

The Impact of Satisfaction and Trust on Loyalty of E-Commerce Customers

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The number of Internet users in Indonesia and e-commerce sales is growing. However, Indonesia is less active in e-commerce research compared to other Asian countries, and existing studies cover limited area. The purpose of this study is identifying the impact of customer satisfaction and trust on loyalty in e-commerce and identifying the factors that influence satisfaction. The results are that information quality affects trust and that trust affects loyalty. E-commerce websites should focus on delivering trusted information on product quality, which will lead to greater customer trust, and greater trust will lead to greater loyalty to the websites.

Keywords: e-commerce, information quality, satisfaction, trust, loyalty, Indonesia

Jumlah pengguna Internet dan penjualan online (e-commerce) di Indonesia terus bertambah. Namun, jumlah penelitian e-commerce lebih sedikit dibandingkan negara-negara Asia lain dan penelitian-penelitian yang sudah ada hanya meneliti area terbatas. Tujuan penelitian ini adalah meneliti pengaruh kepuasan dan kepercayaan pelanggan terhadap loyalitas di konteks e-commerce dan meneliti faktor-faktor yang mempengaruhi kepuasan pelanggan. Hasil penelitian ini adalah kualitas informasi mempengaruhi kepercayaan dan kepercayaan mempengaruhi loyalitas. Situs e-commerce sebaiknya fokus dalam memberikan informasi terpercaya terhadap kualitas produknya. Ini akan meningkatkan kepercayaan pelanggan. Kepercayaan pelanggan yang meningkat akan meningkatkan loyalitas terhadap situsnya.

Kata kunci: e-commerce, kualitas informasi, kepuasan, kepercayaan, loyalitas, Indonesia

Introduction

The number of Internet users in Indonesia is 55 million people in 2011, increasing from 42 millions in 2010, while the number of online purchase grows 100% in 2011 from 2010 (Naik 13 Juta, Pengguna Internet Indonesia 55 Juta Orang, 2011). Globally, e-commerce sales grew 21.1% in 2012, estimated 18.3% in 2013 worldwide and 30% in Asia-Pacific (Booming E-commerce. 2013). Indonesia is one of the countries that will experience faster e-commerce growth than other markets worldwide.

While the growth of e-commerce is significant, Indonesia is less active in e-commerce research compared to other Asian countries (Dwivedi, et al., 2008). To the best of the authors' knowledge, existing studies investigate e-commerce adoption barriers in small to me-

dium-sized enterprises (SMEs) (Kartiwi and MacGregor, 2007), explore problems faced by Indonesian SMEs when going global B2B e-commerce (Moertini, 2012), study factors that influence online buying decisions (Kartavianus and Napitupulu, 2012), and explore standard features of user interface of e-commerce websites (Purwati, 2011). So far there has been little discussion on satisfaction, trust, and loyalty in Indonesian e-commerce context. The purpose of this study is identifying the impact of customer satisfaction and trust on loyalty in e-commerce and identifying the factors that influence satisfaction.

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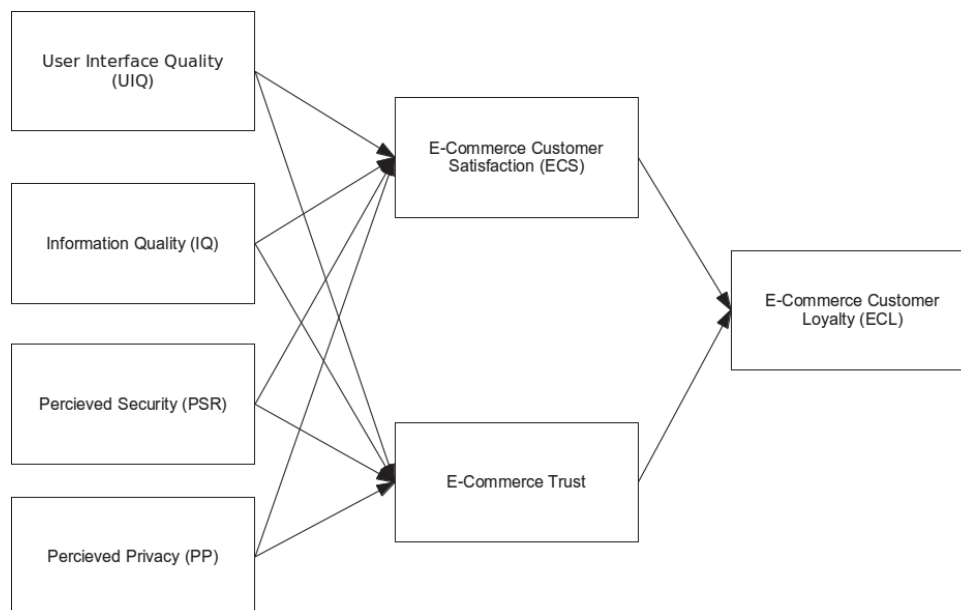


Figure 1. Research Model, adapted from Eid (2011)

Literature Review

User Interface Quality

User interface is the tangible aspect of e-commerce websites (Riel, *et al.*, 2001). It is interaction channel between customers and electronic service providers (Gummerus, *et. al.*, 2004). This includes site design, which consists of organization and searchability (Manes, 1997) and ease of navigation (Spiller and Lohse, 1998).

Information Quality

Information quality is customers' perception of quality of product informations that are provided by e-commerce websites (Park & Kim, 2003). It is importance, relevance, usefulness, etc. of product information provided by e-commerce websites (DeLone & McLean, 1992).

Perceived Security

Security risk on e-commerce websites is defined as customer perception on the security of electronic transaction (Kolsaker and Payne, 2002). Security is considered an important factor by online customers and reflects the reliability of payment method, data transmission, and data storage. It is customer belief that their personal information will not be used, viewed, or stored by unauthorized parties (Flavián & Guinalíu, 2006).

Perceived Privacy

Privacy is the ability of customers to control the presence of third parties or sharing of private information with third parties during transaction or consumption (Goodwin, 1991). In the context of e-commerce, privacy involves personal information, and breach of privacy is unapproved collection, storage, disclosure, or other uses by third parties (Wang, Lee, and Wang, 1998).

Customer Satisfaction

Satisfaction is comparison between expectation and performance. Dissatisfaction occurred when performance fell short on expectation. Satisfaction occurred when performance matched or exceeded expectation (Kotler, *et al.*, 2005). Satisfaction is how far customers needs, wants, and expectations are met (McCarthy and Perreault, 2002).

Customer Trust and Loyalty

Trust is a belief of a party that another party will conduct transaction according to the expectation of the first party, in uncertain circumstances (Ba & Pavlou, 2002). Customer trust in e-commerce setting is the willingness of customers to trust a e-commerce website (Murphy and Blessinger, 2003). Customer loyalty is commitment to use goods or services in the future

Table 1: Measurements Validity and Reliability

Variables	Cronbach's Alpha	KMO
E-commerce Service User Interface Quality (UIQ)	0.777	0.500
E-commerce Service Information Quality (IQ)	0.652	0.659
Perceived Security (PSR)	0.898	0.663
Perceived Privacy (PP)	0.923	0.833
E-Commerce Customer Satisfaction (ECS)	0.784	0.500
E-Customer Trust (ET)	0.659	0.580
E-Commerce Customer Loyalty (ECL)	0.789	0.700

(Kotler and Keller, 2006). In e-commerce context, loyalty is customer intention to purchase from a e-commerce website and intention not to switch to other websites that offers similar offerings (Flavián, Guinalú, and Gurrea, 2006).

Hypotheses

Park and Kim (2003) and Eid (2011) found out that quality of user interface directly affected customer satisfaction. A study in Malaysia also found that website design positively affected shopping satisfaction (Alam and Yasin, 2010).

H1: user interface quality affects e-commerce customer satisfaction.

Gummerus, *et al.* (2004) proposed that quality of interface directly affected trust. Roy, Dewit, and Aubert (2001) found out that perceived trustworthiness of the website was affected by website usability, which consisted of efficiency of interface design.

H2: user interface quality affects e-commerce customer trust.

McKnight, Choudhury, and Kacmar (2002) found out that trust was affected by perceived e-commerce site quality. This was also found by Park and Kim (2003) that both product and service information quality affected information satisfaction. Cyr (2008) also found that trust was affected by information design, which defined as information accuracy of products on e-commerce websites.

H3: information quality affects e-commerce customer satisfaction.

H4: information quality affects e-commerce customer trust.

Flavián and Guinalú (2006) stated that trust on a website was strongly affected by perceived security of personal data handling. Security is the most significant issue in e-commerce, and it is essential in building trust (Warrington, Abgrab, and Caldwell, 2000)

H5: perceived security affects e-commerce customer satisfaction

H6: perceived security affects e-commerce customer trust.

Zorotheos and Kafeza (2009) found that privacy control and empowerment of e-commerce website affect customer trust. Privacy is critical to reach potential online customers and to maintain current customers (Park and Kim 2003), so privacy is an important for customer e-commerce satisfaction.

H7: perceived privacy affects e-commerce customer satisfaction

H8: perceived privacy affects e-commerce customer trust

Trust, both attitudinal and behavioral, affects loyalty (Chaudhuri and Holbrook 2001), and generally high satisfaction of customers increases customer loyalty (Anderson, Fornell and Lehmann 1994; Zins, 2001). In e-commerce context, greater satisfaction on services offered by a website leads to greater loyalty to the website (Flavián, Guinalú, and Gurrea , 2006).

H9: e-commerce customer satisfaction affects e-commerce customer loyalty

H10: e-customer trust affects e-commerce customer loyalty

Methods

Descriptive research design is used in this study. Samples of 134 respondents were collected from people who had conducted e-commerce transaction in at least three months and who lived in Greater Jakarta (*Jabodetabek*). Non-probability sampling method is used in this study, using self-administered questionnaires. Measurements used in this study are adapted from Eid (2011) and translated to Indonesian. Before the main test, pilot test were conducted to test the reliability and validity of the measurements. Data from the main test are

Table 2. Measurement Model's Model Fit Indices

Goodness Of Fit	First Test	Second Test
Chi-Square	340.54 (P = 0.00)	305.43 (P = 0.00)
RMSEA	0.061 P = 0.10	0.06 0.13
EVCI	Model = 3.63 Saturated = 4.51	Model = 3.33 Saturated = 4.15
AIC	Independence = 14.35 Model = 482.54 Saturated = 600.00	Independence = 14.08 Model = 443.43 Saturated = 552
CAIC	Independence = 1908.54 Model = 759.29 Saturated = 1769.35 Independence = 2002.08	Independence = 1961.93 Model = 712.38 Saturated = 1627.80 Independence = 1961.93
NFI	0.81	0.83
NNFI	0.91	0.92
CFI	0.93	0.93
IFI	0.93	0.93

Table 3. Measurement Model Validity

Variables	Items	First Test T-Values	First Test SLF	Second Test T-Values	Second Test SLF
UIQ	UIQ1	7.19	0.71	7.2	0.71
	UIQ2	5.83	0.55	5.82	0.55
IQ	IQ1	9.94	0.77	9.97	0.78
	IQ2	1.51	0.14	n/a	n/a
	IQ3	8.02	0.66	7.99	0.66
	IQ4	9.55	0.75	9.48	0.75
	IQ5	8.43	0.68	8.46	0.69
PSR	PSR1	10.52	0.78	10.52	0.78
	PSR2	9.76	0.74	9.76	0.74
	PSR3	11.15	0.81	11.15	0.81
	PSR4	13.57	0.92	13.57	0.92
PP	PP1	11.29	0.82	11.29	0.82
	PP2	5.87	0.51	5.87	0.51
	PP3	11.12	0.81	11.12	0.81
	PP4	9.73	0.74	9.73	0.74
	PP5	11.8	0.85	11.8	0.85
ECS	ECS1	16.29	1	16.29	1
	ECS2	16.29	1	16.29	1
ET	ET1	8.67	0.75	8.69	0.75
	ET2	8.74	0.75	8.75	0.75
	ET3	4.92	0.45	4.91	0.45
ECL	ECL1	9.22	0.73	9.22	0.73
	ECL2	12.31	0.9	12.3	0.9
	ECL3	10.71	0.81	10.71	0.81

analyzed with structural equation modeling.

Result and Discussion

Pilot Test Statistics

Measurements are reliable and valid. The Cronbach's alphas of the constructs are above 0.6 (Malhotra, 2002). Barlett's test values are significant below 0.05 with KMO above 0.5.

Table 4. Structural Model's Model Fit Indices

Goodness Of Fit	Estimates
Chi-Square	310.09 (P = 0.00)
RMSEA	0.059 P = 0.15
EVCI	Model = 3.29 Saturated = 4.51 Independence = 14.08
AIC	Model = 438.09 Saturated = 552 Independence = 1961.93
CAIC	Model = 687.55 Saturated = 1769.35 Independence = 1961.93
NFI	0.82
NNFI	0.91
CFI	0.93
IFI	0.93

Table 5: Paths' T-Values and Hypotheses Tests

No	Paths	T-Values, Significant at 5% (± 1.96)	Significance Tests	Hypotheses Tests
1	UIQ → ECS	0.54	Not Significant	H1 rejected
2	UIQ → ET	-0.93	Not Significant	H2 rejected
3	IQ → ECS	-0.93	Not Significant	H3 rejected
4	IQ → ET	2.97	Significant	H4 accepted
5	PSR → ECS	-0.85	Not Significant	H5 rejected
6	PSR → ET	1.23	Not Significant	H6 rejected
7	PP → ECS	0.51	Not Significant	H7 rejected
8	PP → ET	-0.67	Not Significant	H8 rejected
9	ECS → ECL	0.87	Not Significant	H9 rejected
10	ET → ECL	4.74	Significant	H10 accepted

Respondents Profiles

The majority of respondents is female and has at least some college degrees. They are between 23 to 25 years old and are private employees. They spend up to Rp. 3 millions a month for expenses. Most of them have been using the Internet more than six years and use e-commerce websites to buy airline tickets and apparels. More detailed profiles are provided in the Appendix.

Measurement Model

The test of validity of measurement model was conducted twice. The goodness of fit indices of the first and second test are adequate (Table 2), and the measurements validity for both tests is presented in Table 3. In the first test, t-value and standardized loading factor (SLF) of IQ2 is between ± 1.96 and below 0.3 while the other indicators are above 1.96 and 0.05 (Table 3). Thus, indicator IQ2 is omitted in the second test. The goodness of fit indices of the second

test are also adequate (Table 2). The remaining indicators have t-values over 1.96 and SLF above 0.3.

Structural Model

Model fit indices of structural model are also adequate and do not require modification (Table 4). Significance of the causal paths and hypotheses testing are presented in Table 5. From ten hypotheses, only two are accepted. Information quality affects customer trust, and customer trust affects loyalty.

These findings are different from Eid (2011) where all hypotheses are accepted. The differences might due to differences in the culture studied; Eid (2011) conducted his study in Saudi Arabia and employed student samples and employees. The differences might also due to differences in objects studied. Eid (2001) employed respondents who used various e-commerce websites, from e-banking to e-auction.

Conclusions

This study investigates the effect of customer satisfaction and trust on loyalty in e-commerce and identifying the factors influencing satisfaction. The results show that satisfaction does not affect loyalty while customer trust does and that customer trust is affected by information quality.

These results mean that e-commerce websites in Indonesia should focus on building customer trust on their websites. They should focus on delivering trusted information on product quality that are sold in their websites. This will lead to greater customer trust on the websites, and greater trust will lead to greater loyalty to the websites. This result is similar to Kartavianus and Napitupulu (2012) who found that trust is the most significant factor that influenced to increase online sales.

The contribution of this study is that this is one of the early attempts to investigate factors that form loyalty and satisfaction on e-commerce websites in Indonesia. Limitations of this study is that majority of the respondents are college graduates age 23 to 25 years old who live in Greater Jakarta. Most of them are private employees and visit mostly airline website and discounted gift certificates. Distinction between first-time users and repeat users is not established. Types of e-commerce website contents are not recognized: company-generated contents (such as amazon.com or bhinneka.com in Indonesia) and user-generated (such as ebay.com or kaskus.com in Indonesia).

Next studies should expand the age span of the respondents, occupation, and residence. Distinction between first-time customers and repeat customers must be established, and effect of type of contents (user or company-generated) needs to be studied.

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