

The Impact of Product Description, Product Photo, Rating, and Review on Purchase Intention in E-commerce

Muhammad Ghiffary Mokobombang^{*1}, Nurrani Kusumawati²

School of Business and Management, Institut Teknologi Bandung, Bandung, Indonesia^{1,2}

Email: mghiffary_moko@sbm-itb.ac.id

Abstract

The Covid-19 pandemic in the last 3 years has strengthened E-commerce growth, making online shopping the new norm due to restricted offline activities. To aid buyers and sellers in conducting transactions in E-commerce, E-commerce platforms have introduced features like product descriptions, product photos, ratings, and reviews. These features have created a competitive landscape, benefiting sellers who can use them effectively. Nevertheless, many sellers still struggle to optimize these features and market their products effectively to buyers. Failure to optimize these features correctly restricts the marketing strategy's effectiveness and puts sellers at risk for unanticipated difficulties that may be prevented by determining the various effects of these features on customers' purchase intentions. Therefore, this research aims to analyze the impact of product descriptions, product photos, and ratings & reviews on customers' purchase intention in E-commerce. A quantitative approach is used in this study, where the data is analyzed through descriptive statistics and PLS-SEM. The result of this study suggested that all three features of product description, product photo, and rating & review significantly and positively influence purchase intention in E-commerce. In addition, the author also found that moderation of perceived trust significantly affects product description and rating & review on purchase intention, while the moderation of perceived risk only significantly affects rating & review on purchase intention. The finding of this research is expected to give insights to E-commerce sellers on optimizing the features in E-commerce to increase the customers' purchase intention.

Keywords: e-commerce; product description; product photo; rating & review; purchase intention

A. INTRODUCTION

Digital platforms are regarded as tools for completing a wide range of tasks. It primarily supports a data-driven world as opposed to a process-driven world. Digital platforms are utilized in various industries, including marketplaces, media, and information platforms. Over the years, digital platforms have seen a significant surge as people prefer to buy online and use other services that are either subscription-based or free on various online channels (Galhotra & Dewan, 2020). Moreover, the emergence of Coronavirus has compelled customers to use the internet and make it a habit in their daily routine (Abiad et al., 2020). According to (ITU, 2021), the number of internet users worldwide has increased from 4.1 billion people or about 54 percent of the world's population in 2019 to 4.9 billion people, accounting for 63 percent of the world's population in 2021.

E-commerce is one of the digital platforms used a lot during this surge of internet users. According to (Kotler & Armstrong, 2012), the exchange of products, services, and information via the internet or other computer networks is known as e-commerce. The popularity of E-commerce is supported by the benefits that it offers to both buyers and sellers. Some benefits include convenience, lower cost, larger market reach, and increased customer engagement (Kotler & Armstrong, 2017).

Through the growing usage of E-commerce, many platforms have implemented features to increase their users' experience. One of those features is the product description. A successful electronic system requires consumers to use online tools to assist them in obtaining information and identifying resources that

* Corresponding author

meet their expectations and wishes, finding and filtering information is crucial to this success. Through the product description, customers can find goods and services at reasonable prices in languages and terminology they are familiar with (Ng et al., 2000). Another feature implemented in e-commerce websites and other sectors, such as service-oriented businesses like hotels, hospitals, theatres, shopping malls, and amusement parks, is the rating and review system (Raja & Pushpa, 2017). The rating and review would generally be done by those who have bought and used the products before; they would explain their experiences using the product/service. One other feature that is implemented in E-commerce is the product photo. Online consumers who cannot directly see the desired product can better understand and check for its specification and quality through photos (Li et al. 2014). In E-commerce, sellers could upload photos of the product they are selling for customers to look at them.

In a preliminary study conducted by the author that surveys e-commerce users, many respondents say that they would not pick a product from a certain seller that is inadequate in their product description, product photos, reviews & ratings, or a mix of all 3. Furthermore, the respondents also gave their reasoning on why sellers need to pay attention to those 3 factors; most of them said that through these factors, sellers could gain the trust of consumers and increase the sellers' reputation, which could influence the purchase intention. Therefore, E-commerce sellers must understand the impact of product descriptions, product photos, and ratings & reviews on customers' purchasing intention.

Studies have been conducted to see the impact of the product description, product photo, and rating & review on purchase intention; however, past studies research each component of the product description, product photo, and rating & review impact on purchase intention separately with no comparison between one and another. Therefore, in this paper, besides analyzing the impact of the features on purchase intention, the author will also research how each component complements the other and the degree of impact each of them has. On top of the findings above, the author will also give suggestions for sellers on the correct strategies to take in optimizing the usage of these features. The benefit of this would be that sellers in e-commerce could understand which feature positively impacts consumers' purchasing intention and how to adjust their sales strategy accordingly.

In determining factors that could influence purchase intention, perceived ease of use and perceived usefulness are the two main components that could influence it (Shaw, 2014). In addition, a study (Pavlou, 2003) showed that the factor of trust and risk could also be implemented as the intention to transact is found to be influenced by trust and perceived risk. Therefore, for this study, those factors are implemented as the moderating variables that could impact the independent variables (product description, rating & review, and product photo) on the dependent variable (purchase intention). However, for this study, the variable of perceived ease of use is not used due to the straightforward usage of the product description, product photo, and rating & review in E-commerce platforms, which makes adding this variable irrelevant. Previous research has also demonstrated the moderating effect on purchase intention of perceived usefulness (Halima et al., 2021), perceived trust (Li et al., 2021; Chang et al., 2019), and perceived risk (Qalati et al., 2020; Gozukara, Ozyer & Kocoglu, 2014), so the implementation of it in this study is justified.

This study will be conducted in Indonesia, the author's domicile. Besides the effectiveness of the data retrieval process, the reasoning for this is that Indonesia has become one of the fastest-growing e-commerce markets in the world. According to eMarketer, by 2022, Indonesia ranked third in the world in retail e-commerce sales growth, with a 23% increase from the year prior. Compared with previous literature's research locations on the impact of product description which is in Northern Ireland (Zhang et al., 2011), ratings and reviews in Sweden (Battha & Zina, 2022), and product pictures in China (Li et al., 2014), this paper fills the gap by conducting it in Indonesia which is still few or none.

B. RESEARCH METHOD

The author starts by identifying problems in the E-commerce industry from the internet and the author's experience. The author also conducted a preliminary survey of platform users further to analyze the recurring problems in the E-commerce industry. From the preliminary, it was found that many sellers have not utilized the platform's features optimally, leading to the consumers not wanting to buy. After the problem has been identified, a literature review is conducted, which reviews past literature that studies the same area or variables as the author. From the literature review, the hypothesis will be formulated based on past studies. Therefore, the proposed model and hypotheses that will be used are:

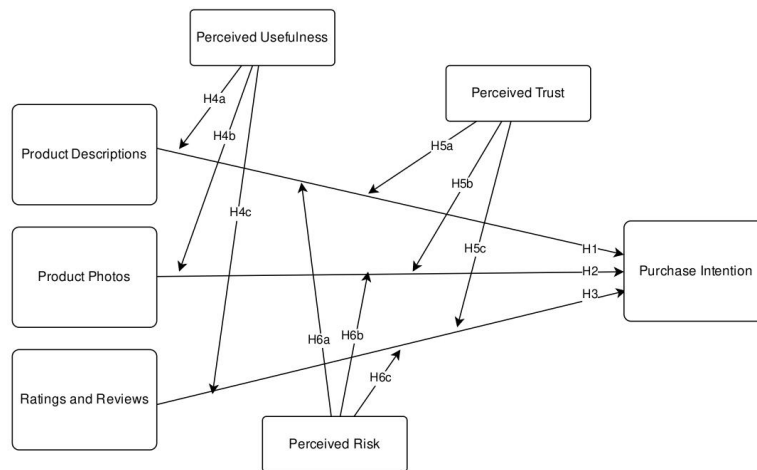


Figure 1. Proposed Model

H1: High-quality product descriptions have a significant positive impact on customers' purchase intention in E-commerce

H2: High-quality product photos have a significant positive impact on customers' purchase intention in E-commerce

H3: Positive ratings and reviews have a significant positive impact on customers' purchase intention in E-commerce

H4a: Moderation of perceived usefulness significantly affects product description on customers' purchase intention in E-commerce

H4b: Moderation of perceived usefulness significantly affects product photos on customers' purchase intention in E-commerce

H4c: Moderation of perceived usefulness significantly affects rating and review on customers' purchase intention in E-commerce

H5a: Moderation of perceived trust significantly affects product description on customers' purchase intention in E-commerce

H5b: Moderation of perceived trust significantly affects product photos on customers' purchase intention in E-commerce

H5c: Moderation of perceived trust significantly affects rating and review on customers' purchase intention in E-commerce

H6a: Moderation of perceived risk significantly affects product description on customers' purchase intention in E-commerce

H6b: Moderation of perceived risk significantly affects product photo on customers' purchase intention in E-commerce

H6c: Moderation of perceived risk significantly affects rating and review of customers' E-commerce purchase intention.

In collecting and analyzing the data, this study uses the quantitative approach as it produces factual, trustworthy results that can frequently be generalized to some larger populations (Steckler et al., 1992). In order to gather the data quantitatively, an online survey will be done through questionnaires which will be spread to respondents that meet the requirement. Moreover, the author conducts a pilot test to examine the respondents' understanding further and identify potential problems with instruments and protocols that might occur during the data collection. The author will use the seven Likert scale for the survey since it offers a more accurate, user-friendly, and better portrayal of a respondent's real assessment (Finstad, 2010).

This study aims to analyze the purchasing behavior of E-commerce users. The author will pick the region with the highest concentration of E-commerce users to better understand this and capture the most effective respondents representing the sample size. According to (Badan Pusat Statistik, 2020), West Java has the highest amount of E-commerce users, with 473.283; therefore, the author will use Bandung as the capital of West Java as the domicile of the respondents. In addition, the sample for this research will focus on Generation Y and Z that have used E-commerce. The author plans to process the data and conduct the hypothesis testing using the SMART PLS tool with PLS-SEM methodology; according to (Memon et al., 2020), generally, a sample between 160 and 300 is suitable for multivariate statistical analysis techniques such as PLS-SEM. Therefore, the author will use a sample size ranging there for the data collection.

C. RESULTS AND ANALYSIS

The result from the validity and reliability of the pilot test has proven that the questionnaire design is valid and reliable to conduct further analysis with more samples. Therefore, the author gathers more samples for the quantitative analysis to be analyzed descriptively statistically. Once the data had been gathered from 243 respondents, it was found from the behavioral question that the most answered reason for customers picking an E-commerce platform is trusted and secure. Followed by more promos, more varieties sold, easy to use, and packed with features.

Continuing on the descriptive analysis, it was concluded that the highest mean score is PI3 (5.31), which is represented by the purchase intention variable specifically on the dimension of rating & review with the indicator "My willingness to buy a product in e-commerce is heavily influenced by the ratings & reviews from previous buyers." Meanwhile, for the lowest mean score, PU2 (4.19) sits at the bottom. PU2, which is from the perceived usefulness variable on the dimension of the product description, has the indicator "I believe that the product description is reliable and useful to judge the seller and its' product". After the descriptive analysis has been conducted, the author will further analyze the result through statistical analysis using PLS-SEM.

In conducting statistical analysis with PLS-SEM, different tests will be used, some of which are the reliability analysis, validity analysis, collinearity test, coefficient of determination, path coefficient, P value, and F-square effect size.

Table 1. Reliability Analysis

Indicators	Outer loadings	Indicators	Outer loadings
PD1 <- Product Description	0.921	PR4 <- Perceived Risk	0.791
PD2 <- Product Description	0.891	PR5 <- Perceived Risk	0.816
PD3 <- Product Description	0.883	PR6 <- Perceived Risk	0.776
PI1 <- Purchase Intention	0.881	PR7 <- Perceived Risk	0.797
PI2 <- Purchase Intention	0.896	PR8 <- Perceived Risk	0.764
PI3 <- Purchase Intention	0.886	PR9 <- Perceived Risk	0.719
PP1 <- Product Photo	0.894	PT1 <- Perceived Trust	0.830

Indicators	Outer loadings	Indicators	Outer loadings
PP2 <- Product Photo	0.886	PT10 <- Perceived Trust	0.753
PP3 <- Product Photo	0.903	PT11 <- Perceived Trust	0.804
PR1 <- Perceived Risk	0.814	PT12 <- Perceived Trust	0.680
PR2 <- Perceived Risk	0.819	PT2 <- Perceived Trust	0.801
PR3 <- Perceived Risk	0.817	PT3 <- Perceived Trust	0.826
PT4 <- Perceived Trust	0.820	PU4 <- Perceived Usefulness	0.832
PT5 <- Perceived Trust	0.803	PU5 <- Perceived Usefulness	0.854
PT6 <- Perceived Trust	0.830	PU6 <- Perceived Usefulness	0.816
PT7 <- Perceived Trust	0.834	PU7 <- Perceived Usefulness	0.812
PT8 <- Perceived Trust	0.827	PU8 <- Perceived Usefulness	0.745
PT9 <- Perceived Trust	0.779	PU9 <- Perceived Usefulness	0.775
PU1 <- Perceived Usefulness	0.837	RR1 <- Rating & Review	0.870
PU2 <- Perceived Usefulness	0.808	RR2 <- Rating & Review	0.879
PU3 <- Perceived Usefulness	0.829		

Source: research data, 2023

In evaluating the convergent validity, the outer loadings can be measured. In general, the minimum outer loading of all indicators should be 0.7 or above to be deemed acceptable, so outer loading values below 0.7 should be eliminated from the model (Hidayat, 2021). Based on the result of outer loading shown in Table 1, it is evident by the red highlight that 1 indicator has an outer loading below 0.7, which is PT12 (0.68); therefore, it is eliminated.

Table 2. Composite Reliability and Validity

Indicators	Composite reliability	Average Variance Extracted (AVE)
Perceived Risk	0.925	0.626
Perceived Trust	0.949	0.660
Perceived Usefulness	0.936	0.661
Product Description	0.883	0.807
Product Photo	0.876	0.800
Purchase Intention	0.867	0.788
Rating & Review	0.855	0.774

Source: research data, 2023

The author will examine the validity using AVE or Average Variance Extracted for all items on each construct. The lowest acceptable AVE is 0.50; when the AVE is 0.50 or greater, the construct is said to explain 50% or more of the variation of the construct's components (Hair et al., 2019). Furthermore, composite reliability should be used to assess internal consistency reliability. The acceptable composite reliability range should be from 0.6 to 0.7, while values ranging from 0.7 to 0.9 can be categorized as good reliability. Based on the result of validity using AVE, as shown in Table 2, it can be seen that all of the indicators have surpassed the minimum acceptable AVE of 0.5. Moreover, from Table 1, the composite reliability is also shown, with all indicators being considered good reliability, which ranges from 0.7 to 0.9.

Table 3. Composite Reliability and Validity

Indicators	VIF	Indicators	VIF
PD1	2.882	PR2	2.605
PD2	2.497	PR3	2.558
PD3	2.207	PR4	2.409
PI1	2.036	PR5	2.374
PI2	2.448	PR6	2.153
PI3	2.350	PR7	2.239

Indicators	VIF	Indicators	VIF
PP1	2.316	PR8	2.004
PP2	2.299	PR9	1.743
PP3	2.518	PT1	3.033
PR1	2.552	PT10	2.185
PT11	2.509	PU3	2.695
PT2	2.416	PU4	2.634
PT3	2.891	PU5	2.970
PT4	2.969	PU6	2.483
PT5	2.460	PU7	2.421
PT6	2.957	PU8	1.896
PT7	2.854	PU9	2.074
PT8	2.987	RR1	1.989
PT9	2.155	RR2	2.165
PU1	2.667	RR3	2.204
PU2	2.481		

Source: research data, 2023

In order to ensure that collinearity does not affect the findings of the regression, it must be addressed before evaluating the structural relationships. The variance inflation factor (VIF) is commonly employed to evaluate the collinearity of the formative indicators, with collinearity problems existing on VIF values above 3 (Becker et al., 2018). Based on the result of the collinearity test shown in Table 3, it is evident that all indicators have a VIF value below 5. Hence, with all indicators passing the collinearity test, the author can conclude that multicollinearity or issues with collinearity between constructs are not present.

Table 4. Collinearity Test

Dependent Variable	R-square adjusted
Purchase Intention (PI)	0.631

Source: research data, 2023

The R^2 which can be referred to as in-sample predictive power (Rigdon, 2012), calculates the variation explained by each endogenous construct and indicates the model's explanatory ability (Shmueli and Koppius, 2011). Higher values R^2 the model has better explanatory power, ranging from 0-1. From the calculation of the adjusted R^2 shown in Table 4, it can be seen that Purchase Intention (PI) has an adjusted R^2 value of 0.631. It can be interpreted that the independent variable predicts 63.1% of the dependent variable.

Table 5. Hypothesis Test

Hypothesis	Structural Path	Path Coefficient	P-value	Result
H1	PD -> PI	0.250	0.012	Accepted
H2	PP -> PI	0.258	0.001	Accepted
H3	RR -> PI	0.469	0.000	Accepted
H4a	PU*PD -> PI	0.257	0.172	Rejected
H4b	PU*PP -> PI	-0.127	0.312	Rejected
H4c	PU*RR -> PI	-0.273	0.155	Rejected
H5a	PT*PD -> PI	-0.503	0.019	Accepted
H5b	PT*PP -> PI	0.031	0.448	Rejected
H5c	PT*RR -> PI	0.526	0.018	Accepted
H6a	PR*PD -> PI	0.076	0.339	Rejected
H6b	PR*PP -> PI	0.122	0.274	Rejected
H6c	PR*RR -> PI	-0.340	0.030	Accepted

Source: research data, 2023

In the PLS-SEM context, hypothesis testing is often done by calculating a P value for each path coefficient (Kock, 2016). For a hypothesis to can be assumed as accepted, the P value should be below or

the same as 0.05; otherwise, it is rejected. In addition to calculating the P value, the author would also calculate the path coefficients of each variable. Path coefficients are values that can indicate the direction of the relationship to a variable, whether positive or negative (Meiryani, 2021). Path coefficients range in value from -1 to 1.

Hypothesis 1 assumes that high-quality product descriptions have a significant positive impact on purchase intention in E-commerce; from the result of the path coefficient and P-value in Table 5, it can be concluded that the hypothesis of H1 is accepted. The result is aligned with the findings from a previous study conducted by (Zhang et al., 2011) that stated high-quality products significantly positively impact customers' purchase intention in E-commerce. From the study of (Kripesh et al., 2020) that analyzed the product information (product description) on purchase intention, the findings are also aligned, meaning that the result is consistent with previous studies.

Hypothesis 2 assumes that high-quality product photos significantly positively impact customers' purchase intention in E-commerce. From the result of the path coefficient and P-value in Table 5, it can be concluded that the hypothesis of H2 is accepted. It is aligned with (Li et al., 2014) findings that product visual presentation (photo) influences consumer purchase intention. This study also found that the image quality of the photos becomes the priority compared to the quantity of photos being provided,

Hypothesis 3 states that positive ratings and reviews significantly impact customers' purchase intention in E-commerce. From the result of the path coefficient and P-value in Table 5, it can be concluded that the hypothesis of H3 is accepted. It can be concluded from the result of hypothesis H3; the findings align with previous studies (Battha & Zina., 2022; Park et al., 2007; Zhang et al., 2020).

The moderation of perceived usefulness on product description, product photo, and rating & review on purchase intention has been proven insignificant. It concludes the rejection of H4a, H4b, and H4c. The result from this study is not aligned with (Halima et al., 2021), but it is aligned with the study (Mensah, 2019) that the moderation of perceived usefulness does not significantly affect behavioral intention.

From Hypothesis 5a, it is assumed that moderation of perceived trust significantly affects product photos on customers' purchase intention in E-commerce. The result showed that the hypothesis is accepted, aligning with the result from (Li et al., 2021; Chang et al., 2019). However, a difference is found between past studies and this study, as the relationship is negative rather than positive. Trust can reduce uncertainty and anxiety, which can lead to a decreased need for information (Rainie et al., 2019), hence when a consumer has high perceived trust towards the product, the relationship between the product description affecting purchase intention weakens as there is less need to seek additional information to verify or validate the claims. Hypothesis 5c is also accepted, indicating that the moderation of perceived trust significantly affects ratings and reviews on customers' purchase intention in E-commerce. With that being said, Hypothesis 5b is rejected. From the preliminary survey that the author conducted, many of the respondents said that one of the difficulties that they felt when using E-commerce is sellers not giving a product that is according to the product photos; they feel that it is hard to check for the trustworthiness of the seller solely from the photo of the product. Therefore, the moderation of perceived trust has no positive significant effect on the customers' purchase intention in E-commerce.

Hypothesis 6a and 6b are rejected through the result of the study, which is aligned with the result from one of the variables in (Gozukara, 2014). This phenomenon happens due to the difficulty of risk assessment in both product description and product photo, making the moderation of perceived risk not significantly affect the relationship on purchase intention. Meanwhile, hypothesis 6c is accepted, aligning with the result (Qalati et al., 2020; Gozukara, 2014).

Table 6. F-square effect size

Structural Path	F-square
PD -> PI	0.042

Structural Path	F-square
PP -> PI	0.047
RR -> PI	0.228
PR*PP -> PI	0.002
PT*RR -> PI	0.035
PT*PP -> PI	0.000
PU*RR -> PI	0.007
PR*PD -> PI	0.001
PU*PD -> PI	0.005
PR*RR -> PI	0.020
PU*PP -> PI	0.001
PT*PD -> PI	0.030

Source: research data, 2023

In order to determine the extent of an exogenous construct's influence on an endogenous construct, the f-square effect size (F^2) is used. According to Cohen (1988), for the measurement of the f-square effect size, values between 0.02 and 0.15 are considered as small, between 0.15 and 0.35 are considered as medium, and higher than 0.35 as large f-square effect size. From the result in Table 6, product description to purchase intention, product photo to purchase intention, perceived trust moderates rating & review to purchase intention, perceived risk moderates rating & review to purchase intention, and perceived trust moderates product description to purchase intention falls into the medium effect size. In addition, rating & review to purchase intention is the only one with a large effect size.

D. CONCLUSION

According to the findings, it was found that all three features of product description, product photo, and rating & review positively influence purchase intention in E-commerce. It can be interpreted that a high-quality product description, product photo, and rating & review strengthen the intention to purchase from E-commerce customers. Moreover, ratings & review influence purchase intention most, followed by product photos and descriptions. This suggests the need for E-commerce sellers to prioritize the rating & review before the other features. Furthermore, based on the quantitative analysis result, the quantity or volume of the rating & review is the most important. The strategy that could be used is by giving compensation to buyers who are willing to give their input toward their product. For buyers, giving ratings & reviews exerts useful time that could be used somewhere else. Therefore, in exchange for their willingness and time spent to rate and review, sellers could give compensation in the form of coupons or discount codes for the next purchase conducted by the buyer. Sellers should also be responsive in resolving problems regarding their products and services. When a buyer posts a low rating & review, sellers should quickly assess what went wrong and immediately fix the problem. This is done so that future buyers will not have this problem, which leads to the avoidance of a low rating & review being repeated.

The author also suggests that E-commerce sellers implement strategies to increase perceived trust and decrease customers' perceived risk due to significantly moderating the relationship between rating & review, and purchase intention. Honoring customer feedback, being responsive on chats, having clear contact information, and accurately shipping products are some things that E-commerce sellers should implement in their business.

Besides E-commerce sellers, the author would also recommend E-commerce platforms. From the survey result, it can be seen by the reasons customers, in picking a platform to use, trusted and secure become the most answered, followed by more promos, more varieties sold, easy to use, and finally, packed with features. Therefore, for E-commerce platforms to garner more users, they need to improve and

maximize their effort in keeping their platform trusted and secure in the customer's eyes. For example, E-commerce can use data encryption to ensure the protection of customers' sensitive data, partner up with reliable and secure payment gateways that are known for their safety and fraud prevention measures, offer responsive and efficient customer support to address any concerns or issues faced by customers and avoid hidden charges or ambiguous information that may lead to customer mistrust.

For further research, a study on the features of a specific E-commerce platform could be done as the characteristics of each platform's users differ. Therefore, it could present an interesting result. Furthermore, widening the scope and implementing a qualitative approach is also suggested, as it could present a more in-depth understanding of the behavior.

REFERENCES

- Abiad, A. et al. (2020) 'The economic impact of the COVID-19 outbreak on developing Asia', ADB Briefs. doi:10.22617/brf200096.
- Battha, M. and Zina, F. (2022) The impact of Online Reviews and Influencers on Customers' Purchasing Intention [Preprint]. Available at: <http://www.diva-portal.org/smash/get/diva2:1663364/FULLTEXT01.pdf>
- Becker, J.-M., Ringle, C.M. and Sarstedt, M. (2018) 'Estimating moderating effects in PLS-SEM and PLSC-SEM: Interaction term generation*data treatment', *Journal of Applied Structural Equation Modeling*, 2(2), pp. 1–21. doi:10.47263/jasem.2(2)01.
- BPS Kota Bandung (2020) Penduduk Menurut Kelompok Umur dan Jenis Kelamin (Jiwa), 2018-2020, Badan Pusat Statistik Kota Bandung. Available at: <https://bandungkota.bps.go.id/indicator/12/103/1/penduduk-menurut-kelompok-umur-dan-jenis-kelamin.html>
- Chang, K.-C. et al. (2019) Effect of tangibilization cues on consumer purchase intention in the social media context: Regulatory Focus Perspective and the moderating role of Perceived Trust', *Telematics and Informatics*, 44, p. 101265. doi:10.1016/j.tele.2019.101265.
- Cohen, J. (1988) *Statistical Power Analysis for the behavioral sciences*. Hillsdale, NJ: L. Erlbaum Associates.
- Finstad, K. (2010) *Response Interpolation and Scale Sensitivity: Evidence Against 5-Point Scales*.
- Galhotra, B. and Dewan, A. (no date) Impact of COVID-19 on digital platforms and change in E-commerce shopping trends. ResearchGate.
- GOZUKARA, E., OZYER, Y. and KOCOGLU, I. (2014) 'The moderating effects of perceived use and perceived risk in online shopping', *Journal of Global Strategic Management*, 2(8), pp. 67–67. doi:10.20460/jgsm.2014815643.
- Hair, J.F. et al. (2019) 'When to use and how to report the results of PLS-SEM', *European Business Review*, 31(1), pp. 2–24. doi:10.1108/eb-11-2018-0203.
- Halima, M.H. et al. (2021) 'Impact of online crisis response strategies on online purchase intention: The roles of online brand attitude and brand perceived usefulness', *SAGE Open*, 11(1), p. 215824402110038. doi:10.1177/21582440211003872.
- Hidayat, A. (2021) PLS SEM: Pengukuran kecocokan model (Inner Model Dan Outer Model), *Uji Statistik*. Available at: <https://www.statistikian.com/2018/08/pls-sem-pengukuran-kecocokan-model-inner-dan-outer.html>

- ITU (2021) Facts and figures 2021. Available at: <https://www.itu.int/itu-d/reports/statistics/2021/11/15/internet-use/>
- Kock, N. (2016) 'Hypothesis testing with confidence intervals and P values in PLS-sem', *International Journal of e-Collaboration*, 12(3), pp. 1–6. doi:10.4018/ijec.2016070101.
- Kotler, P. (2017) *Principle of Marketing: An Asian perspective*. Harlow: Pearson Education Limited.
- Kotler, P. and Armstrong, G. (2012) *Principles Of Marketing 14th Edition*. Essex, England: Pearson Education Limited.
- Kripesh, A.S., Prabhu, H.M. and Sriram, K.V. (2020) 'An empirical study on the effect of product information and perceived usefulness on purchase intention during online shopping in India', *International Journal of Business Innovation and Research*, 21(4), p. 509. doi:10.1504/ijbir.2020.105982.
- Kumar Raja, D.R. and Pushpa, S. (2017) "Feature level review table generation for e-commerce websites to produce qualitative rating of the products," *Future Computing and Informatics Journal*, 2(2), pp. 118–124. Available at: <https://doi.org/10.1016/j.fcij.2017.09.002>.
- Li, G. et al. (2021) 'How do environmental values impact green product purchase intention? the moderating role of Green Trust', *Environmental Science and Pollution Research*, 28(33), pp. 46020–46034. doi:10.1007/s11356-021-13946-y.
- Li, X., Wang, M. and Chen, Y. (2014) THE IMPACT OF PRODUCT PHOTO ON ONLINE CONSUMER PURCHASE INTENTION: AN IMAGE-PROCESSING ENABLED EMPIRICAL STUDY.
- Li, X., Wang, M. and Chen, Y. (2014) THE IMPACT OF PRODUCT PHOTO ON ONLINE CONSUMER PURCHASE INTENTION: AN IMAGE-PROCESSING ENABLED EMPIRICAL STUDY.
- Meiryani, Dr. (2021) Memahami Koefisien Jalur (path coefficients) Dalam Smart Pls, *Accounting*. Available at: <https://accounting.binus.ac.id/2021/08/12/memahami-koefisien-jalur-path-coefficients-dalam-smart-pls/>
- Memon, M.A. et al. (2020) 'Sample Size For Survey Research: Review and recommendations', *Journal of Applied Structural Equation Modeling*, 4(2), pp. i–xx. doi:10.47263/jasem.4(2)01.
- Mensah, I.K. (2019) 'Exploring the moderating effect of perceived usefulness on the adoption of E-Government Services', *International Journal of Electronic Government Research*, 15(1), pp. 17–35. doi:10.4018/ijegr.2019010102.
- Ng, W.K., Yan, G. and Lim, E.-P. (2000) "Heterogeneous product description in Electronic Commerce," *ACM SIGecom Exchanges*, 1(1), pp. 7–13. Available at: <https://doi.org/10.1145/844302.844305>.
- Park, D.-H., Lee, J. and Han, I. (2007) 'The effect of online consumer reviews on consumer purchasing intention: The moderating role of involvement', *International Journal of Electronic Commerce*, 11(4), pp. 125–148. doi:10.2753/jec1086-4415110405.
- Pavlou, P.A. (2003) 'Consumer acceptance of Electronic Commerce: Integrating Trust and Risk with the technology acceptance model', *International Journal of Electronic Commerce*, 7(3), pp. 101–134. doi:10.1080/10864415.2003.11044275.
- Qalati, S.A. et al. (2021) 'Effects of perceived service quality, website quality, and reputation on purchase intention: The mediating and moderating roles of trust and perceived risk in online shopping', *Cogent Business & Management*, 8(1). doi:10.1080/23311975.2020.1869363.

- Rainie, L., Keeter, S. and Perrin, A. (2019) Trust and distrust in America, Pew Research Center - U.S. Politics & Policy. Available at: <https://www.pewresearch.org/politics/2019/07/22/trust-and-distrust-in-america/>
- Rigdon, E.E. (2012) 'Rethinking partial least squares path modeling: In praise of simple methods', *Long Range Planning*, 45(5–6), pp. 341–358. doi:10.1016/j.lrp.2012.09.010.
- Shaw, N. (2014) 'The mediating influence of trust in the adoption of the Mobile Wallet', *Journal of Retailing and Consumer Services*, 21(4), pp. 449–459. doi:10.1016/j.jretconser.2014.03.008.
- Shmueli, G. and Koppius, O.R. (2011) 'Predictive analytics in information systems research', *MIS Quarterly*, 35(3), p. 553. doi:10.2307/23042796.
- Steckler, A. et al. (1992) 'Toward integrating qualitative and quantitative methods: An introduction', *Health Education Quarterly*, 19(1), pp. 1–8. doi:10.1177/109019819201900101.
- Zhang, J., Zheng, W. and Wang, S. (2020) "The study of the effect of online review on Purchase Behavior," *International Journal of Crowd Science*, 4(1), pp. 73–86. Available at: <https://doi.org/10.1108/ijcs-10-2019-0027>.
- Zhang, Y. et al. (2011) 'Repurchase intention in B2C e-commerce—a relationship quality perspective', *Information & Management*, 48(6), pp. 192–200. doi:10.1016/j.im.2011.05.003.