

Conference Paper

What Influences the Online Purchasing of Electrical Equipment Products?

Priyo UTOMO¹ and Timotius F. C. W. SUTRISNO²¹Sekolah Tinggi Ilmu Ekonomi Pemuda, Indonesia²Universitas Ciputra Surabaya, Indonesia**ORCID:**Timotius F. C. W. Sutrisno: <http://orcid.org/0000-0002-5201-9673>**Abstract**

The purpose of this research was to examine the influence of e-trust, risk perception and company reputation on purchasing decisions. This was quantitative research, using the SEM data analysis method assisted by AMOS software. Data collection was done by distributing an e-questionnaire (a google form); 270 responses were obtained. Participants were consumers who had already purchased electrical equipment online in Denpasar and Surabaya. E-trust, risk perception and company reputation significantly influenced purchasing decisions.

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1. Introduction

The industrial development of metal goods, especially electrical equipment, experienced decline from 2016 to 2018 to be -0.61% (Perindustrian, 2019). The weakening of the industrial economy in Indonesia was caused by changes in the people's consumption patterns, with the growth of the technology, the e-commerce industry is growing very rapidly and have a major impact on the Indonesian economy. In addition, 95% of retail companies have transformed their businesses online (Aprindo, 2019). The development of technology causes the shifting of consumer behavior. Where consumer shopping behavior initially through physical stores (offline) has now shifted to become through online platform. This requires that small, medium and large companies must compete in satisfying the needs of their consumers so that business competition will be tighter. If the company is unable to innovate, it will be inferior to competitors who have used technology in running their business.

Based on a survey conducted by We Are Social (2017), in 2016 the percentage of Indonesians who bought goods and services online was 26% and increased in 2017

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to 41%. Purchasing decision is consumer behavior in satisfying their needs and desires (Marbun & Irwansyah, 2017). The e-trust factor is one of the important factors in purchase decisions made through online platform, the consumer who already have trust in an online platform will make a purchase (Wardoyo & Andini, 2017). In addition, the good reputation of a company is also a consideration of consumers in making purchase decisions (Tri et al., 2018).

However, there are still some consumers who consider that buying online is more risky than buying offline because consumers cannot see the product they are going to buy directly. This can be said as risk perception, where risk perception is defined as uncertainty about the negative consequences that may arise from the use of products or services (Priskila, 2018).

1.1. Problem Statement

The phenomenon of the changes in consumer behavior is not only experienced by consumers, but sellers also experience changes in the field of marketing strategies, where conventional stores recently promote their products in online stores. The rapid development of the internet has become one of the main factors affecting people's behavior. For this reason, the authors wish to know whether these three factors influence the decision to purchase the electrical equipment product through online with these following problem:

1. Does the E-Trust factor influence the decision to purchase electrical equipment products online?
2. Does the risk perception factor influence the decision to purchase electrical equipment products online?
3. Does the company's reputation factor influence the decision to purchase electrical equipment products online?

1.2. Research Objectives

This research aims at reviewing the influences between those three factors on online purchase decision of electrical equipment. The objectives of the study are as follows:

1. To identify the influence of e-trust factor on online purchase decision of electrical equipment.

2. To identify the influence of risk perception factor on online purchase decision of electrical equipment
3. To identify the influence of company's reputation factor on online purchase decision of electrical equipment

1.3. Research Hypotheses

The study seeks to test the following hypotheses:

1st hypothesis: The e-trust factor has a significant effect on the decision to purchase electrical equipment products online.

2nd hypothesis: The risk perception factor has a significant effect on the decision to purchase electrical equipment products online.

3rd hypothesis: The company's reputation factor has a significant effect on the decision to purchase electrical equipment products online.

1.4. Significance of the Research

This research will contribute in providing information regarding the factors that influence consumer purchasing decisions that have benefits for academics and practitioners. Academically, this research can be used as a source of basic reference concepts for subsequent researchers who are also examining the same factors with this research. Practically, this research can be used for company to find out what factors influence consumer purchasing decision through online platform so companies can make a strategy plan in online marketing and selling.

2. Literature Review

2.1. E-trust

Trust involves two specific parties, namely the party that is trusted (trustee) and the party that trusts (trustor) and also stated the definition of trust itself is the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other part (Mayer et al., 1995). With the popularity of e-commerce and the internet in the 1990s, trust was expanded into a new context called "E- Trust", which is the process by which consumers trust the abilities, skills and

special expertise of companies (Bao, 2018). In the context of e-commerce, Kim et al. (2008) defines E-Trust as a consumer's subjective belief in the seller who will fulfill his transactional obligations when the consumer understands it. The level of consumer trust is one of the important factors in online shopping. To measure the level of consumer trust, there are several indicators proposed by Mayer et al. (1995) in Rachbini (2018) including:

1. Ability
2. Benevolence
3. Integrity

2.2. Risk Perception

The concept of risk perception was first introduced by Baeur (1960) that consumer behavior involves risks where any action from consumers will produce consequences that cannot be anticipated with certainty and tend to be unpleasant. Risk perception is the uncertainty that faced by consumers when they cannot predict the consequences when making a purchase decision. In other words, risk perception is one of consumers' perceptions where consumers think of risks that will be experienced as well as uncertainties and negative consequences that may be received from the purchase of a product through online (Gunawan et al, 2017). Based on research conducted by (Ariffin et al., 2018). There are several risks when shopping online including:

1. Financial Risk
2. Product Risk
3. Security Risk
4. Time Risk
5. Social Risk
6. Psychological Risk

2.3. Company Reputation

Based on previous research conducted by (Aryska, 2017) there are several definitions related to reputation that were first explained by Zeitaml (1988), namely as perceived

service quality of a product or service has a close relationship with reputation. Company reputation can be defined as a picture of a companies that show good or bad service according to consumer ratings (Shahnaz & Wahyono, 2016). According to Fombrun (1996), a company's reputation is an overall picture of the company's past and future prospects of the company with all company policies compared to its competitors. There are 4 dimensions that can build a company's reputation (Aryska, 2017; Abadi, 2018):

1. Credibility
2. Trusted
3. Reliability
4. Social responsibility

2.4. Purchase Decision

Engel et al. (1990) in Marbun & Irwansyah (2017) have long analyzed and defined consumer behavior as a process experienced by someone in searching for, choosing, buying, evaluating and disposing of products and services to satisfy the needs and desires of their customers. Consumer behavior is currently shifting with the internet that is growing rapidly, the internet has a strong potential to influence consumer behavior in the decision making process to become online (McGaughey & Mason, 1998)

Based on research conducted by Nofri & Hafifah (2018) according to Kotler & Armstrong (2016) purchasing decisions are a process experienced by consumers that begins by realizing their needs that generate them to find information about those needs and taking action to buy brands that the most preferred of the various alternatives. A decision can only be made if there are several alternatives chosen, if there are no alternative choices then the action cannot be said to be a decision. There are five buying decision processes in Wijaya & Warnadi (2019), including:

1. Recognition of Problems
2. Information Search
3. Alternative Evaluation
4. Purchase Decision
5. Post Purchase Behavior

2.5. Previous Study

Study of Bhatti et al. (2018) "Convenience Risk, Product Risk, and Perceived Risk Influence on Online Shopping: Moderating Effect of Attitude" aimed to determine the effect of convenience risk, product risk, and perceived risk when shopping online with influence of attitude in Pakistan. Data were collected through a questionnaire technique by applying convenience sampling techniques and 100 questionnaires were distributed to Gujranwala and Islamabad students. The analysis technique used is Confirmatory Factor Analysis (CFA) and validated through structural equation modeling (SEM). The results of this study indicate that the convenience risk and perceived risk have a significant and negative effect on online shopping. Conversely, product risk has no significant effect.

Study of Rachbini (2018) "The Impact of Consumer Trust, Perceived Risk, Perceived Benefit on Purchase Intention and Purchase Decision" aimed to determine the relationship and influence of consumer trust, risk perception, perceived benefits towards purchase intentions and purchasing decisions. This research method is quantitative with a sample size of 200 respondents. The sampling method is non-probability with a purposive sampling technique. The analysis technique used is Structural Equation Modeling (SEM). The results showed that consumers' trust in the Internet, perceived risks, and perceived benefits have a strong impact on their purchase intentions and decisions.

Study of Arrifin et al. (2018) "Influence of consumers' perceived risk on consumers' online purchase intention" aimed to examine the relationship between the six factors of perceived risk by consumers and online buying intentions of consumers. The sample of this study was 316 internet users who did online shopping in Malaysia from 350 distributed survey questionnaires. The analysis technique used is multiple regression analysis. The results of this study are five risk factors that are felt by consumers have a significant negative effect on online consumer purchase intentions while social risk is found to be insignificant.

Study of Tri et al. (2018) "The Effect of Reputation and Trust on Online Purchasing Decisions on Cosmetic Products on Instagram" aimed to determine the effect of reputation and trust on online purchasing decisions on cosmetic products on Instagram. The population of this research is the people who live in Java and have bought cosmetic products online on Instagram. The data analysis technique used is Partial Least Square (PLS). The results of the analysis of this study are that reputation has a significant

effect on trust and the other results are trust and reputation has a significant effect on purchasing decisions.

Study of Wardoyo & Andini (2017) "Factors that Influence Online Purchasing Decisions on Gunadarma University Students" aimed to determine the effect of lifestyle, trust, convenience and quality of information on online purchasing decisions. The object of this research is Gunadarma University students with a sample of 130 students. Data analysis technique used is multiple linear regression. The results of this study are lifestyle, ease of use and quality of information have a positive effect on purchasing decisions, while the trust factor does not affect purchasing decisions.

Study of Abadi (2018) "The Effect of Company Reputation and Vendor Reputation on Online Purchasing Decisions with Consumer Confidence as an Intermediate Variable" aimed to determine the effect of company reputation and vendor reputation on online purchasing decisions with consumer trust as an intermediate variable. This research method is quantitative and the method of sampling is purposive sampling which is done by survey. This research analysis technique uses path analysis where the results of this study are company reputation and vendor reputation significantly influence consumer trust, then consumer confidence also influences online purchasing decisions.

3. Methods

3.1. Population and Sample of the study

The study population is consumers who have shopped electrical equipment products online in Surabaya and Denpasar regions. The number of the population is unknown. The sampling technique used was purposive sampling with the Maximum Variation Sampling method. The sampling criteria in this study are consumers who have already shopped online electrical equipment. Thus, the number of samples received in this study is 270 respondents, according to the sample needed in this study which is 15 times number of indicators. So that the response rate of this study is 100%.

3.2. Analyzing the Demographic Variables of the Study's Sample

Based on the table, respondent of this study is dominated by 137 men (50.7%). The characteristic based on age are dominated by 20-30 years respondent who already familiar with technology as many as 184 respondents (68.1%). 139 respondents (51.5%) lives in Surabaya. Based on their jobs, 151 respondents (55.9%) as students, 44 respondents

TABLE 1: Sample's Demographic

No.	Characteristic	Total	Percentage	
1.	Gender	Man	137	50.7%
		Woman	133	49.3%
2.	Age	< 20 years	26	9.6%
		20-30 years	184	68.1%
		31-40 years	24	8.9%
		41-50 years	23	8.5%
		> 50 years	13	4.8%
3.	Residential Area	Denpasar	131	48.5%
		Surabaya	139	51.5%
4.	Job	Students	151	55.9%
		Entrepreneurs	44	16.3%
		Private Employees	52	19.3%
		State Employees	2	0.7%
		Housewife	10	3.7%
		Contractor	4	1.5%
		Others	7	2.6%
		5.	Electrical equipment products purchased	Lamp (Incandescent Neon, LED, TL)
Electrical Installation Equipment	49	18.1%		
Decorative Lamp	55	20.4%		
Others	7	2.8%		
6.	Online Platform	Marketplace	235	87%
		Media Sosial	20	7.4%

(16.3%) as entrepreneurs, 52 respondents (19.3%) work as private employees, 2 respondents (0.7%) work as civil servants, 10 respondents (3.7%) as a housewife, 4 respondents (1.5%) as contractors and 7 people (2.6%) have other professions (doctors, insurance agents). The most frequently purchased electrical equipment products by respondents online are incandescent lamps where 168 respondents (62.2%) have bought it online. The most popular online platform by respondents in shopping for electrical equipment online is marketplaces such as Tokopedia, Shopee, Lazada and others, 235 respondents (87%) was bought the product from that platform. The frequency of buying online of 245 respondents (90.7%) only shop around 1-2 times.

3.3. Measurement Model Test

Measurement model is part of SEM model which consists of latent variables (constructs) and several manifest variables (indicators). This test is carried out to find out how precisely the manifest variable can explain the existing variable.

From the table below, it can be seen that the factor loading value of all indicators > 0.50 so that means that all indicators are valid. The value of AVE > 0.50 indicates that there is a convergence between indicators to explain the existing construct. Based on the AVE root values in the table it can be seen that all variables have a greater value than the correlation value between the constructs and this shows good discriminant validity.

Moreover, it can be seen that the reliability value of all > 0.70 indicating that all indicators have good reliability.

TABLE 2: Measurement Model

	<i>Estimate/ Factor Loading (Convergent Validity)</i>	<i>AVE (Construct Validity)</i>	<i>√ (Discriminant Validity)</i>	<i>CR (Construct Reliability)</i>
X1.1 <- ET	0.812	0.608	0.780	0.822
X1.2 <- ET	0.834			
X1.3 <- ET	0.686			
X2.1 <- RP	0.749	0.587	0.766	0.895
X2.2 <- RP	0.778			
X2.3 <- RP	0.844			
X2.4 <- RP	0.729			
X2.5 <- RP	0.782			
X2.6 <- RP	0.707			
X3.1 <- CR	0.731	0.592	0.770	0.852
X3.2 <- CR	0.842			
X3.3 <- CR	0.811			
X3.4 <- CR	0.684			
X4.1 <- PD	0.809	0.735	0.857	0.932
X4.2 <- PD	0.893			
X4.3 <- PD	0.904			
X4.4 <- PD	0.915			
X4.5 <- PD	0.754			

3.4. Structural Model Test

Structural model testing is carried out to test the whole model and measure the relationship between the independent and dependent variables. The evaluation of the structural model can be test with a model of goodness of fit.

TABLE 3: Goodness of fit

Goodness- of-fit index	Cut-off Value	Value	Explanation
Chi-Square	<156.508	343.994	Not fit
CMIN/DF	<2	2.667	Marginal Fit
GFI	≥ 0.9	.857	Marginal Fit
AGFI	≥ 0.9	.810	Marginal Fit
TLI	≥ 0.90	.920	Fit
CFI	≥ 0.95	.933	Marginal Fit
RMSEA	≤ 0.08	.079	Fit

From the table above, the chi-square value do not fit the criteria, this is because the chi-square value is very sensitive to the sample size and is closely related to the degree of freedom, the greater samples are used and the more bigger degree of freedom, chi-square value will increase. In this study the value of degree of freedom is quite large at 129, thus affecting the chi square value. For this reason, testing based solely on the chi-square method is rarely performed, especially in large sample sizes which can be seen from the feasibility tests of other models (Santoso, 2018: 129). Based on the TLI value of 0.920 and an RMSE value of 0.079, it shows that the structural equation model is acceptable because it fits the expected range, even though the values of CMIN / DF, GFI, AGFI, and CFI are included in the marginal fit which is a condition of conformity of the measurement model under the criteria but close to the fit criteria so that it can still be further analyzed (Ferdinand, 2014: 290).

4. Result and Discussion

Hypotheses test can be seen at the value of the critical ratio or the value of the probability of the output regression weight. If C.R. ≥ 2 or probability value < 0.05 then H_0 is rejected and the research hypotheses is accepted. The following are the results of hypotheses test from this study:

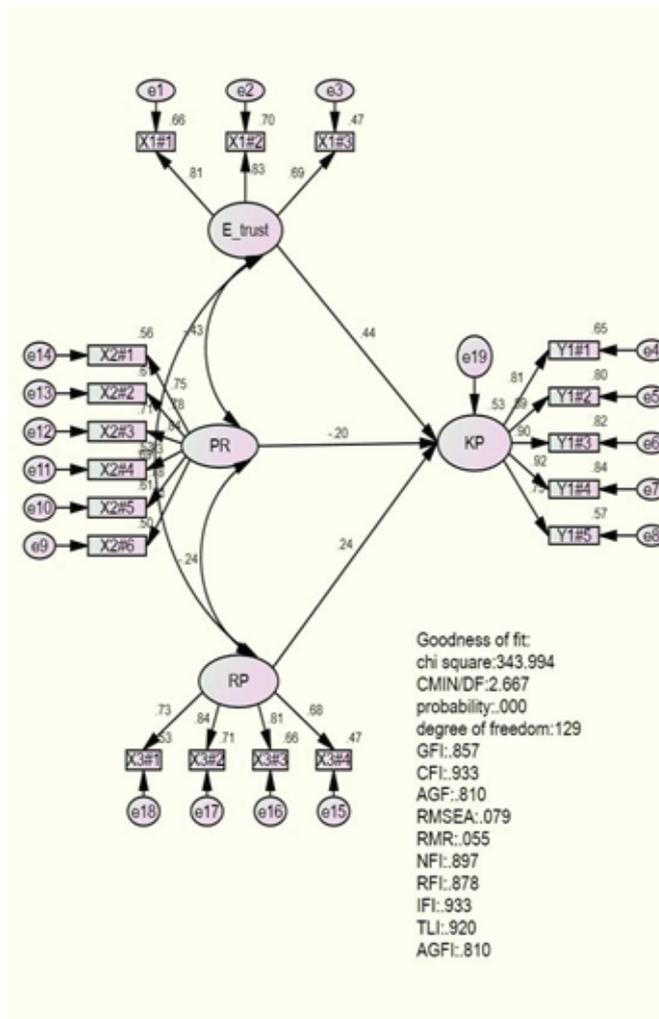


Figure 1: Structural Model

TABLE 4: Hypotheses Test

	C.R.	P
PD <- ET	4.763	.000
PD <- RP	-3.348	.000
PD <- CR	2.941	.003

4.1. First hypotheses

The results of the first hypotheses (H1) indicate that e-trust has a significant effect on purchasing decisions. It based on the result of C.R. between e-trust → purchase decision is 4,763 > 2 and the number P is .000 < 0.05. The e-trust variable has a positive influence on purchasing decisions, it shows that the higher trust that the consumer feel, the higher purchase decision made by a consumer

4.2. Second hypotheses

The results of the second hypothesis (H2) indicate that risk perception has a significant effect on purchasing decisions. It based on the result of C.R. between risk perception → purchasing decision is $3,348 > 2$ and the number P is $0.000 < 0.05$. Risk factors felt by consumers can hamper consumers' consideration in doing online shopping. Risk perception has a negative influence on purchasing decisions. This shows that the higher the perceived risk perceived by consumers, the lower the purchasing decisions will be made, conversely if the perceived of risk perception is low, consumers will be more confident to make a purchase decision.

4.3. Third hypotheses

The results of the third hypotheses (H3) indicate that the company's reputation has a significant effect on purchasing decisions. It based on the results of C.R. between company reputation → purchasing decision is $2,941 > 2$ and the number P is $0.003 < 0.05$. The company's reputation has a positive influence on consumer purchasing decisions. It shows that the better reputation owned by a company, consumers will make purchasing decisions at the company.

5. Conclusion

This study shows that there is a significant relationship between e-trust, risk perception and company reputation on the purchase decision of electrical equipment online. E-trust is an important factor for consumers in making online purchase decision. For this reason, online stores must be able to convince consumers to encourage the level of consumer trust so that consumer purchasing decisions will increase in conducting transactions online. Risk perception is an inhibiting factor for consumers to do transaction online, to make consumers are willing to do online purchase decisions, the online stores must minimized the perception of risk. The factor of a company's reputation is one of the important factors that are considered by consumers. Therefore, online stores must be able to maintain their existing reputation so that consumers remain confident in making purchasing decisions at the store.

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