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Trust, Security, and Online Purchase Intention in Home Appliances: Moderating Role of Digital Literacy

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***Abstract**. This study aims to analyze the effect of trust and security on online purchase intention in purchasing home appliance products through e-commerce, as well as to examine the moderating role of digital literacy. This study applied a quantitative approach using Partial Least Squares Structural Equation Modeling (PLS-SEM). Data were collected through questionnaires distributed to 160 respondents who had experience purchasing home appliance products through e-commerce platforms. The findings show that trust and security have a positive and significant effect on online purchase intention. In addition, digital literacy does not significantly moderate the relationship between trust and online purchase intention, but it significantly strengthens the relationship between security and online purchase intention. The study concludes that trust and security remain critical determinants of online purchase intention in e-commerce, while digital literacy plays a selective moderating role, particularly in strengthening security perceptions. This study is limited by its sample size and focus on respondents from a specific consumer segment, which may affect generalizability. This study contributes to consumer behavior, digital marketing, and e-commerce literature by extending understanding of purchase intention in the home appliance sector. The findings also provide practical insights for e-commerce platforms, marketers, and business practitioners in designing strategies that improve consumer trust, transaction security, and digital engagement.*

***Keywords:** digital literacy; home appliances; online purchase intention; security; trust.*

1. INTRODUCTION

The rapid growth of e-commerce has significantly transformed consumer purchasing behavior across various industries, including the home appliances sector. Consumers increasingly prefer online platforms due to convenience, broader product selection, competitive pricing, and easier access to product information (Darmawan & Ekawati, 2017; Alalwan, 2020; Pantano et al., 2020; Shankar et al., 2021; Sjukun, 2024). In Indonesia, the growth of online purchasing in the home appliances sector continues to increase along with the expansion of digital marketplaces and consumer adoption of online shopping platforms (Statista, 2026).

However, online transactions involve higher uncertainty compared to conventional shopping because consumers cannot directly inspect products before purchase. This creates perceived risk, especially for home appliance products that generally involve higher prices and functional considerations (Fang et al., 2018; Gupta et al., 2019; Yadav & Mahara, 2020; Handoyo, 2024).

Previous studies emphasized that trust is an important factor influencing consumers' online purchase intention. Trust reflects consumers' confidence in the reliability, integrity, and credibility of online sellers and digital platforms. Consumers who perceive higher trust tend to be more willing to complete online transactions (Oliveira et al., 2017; Picaully, 2018; Zhang et al., 2019; Akhtar et al., 2021; Ozturk et al., 2021; San Martín & Camarero, 2021).

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Security is also considered a critical determinant of online purchase intention. Consumers tend to evaluate transaction safety, payment protection, privacy, and data confidentiality before making online purchasing decisions. Stronger security perceptions reduce transaction risk and increase consumer confidence in digital environments (Jefryansyah & Muhajirin, 2020; Chawla & Joshi, 2020; Sharma et al., 2020; Cabanillas et al., 2021; Widyastuti & Pratama, 2023).

In addition, digital literacy has become increasingly important as consumers rely more on digital platforms for purchasing activities. Digital literacy helps consumers evaluate product information, assess seller credibility, identify transaction security indicators, and make better online purchasing decisions (Supriyanto & Hana, 2020; Malaquias & Hwang, 2020; Nazzal et al., 2021; Anggraini et al., 2024; Mustofa & Aisyah, 2025; Kocarslan, 2025).

Despite the growing body of literature on e-commerce behavior, limited studies have specifically examined the moderating role of digital literacy in the relationship between trust, security, and online purchase intention in the home appliances sector (Vemberi & Fitriastuti, 2023; Handoyo, 2024). Therefore, further investigation is needed to understand how digital literacy influences consumer decision-making in digital purchasing environments.

This study aims to analyze the effect of trust and security on online purchase intention in purchasing home appliance products through e-commerce platforms. In addition, this study aims to examine the moderating role of digital literacy in the relationship between trust, security, and online purchase intention.

This study contributes theoretically by extending the discussion of consumer behavior in e-commerce through the integration of digital literacy as a moderating variable. The study also contributes practically by providing insights for e-commerce companies to strengthen transaction security systems and improve consumer trust in digital purchasing environments. Furthermore, the findings may assist businesses in developing more effective online marketing and consumer engagement strategies in the home appliances industry.

2. LITERATURE REVIEW

Trust

Trust refers to consumers' confidence that online sellers and e-commerce platforms are reliable, honest, and capable of fulfilling their obligations during online transactions. In digital commerce, trust reduces uncertainty and perceived risk, thereby increasing consumers' willingness to transact online (Oliveira et al., 2017; Zhang et al., 2019). Previous studies found

that trust significantly influences online purchase intention and consumer loyalty in e-commerce environments (Picaully, 2018; Akhtar et al., 2021; Ozturk et al., 2021).

Security

Security refers to consumers' perceptions regarding transaction safety, privacy protection, payment security, and personal data confidentiality during online purchasing activities. Consumers tend to avoid platforms perceived as risky or insecure, especially when purchasing high-value products (Jefryansyah & Muhajirin, 2020; Sharma et al., 2020). Previous studies found that stronger security perceptions significantly increase consumers' online purchase intention (Chawla & Joshi, 2020; Cabanillas et al., 2021; Widyastuti & Pratama, 2023).

Purchase Intention

Purchase intention refers to consumers' willingness and tendency to purchase products after evaluating available information and alternatives. In e-commerce environments, purchase intention is considered an important predictor of actual consumer behavior (Fang et al., 2018; Darmawan & Ekawati, 2017). Previous studies indicate that trust, security, and platform credibility significantly influence consumers' purchase intention in online marketplaces (Yadav & Mahara, 2020; Sanjaya & Ekowati, 2022).

Digital Literacy

Digital literacy refers to an individual's ability to access, understand, evaluate, and effectively use digital technologies in daily activities, including online shopping. Consumers with higher digital literacy are generally more capable of identifying trusted sellers, evaluating transaction security, and minimizing online purchasing risks (Malaquias & Hwang, 2020; Nazzal et al., 2021). Previous studies also found that digital literacy positively affects consumers' confidence and purchasing behavior in digital environments (Anggraini et al., 2024; Mustofa & Aisyah, 2025; Kocarslan, 2025).

Digital literacy may also strengthen the effect of trust and security on online purchase intention because digitally literate consumers are better able to evaluate online information and transaction systems (Vemberi & Fitriastuti, 2023; Handoyo, 2024).

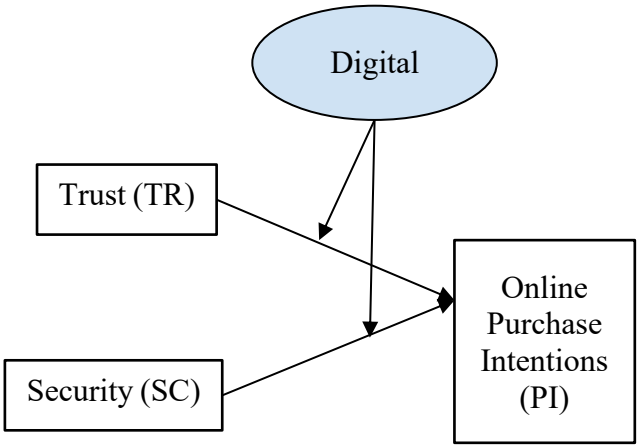
Based on this gap, this study aims to examine the effect of trust and security on online purchase intention in the home appliances, with digital literacy as a moderating variable. Therefore, the proposed hypotheses are:

H1: Trust has a positive effect on online purchase intention.

H2: Security has a positive effect on online purchase intention.

H3: Digital literacy moderates the relationship between trust and online purchase intention.

H4: Digital literacy moderates the relationship between security and online purchase intention. The model in this research is as follows in Figure 2.



Picture 1. Research Model.

This study aims to examine how trust and security influence consumers' online purchase intention in e-commerce. In addition, this study also examines whether digital literacy strengthens the relationship between trust, security, and online purchase intention.

3. RESEARCH METHOD

This study employed a quantitative research approach to examine the relationships between trust, security, digital literacy, and online purchase intention in the home appliances e-commerce sector. Quantitative research is appropriate for testing theoretical relationships between variables and objectively measuring consumer behavior patterns using statistical analysis (Hair et al., 2022; Sarstedt et al., 2020). We collected data through an online questionnaire distributed to consumers who had previous experience purchasing home appliance products through e-commerce platforms. The research was conducted in Indonesia, with respondents selected using simple random sampling. A total of 160 valid responses were collected and used for analysis. The respondents consisted of male and female consumers with diverse age groups, educational backgrounds, occupations, and monthly income levels, representing active e-commerce users in the consumer electronics market.

The research instrument was developed based on measurement indicators from previous studies and adapted to the context of home appliance purchasing. All variables were measured using a five-point Likert scale ranging from strongly disagree to strongly agree. Trust was measured through indicators related to seller reliability, honesty, and consistency. Security was measured through indicators related to transaction safety, payment protection, and personal

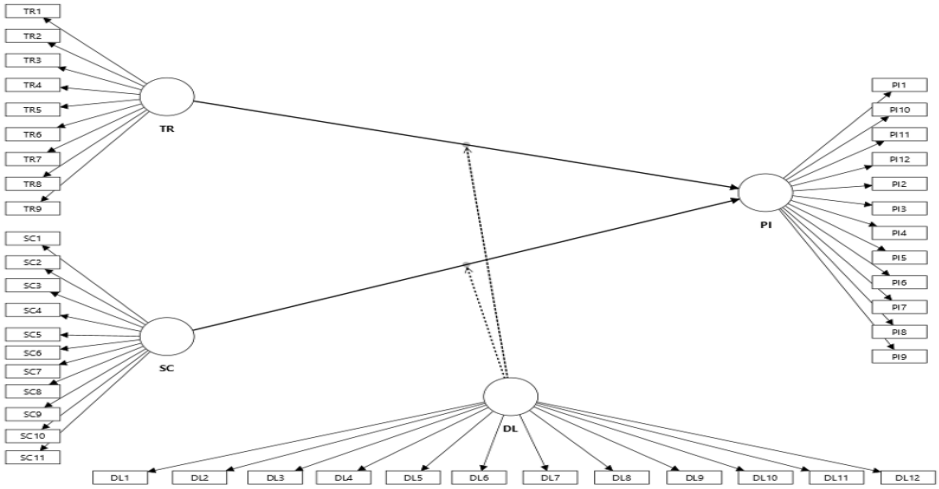
data security. Digital literacy was measured through respondents' ability to access, understand, and evaluate digital information, while online purchase intention was measured through consumers' willingness and interest in purchasing products through e-commerce platforms.

Table 1. Operationalization of Variables and Dimensions.

Variable	Dimension	Indicator
Trust (TR) (Oliveira et al. (2017; Chen & Dhillon, 2003; Mayer, Davis, & Schoorman, 1995)	Reliability	The seller provides products that match the description given.
		The seller delivers products according to the promised time
		The seller provides reliable service during the purchasing process
	Benevolence	The seller shows concern for customers' needs.
		The seller provides helpful assistance during the purchasing process.
		The seller is willing to help when problems occur with the transaction.
	Integrity	The seller provides honest information about the product.
		The seller fulfills promises related to the product and service
		The seller conducts transactions fairly and transparently.
Security (SC) (Jefryansyah & Muhajirin, 2020; Kim, Ferrin & Rao, 2008; Flavián & Guinalíu, 2006)	Transaction Assurance	Online payment for home appliances is secure.
		The platform provides secure transaction systems.
	Product Security	The home appliance product is authentic.
		The product received matches the description.
		The product arrives without dysfunction
	Warranty Assurance	The home appliance product has a warranty.
		Warranty information is clearly provided.
		Warranty claims are available if defects occur.
	Seller Reputation	The seller has a good reputation.
		Customer reviews show seller reliability.
		The seller is recognized for secure and reliable service.
Purchase Intention (PI) (Picaully, 2018; Sanjaya & Ekowati, 2022; Ling, Chai, and Piew, 2010)	Information Search Intention	Searching for information about home appliance products online.
		Reading product specifications before purchasing home appliances.
		Checking customer reviews of home appliance products.
	Purchase Consideration	Considering the purchase of home appliance products from the platform.
		Comparing several home appliance products before deciding.
		Evaluating the features of home appliance products.
	Willingness to Purchase	Willingness to purchase home appliance products online.
		Willingness to complete the purchase transaction.
		Willingness to conduct transactions through the platform.
	Desire To Own the Product	Desire to own the home appliance product offered online.
		Intention to purchase the home appliance product in the future.
		Interest in owning the home appliance product.
Digital Literacy (DL) (Nazzal et al., 2021; Anggreraini et al., 2019; Mustofa & Aisyah, 2025).	Technical Skills	Ability to use e-commerce platforms when purchasing home appliance products.
		Ability to complete online payment transactions safely.
		Ability to use platform features related to secure transactions.
	Information Literacy	Ability to evaluate seller credibility on e-commerce platforms.
		Ability to verify the accuracy of product information online.
		Ability to interpret customer reviews when evaluating products.
	Cognitive Skills	Ability to assess the reliability of online sellers.
		Ability to evaluate the security of online transactions.
		Ability to compare product information from different sellers.
	Photo-visual Literacy	Ability to recognize security indicators on e-commerce platforms.
		Ability to identify trusted seller labels on the platform.
		Ability to interpret product images and authenticity indicators.

Source: Authors (2026).

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software. The analysis included measurement model evaluation through convergent validity, discriminant validity, and composite reliability testing, followed by structural model evaluation through path coefficient analysis, coefficient of determination (R-square), effect size (F-square), predictive relevance (Q-square), and hypothesis testing using bootstrapping procedures. The latent variables (constructs) and their corresponding observed indicators are presented in Figure 2.



Picture 2. Latent and observable variable model made in Smart PLS.

4. RESULTS AND DISCUSSION

Results

The results of the analysis will be divided into two main topics, including a demographic profile summary of respondents and quantitative analysis results. This sub-chapter will display the results and interpret it to see fit for the next sub-chapter.

The study involved 160 respondents, consisting of 69% female and 31% male participants. Most respondents held a bachelor's degree (53%) and were students (29%). Based on location, the majority of respondents were from West Java (83%), while Central Java represented the smallest proportion (1%). These demographic characteristics provide an overview of the respondent profile in this study.

Table 2. Respondent Demographic Profile Summary.

Demographic	Demographic Category	Percentage
Age Group	18 – 25	46%
	26 – 35	28%
	36 – 45	13%
	> 45	13%
Gender	Male	31%
	Female	69%
Education Level	Senior High School	41%
	Diploma	4%
	Bachelor's Degree	53%
	Master's Degree	3%
Location	Jawa Barat	83%
	DKI Jakarta	11%
	Banten	3%
	Jawa Tengah	1%
	Other	3%
Occupation	Student	29%
	Private Sector Employee	26%
	Public Sector Employee	13%
	Entrepreneur	10%
	Househusband/Housewife	17%
	Freelance/Other	5%

By running the PLS-SEM algorithm on SmartPLS, the descriptive statistics for each latent variable are obtained as shown. These results do not include the mean and standard deviation, as their values are 0 and 1 respectively due to the use of a standardized algorithm. Therefore, the mean and standard deviation are presented at the indicator level instead. The descriptive statistics shown in Table 3 represent the values after the removal of invalid indicators, where the outer loading values are also reported.

For the descriptive statistics, kurtosis and skewness are examined, and all values fall within the acceptable range. In terms of kurtosis, PI tends to have a slightly flatter distribution compared to TR, SC, and DL. Meanwhile, for skewness, SC and PI show relatively larger distribution values compared to TR and DL. However, since many values are close to zero, the overall distribution can be considered approximately normal, indicating that the data are neither excessively skewed nor overly peaked.

Table 3. Descriptive statistics, normality test, and convergent validity measurement.

Variable/ Indicator	Mean	STDEV	Median	Excess kurtosis	Skewness	Outer Loading Before Removal	Outer Loading Post Removal	Average variance extracted (EVA)
Trust (TR)								
TR1	3.900	4	0.910	0.887	-0.906	0.796	0.796	0.635
TR2	3.906	4	0.992	1.693	-1.243	0.797	0.798	
TR3	4.056	4	0.989	1.679	-1.288	0.814	0.814	
TR4	3.819	4	0.974	0.415	-0.817	0.734	0.734	
TR5	3.875	4	0.927	1.519	-1.126	0.81	0.811	
TR6	3.925	4	0.952	1.279	-1.076	0.8	0.8	

TR7	4.05	4	0.999	1.244	-1.203	0.777	0.777	
TR8	3.900	4	0.943	1.221	-1.015	0.825	0.824	
TR9	3.962	4	0.968	1.22	-1.095	0.814	0.813	
Security (SC)								
SC1	4.056	4	0.937	1.611	-1.217	0.724	0.755	0.57
SC2	4.112	4	0.955	2.532	-1.488	0.752	0.779	
SC3	3.669	4	0.979	0.57	-0.703	0.867	0.873	
SC4	3.837	4	0.941	0.312	-0.713	0.854	0.854	
SC5	3.831	4	0.989	0.507	-0.829	0.769	0.779	
SC6	3.875	4	0.992	0.696	-0.947	0.829	0.827	
SC7	3.669	4	1.047	0.109	-0.752	0.766	0.761	
SC8	3.856	4	1.018	0.866	-1.000	0.802	0.8	
SC9	4.031	4	0.971	1.861	-1.304	0.751	0.778	
SC10	4.150	4	0.917	3.045	-1.582	0.544	-	
SC11	4.225	4	1.000	2.441	-1.603	0.568	-	
Digital Literacy (DL)								
DL1	4.131	4	0.916	0.916	1.163	0.835	0.835	0.7
DL2	4.062	4	1.010	1.01	1.361	0.858	0.859	
DL3	4.069	4	1.007	1.007	1.769	0.841	0.841	
DL4	4.000	4	0.935	0.935	1.256	0.839	0.839	
DL5	4.081	4	0.935	0.935	1.657	0.826	0.826	
DL6	4.125	4	0.947	0.947	2.784	0.852	0.851	
DL7	4.000	4	0.929	0.929	1.885	0.842	0.842	
DL8	4.106	4	0.939	0.939	1.714	0.85	0.85	
DL9	4.094	4	0.927	0.927	2.572	0.842	0.842	
DL10	4.075	4	1.016	1.016	1.904	0.814	0.814	
DL11	4.062	4	0.960	0.960	1.758	0.839	0.838	
DL12	3.975	4	1.000	1.000	1.189	0.8	0.8	
Purchase Intention (PI)								
PI1	4.206	4	0.807	0.807	1.835	0.674	-	0.631
PI2	4.350	4	0.846	0.846	5.972	0.852	0.858	
PI3	4.331	4.5	0.871	0.871	4.214	0.802	0.804	
PI4	4.119	4	0.869	0.869	2.025	0.778	0.775	
PI5	4.331	4	0.864	0.864	5.161	0.833	0.838	
PI6	4.256	4	0.823	0.823	3.734	0.835	0.831	
PI7	4.256	4	0.861	0.861	1.878	0.785	0.782	
PI8	4.131	4	0.895	0.895	2.832	0.762	0.767	
PI9	4.263	4	0.848	0.848	3.144	0.807	0.809	
PI10	4.150	4	0.875	0.875	2.854	0.778	0.78	
PI11	4.237	4	0.810	0.810	2.832	0.795	0.801	
PI12	4.275	4	0.873	0.873	3.532	0.819	0.817	

Since the model used is reflective, a series of tests were conducted consisting of Convergent Validity, Internal Consistency, and Discriminant Validity. In the first test, Convergent Validity is assessed by examining the outer loadings and AVE (Average Variance Extracted) as presented in Table IV.2. The results show that most outer loadings are above the acceptable threshold of 0.708 after indicator purification. However, several indicators were removed due to low loading values, namely SC10 (0.544) and PI1 (0.674), as they do not meet the minimum requirement. After the removal process, all remaining indicators demonstrate adequate loading values, indicating that the constructs of Trust (TR), Security (SC), Digital Literacy (DL), and Purchase Intention (PI) have achieved sufficient convergent validity. Additionally, all AVE values exceed the threshold of 0.50 (TR = 0.635, SC = 0.57, DL = 0.70,

PI = 0.631), confirming that each construct explains more than half of the variance of its indicators.

Table 4. Internal consistency measurement.

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
TR	0.928	0.929	0.94	0.635
SC	0.934	0.962	0.942	0.643
DL	0.961	0.962	0.965	0.7
PI	0.946	0.95	0.953	0.65

After the removal, the values of AVE, Cronbach's Alpha, as well as Composite Reliability have passed the required values. Based on the outer loading, the Convergent Validity shows that the constructs (latent variables) correlates positively with the same constructs. Internal Consistency on Table 4 using Cronbach's Alpha and Composite Reliability shows that the data are consistent and reliable.

Table 5. Heterotrait-Monotrait (HTMT) Ratio.

Variable	DL	PI	SC	TR	DL x SC	DL x TR
DL						
PI	0.568					
SC	0.506	0.100				
TR	0.689	0.614	0.395			
DL x SC	0.324	0.352	0.445	0.170		
DL x TR	0.626	0.322	0.207	0.651	0.287	

Sources: Primary Data Treated (2026)

Last is the Discriminant Validity that uses the HTMT and Fornell-Larcker. These measurements show the constructs are distinct and unique from one another, which as shown in Table 5 and Table 6 have passed the required value

Table 6. Fornell-Larcker Criterion.

Variable	DL	PI	SC	TR
DL	0.837			
PI	0.55	0.794		
SC	0.397	-0.14	0.755	
TR	0.652	0.579	0.302	0.797

After ensuring the reflective models are aligned with the required values. The structure is evaluated by using Collinearity Test, Model Explanatory Power, and Model Fit. Collinearity uses VIF (Variance Inflation Factor), while the Model Explanatory Power will evaluate the model using Q-square, R-square, and F-square. and p-value of the CVPAT (Cross-Validated Predictive Ability Test). Meanwhile, model fit uses SRMR as its main measurement. The first test is the Collinearity using PLS-SEM algorithm, with the resulting values shown in Table 7.

Table 7. VIF (Variance Inflation Factor).

Indicator	Value	Indicator	Value
TR1	2.305	DL3	3.554
TR2	2.294	DL4	3.093
TR3	2.505	DL5	2.757
TR4	1.87	DL6	3.528
TR5	2.564	DL7	3.025
TR6	2.307	DL8	3.199
TR7	2.113	DL9	3.115
TR8	2.588	DL10	2.714
TR9	2.485	DL11	3.179
SC1	2.737	DL12	2.536
SC2	2.860	PI2	3.288
SC3	2.924	PI3	2.643
SC4	2.565	PI4	2.442
SC5	2.267	PI5	2.798
SC6	2.765	PI6	2.992
SC7	2.199	PI7	2.322
SC8	2.794	PI8	2.129
SC9	2.232	PI9	2.539
DL1	2.981	PI10	2.400
DL2	3.867	PI11	2.682

Based on the PLS-SEM results, the R-square and F-square values are presented in Table 8. The R-square value for purchase intention is 0.740, indicating that trust, security, digital literacy, and the interaction effects in the model explain 74.0% of the variance in purchase intention. The F-square results show that trust, security, and digital literacy have small to medium effect sizes in influencing purchase intention, while the moderating effect of digital literacy on security shows a relatively stronger effect compared to other relationships. To further evaluate the predictive ability of the model, additional analysis was conducted using Q-square and CVPAT, which indicate that the model has good predictive relevance and predictive capability.

Table 8. Model Explanatory Powe.

R-square			F-square	
Variable	**R-square**	**R-square adjusted**	**Variable**	**F-square**
PI	0.740	0.731	TR -> PI	0.354
			SC -> PI	0.326
			DL -> PI	0.765
			DL x TR -> PI	0.060
			DL x SC -> PI	0.505

Table 9. Q-square and PLS Predict.

Variable	Q^2 Predict	PLS-SEM_RMSE	PLS-SEM_MAE	LM_RMSE	LM_MAE
PI2	0.512	0.594	0.483	0.719	0.561
PI3	0.342	0.711	0.523	0.853	0.653
PI4	0.338	0.711	0.554	0.858	0.666
PI5	0.508	0.61	0.48	0.776	0.612

PI6	0.432	0.624	0.469	0.781	0.588
PI7	0.341	0.703	0.547	0.905	0.721
PI8	0.384	0.707	0.531	0.912	0.706
PI9	0.439	0.639	0.499	0.813	0.648
PI10	0.348	0.711	0.542	0.963	0.744
PI11	0.369	0.647	0.495	0.789	0.611
PI12	0.418	0.669	0.51	0.844	0.632

Table 10. CVPAT (Cross-Validated Predictive Ability Test).

Variable	PLS Loss	IA loss	Average loss difference	t-value	p-value
PI	0.445	0.745	-0.299	2.814	0.006
Overall	0.445	0.745	-0.299	2.814	0.006

PLS predict/CVPAT was added for Model Explanatory power, that ran with 10 folds and 10 repetitions, resulting in the Q-square values within PLS predict summary as shown in Table 8 as well. When observing the Q-square, they fulfill the required values in blindfolding as well. While comparison of the prediction power RMSE/MAE (Root Mean Square/Mean Absolute Error) for LM (Linear Regression Model) yields high predictive power as the PLS one produces smaller prediction errors.

Lastly, when comparing the PLS loss and IA (Indicator Average) on table 8, the average loss difference is negative. Meaning that it also produces less error, along with the p-value presenting a value of less than 0.05. Both LM and IA have been outperformed by the model, making the PLS-SEM model significantly better than them, with a high predictive capability. Lastly, model fit with SRMR (Standardized Root Mean Square Residual) as the main measurement, shows a slightly above number than the conservative recommended, but nonetheless still a good fit.

Table 11. VIF (Variance Inflation Factor)

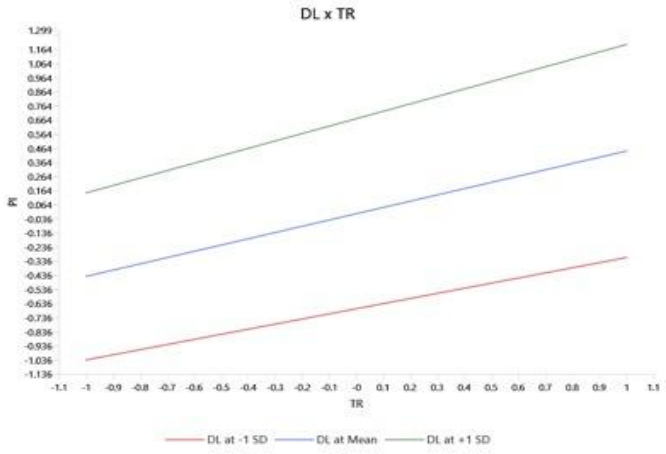
Model Fit	Estimated model
SRMR	0.07
d_ULS	4.203
d_G	1.498
Chi-square	1160.987
NFI	0.806

While NFI is under the acceptable number, the model used in this study is relatively not large as shown on table 9. NFI scales with the size of the model, thus the author accepts this value and only consider NFI as a reminder that the closer it is to the value of 1, the better the model fit is. The testing method takes advantage of the segmented part-worth information obtained from Table 10 below.

Table 12. VIF (Variance Inflation Factor) .

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Hypothesis supported?
H1: TR → PI	0.444	0.406	0.199	2.237	0.025	Accepted
H2: SC → PI	-0.352	-0.318	0.105	3.353	0.001	Accepted
H3: DL x TR → PI	0.082	0.071	0.06	1.370	0.171	Rejected
H4: DL x SC → PI	0.227	0.234	0.085	2.686	0.007	Accepted

H1, H2, and H4 are accepted, while H3 is rejected. H3's rejection is in line with its insignificant effect, indicating that it does not have a meaningful moderating role. TR has a valid positive effect on PI, while SC has a valid negative effect on PI. Furthermore, DL as a moderator is not valid in the relationship between TR and PI, but is valid in moderating the relationship between SC and PI with a positive effect. This indicates that the presence of DL strengthens the effect of SC on PI, although the change in the relationship is not substantial.



Picture 3. DL Variable as a Moderator between TR and PI.

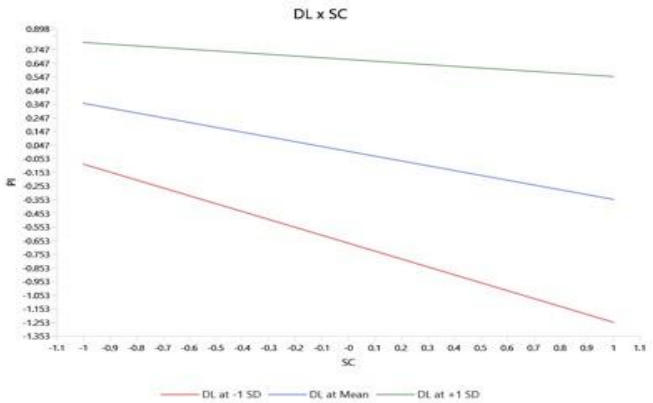


Figure 4. DL Variable as a Moderator between SC and PI.

For Figure 3, the interaction between DL and TR shows that the slope lines are relatively parallel across different levels of DL (−1 SD, mean, +1 SD). This indicates that although DL has a positive role, it does not significantly change the strength of the relationship between TR and PI. This result is consistent with the hypothesis testing, where the moderating effect of DL on the relationship between TR and PI is not supported.

In contrast, Figure 4 shows a different pattern for the interaction between DL and SC. The slope of the lines changes more noticeably across different levels of DL, where higher levels of DL reduce the negative effect of SC on PI. This indicates that DL significantly moderates the relationship between SC and PI. Thus, the moderating effect is applicable for the relationship between SC and PI, but not for TR and PI.

Discussion

The results of this study show that trust has a positive and significant effect on online purchase intention. This means that consumers are more likely to purchase home appliance products online when they feel that the seller is reliable, provides honest information, and delivers products as promised. In online transactions, especially for electronic products, consumers cannot directly inspect the product before purchasing. Because of this, trust becomes an important factor in reducing uncertainty and helping consumers feel more confident in making purchase decisions. This finding is in line with previous studies which found that trust plays an important role in influencing online consumer behavior.

The findings also show that security has a significant effect on online purchase intention. Consumers consider transaction safety, payment protection, product authenticity, and delivery reliability before deciding to purchase home appliance products online. Since electronic products usually involve higher prices and greater perceived risk, consumers tend to pay more attention to security during the purchasing process. When consumers feel that the platform provides a secure transaction environment, they are more willing to complete the transaction. This result supports previous studies that found security to be one of the key factors in online purchasing decisions (Jefryansyah & Muhajirin, 2020; Sonja & Ewald, 2003).

For the moderating effect, digital literacy was not found to strengthen the relationship between trust and online purchase intention. This suggests that trust can influence purchase intention regardless of consumers' digital literacy level. Consumers may build trust through seller reputation, product reviews, or previous shopping experience. However, digital literacy significantly strengthens the relationship between security and online purchase intention. Consumers with better digital understanding tend to be more confident in evaluating payment systems, security features, and seller credibility. This helps them feel safer when making online

transactions. These findings show that digital literacy is more relevant when consumers evaluate transaction security rather than when they form trust in sellers.

5. CONCLUSION

This study examined how trust and security influence consumers' online purchase intention when purchasing home appliance products through e-commerce platforms, with digital literacy as a moderating variable. The results show that trust and security have a significant influence on online purchase intention. Consumers are more likely to purchase online when they feel confident in the credibility of sellers and the safety of the transaction process. The findings also show that digital literacy does not significantly strengthen the relationship between trust and online purchase intention. However, digital literacy strengthens the relationship between security and online purchase intention, indicating that consumers with better digital skills are more confident in evaluating online transaction security. These findings provide a better understanding of consumer behavior in online purchasing, especially in the home appliances sector.

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