

Recent studies have emphasized the pivotal role of perceived security in fostering customer trust in international e-commerce. For instance, Ebbers et al. (2021) found that customers are more likely to disclose personal information when they perceive platforms to be trustworthy in safeguarding their data. Similarly, Alzaidi & Agag (2022) highlighted the negative association between higher privacy concerns and trust in e-commerce. These findings underscore the importance of robust security measures in cultivating customer trust. Hypotheses:

H1: Perceived security has a significant positive impact on customer trust in international e-commerce.

#### **Privacy Concerns And Customer Trust**

Privacy concerns have emerged as a significant factor influencing customer trust in e-commerce. Alzaidi & Agag (2022) demonstrated that individuals with higher privacy concerns exhibit negative attitudes towards online shopping and lower trust in e-commerce platforms. These findings align with previous research by Fortes et al. (2016), who also observed a negative relationship between privacy concerns and trust in online shopping.

H2: Privacy concerns have a significant negative impact on customer trust in international e-commerce.

#### **Customer Trust and Customer Loyalty**

Building customer trust is essential for fostering loyalty in the context of international e-commerce. Research by Akgul (2018) and Deng et al. (2010) consistently highlights the positive

impact of trust on customer satisfaction and loyalty. These findings underscore the importance of cultivating trust to encourage repeat purchases and long-term customer relationships.

H3: Customer trust has a significant positive impact on customer loyalty in international e-commerce.

### **Perceived Security And Customer Loyalty**

Perceived security plays a crucial role in influencing customer loyalty. Leppaniemi et al. (2017) emphasized that they are more likely to avoid engaging with companies when they feel a lack of control over their data. Excessive data collection can undermine customer trust and loyalty, leading to reduced engagement and purchasing intentions. These findings align with previous research by Frehse et al. (2008), who highlighted the negative impact of privacy concerns on customer loyalty.

H5: Privacy concerns have a significant negative impact on customer loyalty in international e-commerce.

### **Perceived Security And Customer Loyalty With Customer Trust As Mediator**

Recent research has explored the mediating role of trust in the relationship between perceived security and customer loyalty. Gefen et al. (2003) and McKnight et al. (2002) provided evidence that customer trust partially mediates the relationship between website features and behavioral intent. These findings suggest that perceived security can indirectly influence customer loyalty through its impact on trust.

Additionally, trust plays a crucial role in reducing perceived risk, which enhances customers' willingness to engage in repeat transactions and long-term relationships with a brand. Therefore, businesses that prioritize building secure environments not only increase customer trust but also foster greater customer loyalty through this trust-mediated pathway.

H6: Perceived security has a significant positive impact on customer loyalty in international e-commerce, with customer trust as a mediator.

H7: Privacy concerns have a significant negative impact on customer loyalty in international e-commerce, with customer trust as a mediator.

## **METHODS**

### **Procedure**

This study employs quantitative research methodology, wherein data gathered from questionnaires will be statistically analyzed using the partial least squares (PLS) regression method. Quantitative research is grounded in deductive reasoning (Stockemer, 2019) and encompasses a broad spectrum of statistical analysis techniques, ranging from basic descriptive statistics to complex statistical modeling, to elucidate statistical correlations between variables (Saunders et al., 2009). This study adopts an explanatory research approach, which delves into cause-and-effect analyses and conducts in-depth examinations focusing on the current issues of why and how (Bhattacharjee, 2012; Sugiyono, 2017). Partial least squares structural equation modeling (PLS-SEM) is employed as the methodological tool to estimate latent variables and their relationships. PLS is a SEM technique based on an iterative process that capitalizes on delineating differences in elucidated endogenous constructs (Fornell and Bookstein, 1982). The population for this research is international e-commerce platform user located in East Java. The total of international e-commerce platform users in East Java is unknown.

This research will be using G\*Power to calculate the minimum sample needed. This research will be using G\*Power to calculate the minimum sample size needed for the analysis. G\*Power is a statistical software that facilitates power analysis for various statistical tests, ensuring the study's findings are robust and reliable. For this study, we will focus on linear multiple regression coefficients, specifically examining the fixed model. In the analysis, we will set

the alpha level ( $\alpha$ ) at 0.05, which indicates the threshold for statistical significance; this means we are willing to accept a 5% chance of incorrectly rejecting the null hypothesis.

The effect size, denoted as  $f^2$ , will be calculated based on prior research or pilot studies, with a common benchmark for a medium effect size typically set at 0.1. Additionally, we will specify the desired power level, generally set at 0.80, indicating an 80% chance of correctly rejecting the null hypothesis when it is false. After inputting these parameters into G\*Power, the output will provide the minimum required sample size to achieve the desired statistical power. Therefore, the total sample size needed for this research is 81. The research will utilize purposive non-probability sampling to select participants who meet specific criteria, such as being residents of East Java and having experience using international e-commerce platforms. Data will be collected through a Google Forms questionnaire featuring a 5-point Likert scale. The questionnaire will be distributed via social media to reach the target population.

### Measurement And Scale

In this study, perceived security was measured with eleven items (PS1-11), taken from Aggarwal & Rahul (2018). Privacy concern was measured with eight items (PC1-8), taken Castañeda et al. (2007), while customer trust was measured with nine items (CT1- 9), adapted from Ratnasari et al. (2021). Finally, customer loyalty was measured with seven items (CL1- 7), derived from Anderson & Srinivasan (2003). A questionnaire, created using Google Forms and featuring a 5-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree," will be distributed to selected participants. The questionnaire will consist of closed-ended questions designed to gauge participants' preferences and levels of agreement with various statements.

## RESULTS

### Data Analysis

The questionnaire survey was sent to 119 potential respondents. 110 respondents completed the survey and the responses are usable, generating a 92.4% response rate. Table 1 describes the demographic characteristics of the sample. Half of the respondents are female (50%) and male (50%) with most being 25 – 34 years old (38.2%), followed by 18 – 24 years old (33.6%), 45 – 54 years old (12.7%), 55 – 64 years old (8.2%) and 65 years old and above (7.3%). The latest education of the respondents are S1 (44.5%), Diploma (28.2%) and Highschool (27.3%). All of the respondents are from East Java with 31.8% from Surabaya, 23.6% from Malang, 16.4% from Kediri, 8.2% from Madiun, 5.5% from Probolinggo, 4.5% from Pasuruan, 4.5% from Blitar, 2.7% from Batu, 0.9% from Mojokerto, 0.9% from Gresik and 0.9% from Lamongan. The average experience held by the respondents is between 1 to 3 years (44.5%), 3 to 5 years (39.1%), more than 5 years (10%), and less than a year (6.4%). The majority of respondents uses the platform daily (65%), weekly (30%), monthly (3.6%), and yearly (0.9%). Most respondents use Shopee as their international e-commerce platform (69.1%) followed by Amazon (12.7%), olx (6.4%), Zalora (4.5%), Alibaba (2.7%), Lazada (2.7%), and Etsy (1.8%).

The platforms are used mostly to buy (90%), to observe (10%) and to sell (5.5%). The average user experience of using the platform is very satisfactory (59.1%) followed by satisfactory (39.1%) and adequate (1.8%).

**Table 1: Sample Demography and Characteristics**

Category	Number of Respondents	Percentage
<b>Gender</b>		
Male	50	50%
Female	50	50%
<b>Age</b>		
18 - 24 years old	37	33,6%
25 - 34 years old	42	38,2%
35 - 44 years old	0	0,0%
45 - 54 years old	14	13%
55 - 64 years old	9	8%
>65 years old	8	7%
<b>Latest Education</b>		
Highschool	30	27,3%
S1	49	44,5%
Diploma	31	28,2%
<b>City</b>		
Surabaya	35	31,8%
Malang	26	23,6%
Madiun	9	8,2%
Kediri	18	16,4%
Pasuruan	5	4,5%
Probolinggo	6	5,5%
Gresik	1	0,9%
Lamongan	1	0,9%
Blitar	5	4,5%
Batu	3	2,7%
Mojokerto	1	0,9%
<b>Platforms used</b>		
Shopee	76	69,1%
Amazon	14	12,7%
Zalora	5	4,5%
Alibaba	3	2,7%
Etsy	2	1,8%
Olx	7	6,4%
Lazada	3	2,7%
<b>Years of usage</b>		
<1 year	7	6,4%
1 - 3 years	11	10,0%
3 - 5 years	43	39,1%
>5 years	49	44,5%
<b>Frequency of use of the platform</b>		
Daily	72	72,0%
Weekly	23	23,0%
Monthly	4	4,0%
Yearly	1	1,0%

<b>Usage of the platform</b>		
To buy	99	85,3%
To sell	6	5,2%
To observe	11	9,5%
<b>Experience with the platform</b>		
Adequate	2	1,8%
Satisfactory	43	39,1%
Very Satisfactory	65	59,1%

Source: Processed data (2024)

As shown in Table 2, the result of factor loading for all variable indicators are  $> 0.5$ , thus, discriminant validity is supported (Hair et al., 2017). AVE for all variables are  $\geq 0.5$ , thus convergent validity is supported (Hair et al., 2017). The result of composite reliability for all variables are  $> 0.7$ , therefore, reliability is supported (Hair et al., 2017).

**Table 2: Measurement Model Validity and Reliability**

Indicator s	Factor Loading	AVE	Construct Reliability
PS2	0.789	0.574	0.800
PS3	0.830	0.574	0.800
PS11	0.641	0.574	0.800
PC3	0.810	0.583	0.807
PC4	0.732	0.583	0.807
PC8	0.746	0.583	0.807
CT1	0.771	0.556	0.790
CT5	0.710	0.556	0.790
CT7	0.756	0.556	0.790
CL2	0.769	0.607	0.822
CL3	0.763	0.607	0.822
CL7	0.804	0.607	0.822

Source: processed data (2024)

Discriminant validity applied to recognize the difference between each indicator or variable. Here the analysis on table 3 and table 4 are done using two methods which are Fornell Larcker and Cross Loading. Table 4 presents the analysis result by using the data source from PLS Algorithm, the Fornell Larcker discriminant validity result is matched, with every square root of AVE of latent variable obtain the largest value compared to its correlations with other latent variables (PS= 0.758/ PC= 0.763/ CT= 0.746/ CL= 0.779). Using the Cross Loading method, the results are all fulfilled due to the loading value of an indicator to its latent variable is bigger than its crossloading values to other latent variables in the model. Hence, both methods succeed in achieving valid discriminant results and discriminant validity is confirmed.

**Table 3: Fornell Larcker Result**

Variables	Customer Loyalty	Customer Trust	Perceived Security	Privacy Concern
<b>Customer Loyalty</b>	0.779			
<b>Customer Trust</b>	0.555	0.746		
<b>Perceived Security</b>	0.563	0.545	0.758	
<b>Privacy Concern</b>	0.641	0.534	0.598	0.763

Source: processed data (2024)

**Table 4: Cross Loading Result**

Indicators	Customer Loyalty	Customer Trust	Perceived Security	Privacy Concern
CL2	0.769	0.500	0.388	0.521
CL3	0.763	0.396	0.460	0.517
CL7	0.804	0.394	0.470	0.456
CT1	0.387	0.771	0.457	0.413
CT5	0.443	0.710	0.392	0.389
CT7	0.411	0.756	0.368	0.392
PC3	0.576	0.431	0.398	0.810
PC4	0.448	0.364	0.475	0.732
PC8	0.431	0.426	0.514	0.746
PS11	0.357	0.359	0.641	0.457
PS2	0.438	0.421	0.789	0.525
PS3	0.476	0.453	0.830	0.391

Source: processed data (2024)

Coefficient of determination (R Square) of this research has a result of, 49.7% of customer loyalty can be explained by perceived security & privacy concern (0.497) and 36.4% of customer trust can be explained by perceived security, privacy concern, & customer loyalty (0.364).

**Table 5: R Square Result**

Variables	R Square	R Square Adjusted
Customer Loyalty	0.497	0.482
Customer Trust	0.364	0.353

Source: Processed Data (2024)

The result of effect size (F Square) categorized small with range between 0.02 to 0.1499 and medium effect with range between 0.15 to 0.3499. In detail, perceived security has small effect on customer loyalty (0.044), privacy concern has medium effect on customer loyalty (0.182), customer trust has small effect on customer loyalty (0.070), perceived security has small effect on customer trust (0.125), and privacy concern has small effect on customer trust (0.106).

**Table 6: F Square Result**

Variables	Customer Loyalty	Customer Trust	Perceived Security	Privacy Concern
Customer Loyalty				
Customer Trust	0.070			
Perceived Security	0.044	0.125		
Privacy Concern	0.182	0.106		

Source: Processed data (2024)



Furthermore, this study conducts blindfolding or predictive relevance (Q Square) measurement. These measurements provide the predictable rate of the data by removing the data and predict using regression of the rest of the data. The end results are classified within the large ( $> 0.5$ ) and medium ( $0.25-0.4999$ ) predictive group. Customer trust has small predictive relevance ( $0.184$ ) and customer loyalty has medium predictive relevance ( $0.261$ ).

**Table 7: Q Square Result**

Variables	SSO	SSE	Q <sup>2</sup> (=1-SSE/SSO)
Customer Loyalty	330	243.731	0.261
Customer Trust	330	269.258	0.184
Perceived Security	330	330	0.000
Privacy Concern	330	330	0.000

Source: Processed data (2024)

Inner model measurement is conducted with the first measurement done by referring to the inner collinearity statistic (VIF) value. This research has no multicollinearity with all values range  $< 5$  ( $1.124$  to  $1.444$ ). Table 8 describes the relationship between the variables in this study. Path coefficient is the method used to show the relationship between the variable, whether the variable has a positive or negative effect and usually falls between  $-1$  until  $+1$  (Hair et al., 2017). The results of hypothesis testing show several direct influences between the variables in this study.

H1 Perceived security has a significant positive influence on customer trust, with a coefficient value of  $0.351$ , a t-statistic value of  $3.709$ , and a p value of  $0.000$ , which indicates that hypothesis H1 is supported. This means that the higher the customer's perception of security, the greater the level of customer trust in the site.

H2 Privacy concern also shows a significant positive influence on customer trust with a coefficient of  $0.324$ , t-statistic of  $3.202$ , and a p value of  $0.001$ , supporting hypothesis H2. That is, customer concerns about privacy influence the level of trust in a site, where better privacy protection increases trust.

H3 Customer trust also has a significant positive effect on customer loyalty with a coefficient of  $0.235$ , t-statistic of  $2.646$ , and a p value of  $0.008$ , supporting hypothesis H3. This shows that the higher the customer's trust in the site, the more loyal they are to the site.

for hypothesis H4, Perceived Security does not have a significant influence on customer loyalty, with a coefficient of  $0.197$ , t-statistic of  $1.846$ , and a p value of  $0.065$ , so this hypothesis is not supported. This shows that perceived security alone is not enough to directly influence customer loyalty

Privacy concern has a significant positive influence on customer loyalty with a coefficient of  $0.398$ , t-statistic of  $4.245$ , and a p value of  $0.000$ , supporting hypothesis H5. This means that high attention to privacy can increase customer loyalty to the site.

**Table 8: Direct Result**

Hypothesis	Path	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	Hypothesis Support
H1	Perceived Security -> Customer Trust	0.351	0.366	0.095	3.709	0	Yes
H2	Privacy Concern -> Customer Trust	0.324	0.315	0.101	3.202	0.001	Yes
H3	Customer Trust -> Customer Loyalty	0.235	0.248	0.089	2.646	0.008	Yes
H4	Perceived Security -> Customer Loyalty	0.197	0.19	0.107	1.846	0.065	No
H5	Privacy Concern -> Customer Loyalty	0.398	0.398	0.094	4.245	0	Yes

Source: Processed Data (2024)

For hypothesis H7, the path Privacy Concern -> Customer Trust -> Customer Loyalty also shows a significant indirect effect, with a coefficient of 0.076, a t-statistic value of 2.242, and a p value of 0.025. This supports the hypothesis that privacy concern can influence customer loyalty indirectly through customer trust. This means that when customer concerns about privacy are addressed well, trust levels increase, which contributes to increased loyalty to the site.

**Table 9: Indirect Result**

Hypothesis	Path	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	Hypothesis Support
H6	Perceived Security -> Customer trust -> Customer Loyalty	0.083	0.091	0.041	2.023	0.044	Yes
H7	Privacy Concern -> Customer trust -> Customer Loyalty	0.076	0.076	0.034	2.242	0.025	Yes

Source: processed data (2024)

## DISCUSSION

Practically, the findings underscore the importance for e-commerce platforms to prioritize security and address privacy concerns, as these factors are closely linked to building trust and loyalty among Indonesian customers. This supports Trust Theory and Technology Acceptance Model (TAM) principles, where trust and perceived ease of use influence customer behavior and loyalty.

While the positive relationship between perceived security and customer loyalty aligns with much of the existing literature, the lack of statistical significance ( $p = 0.065$ ) calls into question its strength in this specific context. This result may either reflect cultural nuances within the Indonesian market or indicate a different prioritization of factors compared to findings in other regions. Future studies should continue to explore these relationships across varied cultural contexts to validate or refine existing theories in international e-commerce.

The results of the study supported the hypothesized relationships between the variables. Specifically, perceived security and privacy concerns were found to have significant positive impacts on customer trust. Moreover, customer trust was found to have a significant positive impact on customer loyalty. The mediating role of customer trust in the relationships between perceived security, privacy concerns, and customer loyalty was also confirmed.

The study also confirmed the mediating role of customer trust in the relationship between perceived security, privacy concerns, and customer loyalty. This means that perceived

security and privacy concerns indirectly influence loyalty through their impact on trust, underscoring trust as a critical intermediary. This finding adds depth to our understanding of how customer perceptions translate into loyalty in international e-commerce, especially in emerging markets like Indonesia. By ensuring that customers feel secure and their privacy is protected, platforms can enhance trust, which in turn fosters loyalty. This insight has strategic implications, as it suggests that building a trustworthy reputation through high security and privacy standards is key to fostering loyal customers in competitive e-commerce environments.

The results of hypothesis H1 show that Perceived Security has a significant and positive impact on Customer Trust. This indicates that as customers perceive the site to be more secure, their trust in the site increases. This finding is aligned with prior studies that highlight the importance of security in e-commerce. Trust is a key element in online transactions, where customers are more likely to engage with and remain loyal to a platform that they feel protects their personal and financial information. This result suggests that e-commerce businesses should prioritize security features, such as encryption, secure payment gateways, and transparent privacy policies, to build and maintain customer trust.

Hypothesis H2 is also supported, with Privacy Concern showing a significant positive effect on Customer Trust. This indicates that when customers are more concerned about privacy, their trust in the site increases if their concerns are adequately addressed. This finding reinforces the critical role privacy protection plays in fostering trust. E-commerce businesses must ensure robust privacy policies and transparency about how customer data is collected, stored, and used. By alleviating privacy concerns, companies can strengthen their relationship with customers and enhance trust, which is vital for maintaining long-term engagement and loyalty.

The results from hypothesis H3 indicate that Customer Trust positively influences Customer Loyalty. This suggests that the higher the trust customers have in the site, the more loyal they become. Trust acts as a foundation for long-term customer relationships. When customers feel confident in a brand, they are more likely to return and make repeat purchases. This finding aligns with customer behavior theories, where trust in a brand leads to increased customer satisfaction, retention, and ultimately loyalty. Therefore, e-commerce businesses should continue to focus on building trust through excellent service, quality, and reliability to foster customer loyalty.

Hypothesis H4, which posited that Perceived Security directly influences Customer Loyalty, was not supported. This suggests that the direct impact of perceived security on customer loyalty is not statistically significant. This implies that while security is essential for establishing trust, it may not be sufficient on its own to directly drive loyalty. Other factors, such as the quality of products or services, user experience, and customer satisfaction, may play a more substantial role in fostering loyalty. E-commerce platforms need to consider a holistic approach to enhance customer loyalty, beyond just security measures.

Hypothesis H5 is supported, as Privacy Concern has a significant positive effect on Customer Loyalty. This suggests that addressing privacy concerns can directly increase customer loyalty. In an era of increasing concerns over data breaches and unauthorized access, customers are more likely to stay loyal to platforms that prioritize their privacy. E-commerce businesses should implement transparent privacy policies and ensure customers feel their personal data is protected. By doing so, they can create an environment where customers feel secure and valued, thus enhancing their loyalty.

Hypothesis H6 examines the indirect effect of Perceived Security on Customer Loyalty through Customer Trust. This supports the hypothesis that Perceived Security influences Customer Loyalty through its impact on Customer Trust. This finding emphasizes the importance of security in fostering trust, which, in turn, contributes to customer loyalty. E-commerce businesses should recognize that improving security features will not only directly enhance trust but also indirectly drive loyalty by creating a more trustworthy environment for customers. This indirect effect highlights the critical role of trust as a mediator between security and loyalty.

Hypothesis H7 also shows a significant indirect effect of Privacy Concern on Customer Loyalty through Customer Trust. This supports the hypothesis that Privacy Concern influences Customer Loyalty by first enhancing Customer Trust. When customers' privacy concerns are adequately addressed, they develop greater trust in the site, which leads to higher loyalty. This underscores the importance of privacy protection in building trust and fostering loyalty. E-commerce platforms should invest in privacy policies that reassure customers, as this will ultimately strengthen customer loyalty through the trust they build. The findings of this study align with previous research that has highlighted the importance of trust in fostering customer loyalty in e-commerce. The study's emphasis on the mediating role of trust is consistent with the findings of Gefen et al. (2003), McKnight et al. (2002), and Bart et al. (2005).

While not all hypothesized relationships were supported, it is worth noting that the strength of the relationships varied. For example, the indirect effect of perceived security on customer loyalty mediated by customer trust was found to be stronger than the direct effect. Further research is needed to explore this relationship in more detail.

The findings of this study have important implications for international e-commerce platforms operating in Indonesia. To build trust and foster customer loyalty, these platforms should prioritize addressing customer security concerns and protecting customer privacy. This can be achieved through implementing robust security measures, such as encryption and authentication, and adopting transparent privacy policies. Additionally, platforms should actively communicate their security and privacy practices to customers to build trust and confidence.

In addition to implementing technical security measures, international e-commerce platforms should also focus on clear communication of their security and privacy practices. Many customers, especially in emerging markets like Indonesia, may lack detailed knowledge about how platforms handle their data. Regularly informing customers about the platform's security protocols and reassuring them of their commitment to privacy can help build a positive perception and increase customer confidence. For instance, platforms can send notifications about security updates, offer visible indicators of secure transactions, and provide resources on safe online practices. By fostering an environment of transparency and open communication, e-commerce platforms can not only meet customer expectations but also enhance their reputation as trusted, customer-centric businesses in Indonesia's growing digital economy.

## CONCLUSION

This study investigated the relationships among perceived security, privacy concerns, customer trust, and customer loyalty within the context of international e-commerce platforms operating in Indonesia. By surveying 110 respondents, the study provides empirical evidence on the significant roles of perceived security and privacy concerns in shaping customer trust and loyalty. The demographic insights highlighting a predominance of educated young adults aged 18-34 align with the tech-savvy nature of East Java's e-commerce market, suggesting that international platforms should target this segment to maximize engagement.

Perceived security and privacy concerns were found to have significant positive impacts on customer trust, which, in turn, significantly positively influenced customer loyalty. Additionally, customer trust acted as a mediator in the relationships between perceived security, privacy concerns, and customer loyalty.

The findings highlight the importance of prioritizing security and privacy measures for international e-commerce platforms operating in Indonesia to build trust and foster customer loyalty. Overall, this study provides valuable insights into the factors influencing customer trust and loyalty in the Indonesian e-commerce market. By understanding the critical role of perceived security and privacy concerns, international e-commerce platforms can take proactive steps to enhance customer satisfaction and loyalty.

## SUGGESTION

Based on the test results, some suggestions can be implemented by future researchers to extend this study. The sample size may not be fully representative of the diverse Indonesian e-commerce user base. A larger and more geographically diverse sample could provide a more comprehensive understanding. Additionally, the cross-sectional design limits the ability to establish causal relationships between variables. Longitudinal studies are needed to explore these relationships over time.

Future research could investigate the moderating effects of cultural differences, competitive intensity, and emerging technologies on the relationships between perceived security, privacy concerns, customer trust, and customer loyalty. It would be worth to consider exploring a broader range of factors influencing customer confidence, such as product variety, delivery speed, and customer service quality.

Incorporating additional data sources, such as website analytics or behavioral observation techniques, can enhance the validity of the study. Conducting longitudinal studies can help establish causal relationships between variables and track changes in customer behavior over time.

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