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Article

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MARKETING | RESEARCH ARTICLE

Online retailers' ethics and its effect on repurchase intention: The mediating role of perceived risk

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Abstract: Online shopping presents a different environment, atmosphere, and experience compared to offline shopping due to the convenience provided when transacting at any location through the internet from web browsers or mobile applications. However, ethical violations are more likely to occur during this mode of transaction compared to direct shopping. Consumers' perceptions towards online retail ethics and the perceived risk caused by the uncertainties of transactions have been identified as the major problems causing hesitancies in making decisions for online shopping. Therefore, this study aims to investigate the effect of consumers' perception of retail ethics and the perceived risk on repurchase intention. In addition, to investigate the role of perceived risk in mediating the relationship between consumers' perception of retail ethics and repurchase intention in the context of online shopping. An online survey was conducted on customers that have experience in purchasing products on the marketplace website, while a structural equation model was also used to test the conceptual model of the study. The results

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PUBLIC INTEREST STATEMENT

The online retail ethics and perceived risks are presently the biggest challenge for consumers that are considering the actions of making online purchases and discouraged consumers from completing online shopping. Customer loyalty to business should be maintained in order to make the business survive in the long term. The two factors were found have an effect on the repurchase intention in online shopping. Therefore, online retail should consider focusing their marketing strategies on establishing the good synergy of customers' positive perception by creating ethical practices in its business and minimizing the level of perceived risk towards making consumers comfortable with online shopping, in order to increase consumer' repurchase intention.

showed that consumers' perceptions of online retail ethics had positive effects and perceived risk had negative effects on repurchase intention. Additionally, it was observed that the perceived risk partially mediated the relationship between consumers' perception and repurchase intention.

Subjects: Marketing Research; Internet / Digital Marketing / e-Marketing; Marketing Management; Relationship Marketing

Keywords: Retail Ethic Perception; Perceived Risk; repurchase intention; online shopping

1. Introduction

The internet has created a new system in the business world, namely electronic-based trading, which enables the exchange of information, goods, and different transaction processes through the use of computer media. It also changed the global shopping behaviors of people, which were previously carried out by directly visiting shops. This indicates that people are presently seeking information and virtually making purchases of products or services through electronic devices that are connected to the internet.

Online shopping presents different environments, atmospheres, and experiences when compared to offline transactions, even for identical products (Lu et al., 2013). This is due to transaction of shopping online conducted through the internet from different web browsers or mobile applications at any location. Customers interaction with the businesses in a virtual space that consists of technical interfaces and they are unable to physically inspect their potential purchases (Yen & Lu, 2008). However, consumers that shop at brick-and-mortar stores can directly approach the store and can touch, test, and physically feel the product they want to purchase. Therefore, in online shopping, the assessment and evaluation of products are limited to the information presented by the seller on the online retail site. Besides that, consumers are also required to complete some personal information registration (name, address, phone number, credit card number) in order to complete the transaction, and they also have to wait until the product being purchased is sent by the seller and received at the address provided.

Despite the fact that online shopping offers various advantages such as convenience and comfort, this mode of shopping is particularly vulnerable to the core elements of perceived risk, namely, uncertainty and unfavorable consequences (Kaur & Quareshi, 2015). Online shopping uncertainties include a lack of security, the absence of product physical examination, poor quality information, and unappealing website layouts. Besides that, the virtual exchange of information involves several risks for consumers (Anderson & Srinivasan, 2003). Therefore, consumers generally perceive more risks when shopping online when compared to the previous methods (Hong & Yi, 2012; K. S. Lee & Tan, 2003), due to the differences between expectations regarding perceived performance and reality (Yen & Lu, 2008).

The study by Citera et al. (2005) revealed that ethical violations are more likely to occur in online transactions compared to direct business. In line with that, Freestone and Mitchell (2004) and Pålsson et al. (2017) stated that the internet is an environment for unethical behaviors and the increase in the number of online transactions increases the rate of ethical problems. Furthermore, there are still several disappointing online retail practices and violate consumer rights. Examples of these problems include false testimonials, persuasive deceptive advertisements, fake image or photo uploads on sites, undisclosed product information, incompatibility of goods sent to the expectations of consumers, damaged products due to wrong packaging, fraud, credit card crime, and the rampant spamming of sending catalogs online through the e-mail of buyers. This is in line with Yang et al. (2020), Elbeltagi and Agag (2016), Leonidou et al. (2013), and Limbu et al. (2012), and Roman (2007), which stated that e-commerce was the environment for unethical actions, such as misleading or untruthful advertising, bad product quality, cheating, intrusion of privacy,

information misuse, and betrayal of trust. Based on these conditions, consumers are confronted with uncertainty and they dependence on online retail ethics in fulfill their services.

Furthermore, customer perception of online retail ethics refers to the integrity and responsibility of the company behind online retail sites in shielding transaction security, maintaining confidentiality of information, acting fairly and honestly, and protecting the interests of consumers (Roman, 2007). Meanwhile, perceived risk is a potential negativity based on the uncertainty of online transactions (Ko et al., 2004). It is also an expectation that any negative consequences of online shopping will occur (Hassan et al., 2006). These online retail ethics and perceived risks are currently the most difficult challenges for consumers who are contemplating making purchases online.

Ethical issues surrounding online shopping have provoked critical problems for consumers and also created new issues for practitioners (Román & Cuestas, 2008). Therefore, gaining clarity on how consumers perceive online retailers' ethical performance is also very important (Eryandra et al., 2018). Online retailers that are perceived as ethical in their behavior are likely to establish and maintain business transactions in the online world, and consumers are more likely to purchase from the same retailer if they perceive positive ethical behaviors (Lu et al., 2013).

Besides that, online retailers also need to address the risks for consumers to feel comfortable shopping online. The results of Thakur and Srivastava (2015) showed that perceived risk was an obstacle to the use of online shopping as it discouraged consumers from completing transactions. This was due to the fear of negative consequences, which motivated them to switch back to brick-and-mortar stores (Persad & Padayachee, 2015). These risks act as a barrier to successful online transactions (Meng-Hsiang et al., 2014), and have become an important factor for consumers that are considering making online purchases due to customers with less perceived risk preferring to shop online (Hsieh & Tsao, 2014).

Both online retail ethics and perceived risk are arguable predictors of repurchase intention in online shopping. However, perceived risk is also a factor that mediates the relationship between online retail ethics and repurchase intention. Unethical retailer practices increase the potential risk consumers perceive of repurchase intentions and vice versa. Furthermore, there are still few studies that observe customer perceptions of retail ethics, perceived risk, and repurchase intention in the context of online shopping. Therefore, the aim of this study is to investigate the influence of customer perception of online retail ethics and perceived risk on online repurchase intention. It also aims to investigate how the role of this risk mediates the relationship between these perceptions and intentions.

2. Literature review and hypotheses development

2.1. Perception ethics of online retail

Based on the research by Roman (2007) on The Ethics of Online Retail, CPEOR (Customer Perception Ethics of Online Retail) was defined as the integrity and responsibility of companies (behind the website) towards attempting to deal with consumers in a secure, confidential, fair, and honest manner to protect the interests of consumers. In line with Roman, Cheng et al. (2014) and Agag et al. (2016) defined CPEOR as the positive perception of consumers regarding the behavior of e-commerce companies in handling them confidentially, fairly, honestly, and sincerely during the transaction process.

The research on the issues of ethical e-commerce is quite new, as Vuorinen (2007) and Kracher and Corritore (2004) addressed the ethics of online business, with Vafopoulos et al. (2012) also addressing the importance of web ethics. Furthermore, several studies have identified the influence of these ethics of online retail based on the word-of-mouth (Román & Cuestas, 2008), attitude, website trust, satisfaction, and consumer loyalty (Limbu et al., 2011), purchase intention (Limbu et al., 2012), fulfilment and repurchase motive (Elbeltagi & Agag, 2016), trust (Alam, 2020;

Yang et al., 2019), site credibility (Jensen & Limbu, 2018), and transaction intent and comfort (Yang et al., 2020).

Several previous studies have explored the measurement of customer perceptions of online retail ethics, the details of which are presented in Table 1.

Based on the above studies, the measurement dimensions of customer perception of online retail ethics adopted in this study consist of security, privacy, non-deception, fulfillment/reliability, and service recovery.

a. Security

Security is the consumers' perception of the safety of online transactions and the protection of financial information from unauthorized access (Roman, 2007).

b. Privacy

Privacy is a consumer's perception of the protection of identifying individual information on the internet (Bart et al., 2005).

c. Non-Deception

Non-deception refers to the consumers' belief that electronic service providers (e-commerce) do not use deceptive practices (e.g., fraud) to influence people to buy their products (Limbu et al., 2011).

d. Reliability/Fulfillment

Reliability/fulfillment is the technical function and on-time delivery of accurate purchases displayed on the online retail sites (Wolfinbarger & Gilly, 2003).

Table 1. The measurement of customer perception of online retail ethics

Authors	Measurements
Bush et al. (2000)	Security, fraud, hacking, privacy, honesty/truthfulness.
Stead and Gilbert (2001)	Privacy, security, conflicts of interest
Miyazaki and Fernandez (2001)	privacy, security, fraud systems
Roman (2007), Adam et al. (2007), Román and Cuestas (2008), Nardal and Sahin (2011), Limbu et al. (2012), Lu et al. (2013), Kurt (2013), Golalizadeh and Sharifi (2016), Jensen and Limbu (2018), Yang et al. (2019), Alam (2020), Yang et al. (2020)	Security, privacy, non-deception, fulfillment/reliability
Cheng et al. (2014)	Sales behavior, privacy, security, fulfillment, service recovery
Schlegelmilch and Öberseder (2010)	Privacy, identity, theft, phishing
Agag & Elbeltagi (2013)	Security, privacy, non-deception, fulfillment/reliability, corporate social responsibility
Agag et al. (2016)	Security, privacy, non-deception, fulfillment/reliability, service recovery, shared value
Agag (2019)	Privacy, security, non-deception, reliability, service recovery, shared value, communication

e. Service Recovery

This is the consumers' perception of the justice of online retail companies, based on the recovery efforts in response to service failures (Grönroos, 1988).

2.2. Perceived risk

Perceived risk is defined as the potential loss incurred in pursuing the desired results when involved in online shopping. It is also a combination of uncertainty and the possibility of serious results (Featherman & Pavlou, 2003; Forsythe & Shi, 2003; Kim et al., 2008; Ko et al., 2004). Furthermore, the studies of Hassan et al. (2006), Glover and Benbasat (2010), and Zheng et al. (2012) stated that the perceived risk was a loss or any negative consequences arising as a result of online shopping. Another definition was presented by Huang et al. (2004) and Mandrik and Bao (2005) which stated that it was a subjective assessment of loss possibility and unfavorable perceptions of people in online shopping. Park and Tussyadiah (2017) and Pelaez et al. (2017) also defined perceived risk as a consumer's belief that they will experience an unfavorable and unpredictable result when buying online.

Several previous studies have explored the measurements of perceived risks influenced consumers' behavior on online transactions, which the details are presented in Table 2.

According to these descriptions, this study used the dimensions of financial, product, time, delivery, social, physical, and psychological risks.

Table 2. The measurement of perceived risks

Authors	Measurements
Forsythe and Shi (2003)	Financial, product performance, psychological, time/ convenience risks.
Naiyi (2004)	Fraud, delivery, financial, process and time loss, product, privacy, information risks.
Hassan et al. (2006)	Financial, performance, time loss, social, physical, psychological, source, privacy risks.
San Martín and Camarero (2009), Tsai and Yeh (2010), Almousa (2011), Javadi et al. (2012)	Financial, product, convenience, health, quality, time, delivery, after-sale, performance, psychological, social, private risks.
Masoud (2013)	Financial, performance, time-loss, social, delivery, information risks.
L. Zhang et al. (2012)	Health, quality, time, delivery, after-sale risks.
Zheng et al. (2012)	Performance, privacy, source, delivery, financial, payment, physical, personal, social, psychological, time risks.
H. H. Lee and Moon (2015)	Financial, psychological, social, additional effort, return, product performance, delivery risks.
Tandon et al. (2016)	Financial, product, time loss, social, privacy, security risks.
Bhatti et al. (2018)	Convenience, product, perceived risks.
Tham et al. (2019)	financial, convenience, non-delivery, return policy, product risks.
Lin et al. (2019),	Product performance, psychological, time, social, privacy, security risks.
Park et al. (2019),	Financial, privacy, security risks.
Guru et al. (2020)	Performance, financial, time-loss risks.

a. Financial risk

This refers to financial losses to be incurred by consumers, when the product does not perform as expected or match the price paid (Featherman & Pavlou, 2003). It includes repair and hidden maintenance costs (Popli & Mishra, 2015), as well as credit card fraud (Masoud, 2013).

b. Product risk

This refers to the potential losses to be received by consumers when the quality or performance of the product is not as expected (Zheng et al., 2012).

c. Time risk

This is the potential loss of time that the consumer has to sacrifice in order to make an online purchase (Dai et al., 2014; Hassan et al., 2006; Ko et al., 2004; Sandra et al., 2006). It includes inconvenience caused by navigation difficulties during online transactions and delays in receiving products due to late delivery (Sandra et al., 2006).

d. Delivery risk

Potential losses caused by the shipping process when shopping online. This includes loss of items, wrong address delivery, damaged goods due to improper handling and packaging, as well as late arrival period (Comegys et al., 2009; Iconaru, 2012; Kim et al., 2008).

e. Social risk

Consumer perceptions of how others will react to their actions in online shopping, for example, result in disagreements and dissatisfaction among family, friends, or communities (Popli & Mishra, 2015). It is also the potential loss of consumers' image and status in social groups (Zielke & Dobbelstein, 2007).

f. Physical risk

Consumers' potential health and safety losses as a result of the purchase a product or service through online (L. Zhang et al., 2012). For example, health losses due to prolonged use of computers are likely to cause fatigue, impaired vision, and pressure on the heart (Comegys et al., 2009).

g. Psychological risk

Reflects the individual's disappointment at himself (Cases, 2002), as well as the possibility of regret and frustration that causes consumers to experience mental stress in the future because the purchase decision that has been taken does not meet their expectations (Ueltschy et al., 2004).

2.3. Repurchase intention

Several marketing studies, such as Liao et al. (2017) and Y. Zhang et al. (2011) have highlighted the importance of consumer repurchase intention as a success factor in e-commerce. Furthermore, previous studies regarding consumers' motive to repurchase, such as Theories of Reasoned Action (Ajzen & Fishbein, 1977), Planned Behavior (Ajzen, 2011) and Technology Acceptance Model (Davis, 1989), stated that intention was a predictor of actual behavior. They also stated that repurchase intention was a consequence of customers' satisfaction. According to the Expectation Confirmation Theory (Bhattacherjee, 2001; Liao et al., 2017) that the consumers' intention to repurchase and continue using the service was determined by their level of satisfaction with the previous utilization of the product based on the comparisons between expectation and performance. This indicates that

satisfaction is a crucial factor influencing consumer repurchase intention. Therefore, repurchase intention is a potential for consumers to carry out actions after being satisfied with previous transactions.

Hellier et al. (2003) also stated that intentions were people's judgments regarding the repurchasing of services as well as the decision to engage in future activities with service providers. This was identified through the following indicators: intention to buy with a similar amount based on the previous transaction, as well as increasing the quantity of usage and frequency of purchase on the next deal. Furthermore, the study by Tjiptono (2005) stated that repurchase intentions were behaviors that originated in response to specific objects, which indicated the desire of consumers to repurchase in the future. This was based on several indicator measurements, such as planning to buy similar and different products, as well as more combinations of both goods.

Based on the online shopping context, Khalifa and Liu (2007) defined repurchase intentions as reusing virtual channels to buy from certain retailers. Therefore, it refers to the subjective probability that a consumer is likely to continue buying products and services from the same online seller. Chou and Hsu (2016) defined online repurchase intention as a consumer's motive to re-use a specific retailer's website in order to buy products or services. In line with Chou and Hsu (2016), Choi and Mai (2018) stated that repurchase intention is one part of consumer loyalty, based on the favorable attitudes of a specific retailer. According to Bhattacherjee (2001), online repurchase intention was measured by three indicators, namely (a) intent to continue shopping online rather than stop, (b) intent to continue shopping online instead of offline, and (c) intent to continue shopping online as much as possible. Furthermore, the study by Khalifa and Liu (2007) measured the future propensity of a customer in order to determine their purchase intention at a specific online store. This was also based on three indicators, such as anticipating, being likely, and expecting to repurchase from the online store in the future. Meanwhile, the research by Chiu et al. (2012) measured the online repurchase intent by three indicators, such as (a) being willing to continue purchasing online products as much as possible, (b) planning to continue using online shopping in the future rather than traditional stores, and (c) likely to continue purchasing products from the online stores in the future.

2.4. Online retail ethic perception, perceived risk, and repurchase intention

Online shopping causes uncertainty because of unethical actions such as misleading or untruthful advertisements, bad product quality, cheating, intrusion of privacy, information misuse, and betrayal of trust have become one of the most important issues (Choi & Mai, 2018; Elbeltagi & Agag, 2016; Leonidou et al., 2013; Limbu et al., 2012; Roman, 2007). Bart et al. (2005) stated that the collection of consumers' personal information when conducting transactions causes uncertainty regarding the handling and security of that data by retailers. Other major causes were the fulfillment of services that created inconvenience and the accuracy of meeting promises that were vulnerable to fraud. This was closely related to the responsibilities, credibility, and integrity of online retail companies, which potentially posed risks to consumers. Based on this condition, the following hypothesis is proposed:

H1: Customer perception of online retail ethic has a negative effect on perceived risk.

Previous experts found that the retailers' ethics were determinants of consumer repurchase intention in online shopping, such as the study conducted by Limbu et al. (2012), which stated that there was a direct effect between online retail ethic and repurchase intention. Agag and Elbeltagi (2014) also stated that there were five online retail ethic factors (security, privacy, non-deception, fulfillment/reliability, and corporate social responsibility) that affected customers' intentions to repurchase online. Furthermore, the study by Elbeltagi and Agag (2016) stated that consumers' perception of online retail ethic was a second-order construct that predicted satisfaction and repurchase intention. Based on these descriptions, the consumers' intention to shop again at a specific online store depends on their ethical behavior.

H2. Customer perception of online retail ethic has a positive effect on customer repurchase intention.

2.5. Perceived risk and repurchase intention

Cho et al. (2014) showed in their study that perceived risk has a negative effect on online repurchase intention for wine products. According to Dai et al. (2014), this risk also had a negative effect on purchase and repurchase intentions in online shopping. Chiu et al. (2014) investigated the online shopping intentions of experienced consumers using means-end chain and prospect theories, utilitarian and hedonic values, perceived risk, and repeated purchase intentions as research variables, and the results stated that perceived risk negatively affected the intentions of repeated purchases. Furthermore, the study by Chen et al. (2015) constructed a model based on the perceived benefit and risk paradigms of online user behavior. This indicated that the benefit and risk influenced customers' satisfaction and repurchase intention in online retail. Martin et al. (2015) also stated that the negative effect of perceived risk on repurchase intention was greater for consumers that rarely shop online, compared to virtual users.

Further research was conducted by Tho et al. (2017) on the Effect of Perceived Risk on Repurchase Intention and Word–of–Mouth in the Mobile Telecommunication Market in Vietnam. According to the findings, perceived risk had a significant negative impact on the repurchase intention. Liang et al. (2018) also extended the research on consumer repurchase intention, as well as perceived value and risk, into the realm of the social economy, specifically in the context of Airbnb. The results showed that the perceived risk negatively impacted the value and repurchase intention of Airbnb consumers. According to the study by Chen and Chen (2019), which identified the effects of the website and service quality, perceived risk, and repurchase intention, the results further proved that perceived risk had a negative impact on the customer's repurchase intentions.

Several previous experts have explained that perceived risk in the context of e-commerce has a negative effect on online shopping behavior. Generally, consumers are reluctant to make online purchases when confronted with a number of risks. Therefore, perceived risk is very influential on repurchase intention in online shopping. Based on these conditions, the following hypothesis is proposed:

H3. Perceived risk has a negative effect on repurchase intention.

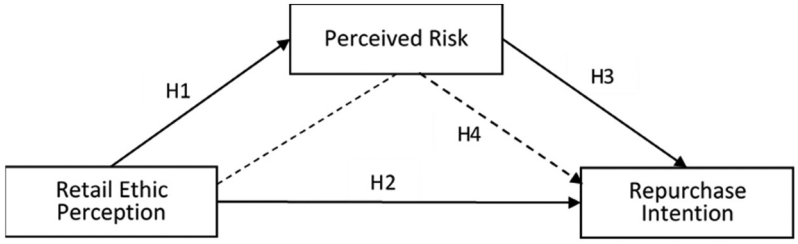
2.6. The role of perceived risk in customer perception of online retail ethic and repurchase intention

Consumers are confronted with concerns over the potential losses that could be incurred when shopping online. Their positive perceptions regarding the ethical behavior of online retailers enable them to overcome uncertainty and perceived risk. This greatly influences their behavior when carrying out purchases on online sites (McKnight et al., 2002). When consumers perceive that online retail sites are ethical, it can reduce the perceived risk and strengthen their intention to repurchase. Based on these explanations, the perceived risk is assumed to be a mediating factor in the relationship between the customer's perceptions of online retail ethics and repurchase intention. Therefore, the following hypothesis is proposed:

H4. Perceived risk plays a role in mediating the effect of customer perception of online retail ethic risk on repurchase intention.

The hypotheses regarding the directional linkages among the variables are presented in the following research framework in figure 1.

Figure 1. Research framework.



3. Research methods

3.1. Questionnaire development

The survey instrument was divided into three sections, with Section 1 including the demographic data of respondents, such as gender, age, and occupation. Based on Section 2, the respondents were asked several questions about their previous Online Shopping frequency. This approach ensured that they had both knowledge of and experience with retail websites being evaluated.

According to Section 3, the measures were designed to evaluate the perception of respondents towards retail online ethics, perceived risk, and repurchase intention. Furthermore, the questionnaire used five-point Likert-type items, anchored by 1 = strongly disagree and 5 = strongly agree. The retail ethic perception was assessed by 15 item measures, which were adopted from Roman (2007), Nardal and Sahin (2011), Cheng et al. (2014), and Elbeltagi and Agag (2016), and Agag et al. (2016). Also, the perceived risk was measured by 24 item measures adopted from Forsythe and Shi (2003), Featherman and Pavlou (2003), Naiyi (2004), Hassan et al. (2006), L. Zhang et al. (2012), and Masoud (2013), and H. H. Lee and Moon (2015), and Q. Yang et al. (2015). The repurchase intention was also assessed by 4 item measures, which were adopted from Bhattacherjee (2001), Khalifa and Liu (2007), Fang et al. (2011), and Chiu et al. (2012).

3.2. Pilot test

The instrument was preliminary pilot-tested and distributed with a purposive sampling method to 50 respondents. Furthermore, the complete responses were evaluated using Cronbach's alpha reliability and factor analysis. This alpha indicator was used to assess the initial reliability of the scales, as the standard lower bound was 0.70 (Hair et al., 2010). A factor analysis was also performed to examine the validity of the item indicators and whether they can measure their construct by determining the individual indicator loading. (Hair et al., 2010) considered a measure to be significant when its loading factor was greater than 0.50 at a sample size of 120. This criterion was adopted to examine the item loadings of all measures in this study. Furthermore, the measurement was refined by removing the items that did not significantly load the underlying constructs. Therefore, the final 43 item measurements obtained from the pilot test were further used as indicator variables for the main study. A final text version of the questionnaire is presented in Table A3 of the Appendix.

3.3. Sampling plan and data collection

The study was conducted in Indonesia, by using a purposive sampling method. This method involved the identification and selection of individuals with specific characteristics, which were proficient and well-informed with a phenomenon of interest (Creswell & Piano Clark, 2017). It was also used to identify and select the survey being carried out in this study, based on certain considerations or criteria that were in accordance with the stated research objectives (Sekaran & Bougie, 2016). Therefore, the participants in this study were customers that had experience in purchasing online product on retail website in Indonesia.

The determination of the sample size was based on the minimum number requirements recommended by Hair et al. (2010). This was due to the sample size depending on the higher number of

parameters used in all latent variables. Furthermore, the total number of indicators and samples in this study were 43 items and 450 respondents, respectively. The survey was carried out within a period of 2 weeks, from 3–16 February 2020, before the emergence of the COVID-19 pandemic in Indonesia. Also, an instrument was administered to the participants by using a link to an online questionnaire created through Google Form Media, which was distributed across the online discussion boards. Furthermore, the message was subsequently and repeatedly posted on various online discussion boards in order to encourage more responses. Approximately 469 responses were received, with 450 being used for the final analysis.

The responses showed that more than half of all the respondents were female (64.2%), with the values of occupation at 16.2%, 58.9%, 6.9%, and 18% for students, workers, entrepreneurs, and others, respectively. Based on their ages, 31.6%, 29.6%, 27.6%, and 11.3% were aged below 30, between 31 and 40, 41–50, and above 50, respectively. All the respondents had experience of online shopping on the retail website, as a whole, with 67.7%, 15%, and 17.3% having shopping intensity between 1–5, 6–10, and more than 10 times, respectively.

4. Results and discussion

4.1. Results

This study employed a two-step approach, namely the measurement and structural models. The measurement model was carried out by conducting confirmatory factor analysis (CFA), while the structural models were estimated for model and hypotheses testing. These models were both assessed by the maximum likelihood method using the AMOS 21 Structural Equation Method.

Each construct in the measurement model was separately evaluated by examining the loading factor and assessing its extracted reliability and variance. The loading of all indicators to their latent constructs in this study was statistically significant with t-values > 2. Furthermore, the scale composite reliabilities (CR) and average variance extracted (AVE) ranged from 0.772–0.911 and 0.516–0.776, exceeding the acceptable level of 0.70 and 0.50, respectively, as shown in Table A1 (Hair et al., 2010).

The Structural Model yielded a chi-square value of 131.000 and 96 degrees of freedom (P = 0.010), which indicated a general lack of fit. However, the chi-square test was sensitive to the sample size, especially where the population exceeded 200 respondents (Hair et al., 2010). As an alternative, the ratio of the chi-square to the degrees of freedom was used. This approach obtained a value of 1.365, which was within the suggested requirement of 5 or below (Bagozzi & Yi, 1988). Furthermore, the modification indices satisfied the recommended values, which indicated a good model fit (GFI = 0.967, NFI = 0.962, CFI = 0.989, AGFI = 0.954, and RMSEA = 0.028). This model fit was generally considered to be adequate when GFI, NFI, and CFI were larger than 0.9, as well as AGFI and RMSEA being higher and smaller than 0.8 and 0.08, respectively (Bagozzi & Yi, 1988; Hair et al., 2010). Therefore, there was a reasonable overall fit between the model and the observed data in this study. Table A2 and Figure A further showed the structural model estimates, where the parameters were standardized path coefficients with a significance level of 95%.

Based on Table A2, the analytical results indicated that H1 was supported, as the customer perception of online retail ethic significantly and negatively affected perceived risk. Similarly, H2 was also supported, with customer perception of online retail ethic significantly affecting repurchase intention, and H3 was supported, with perceived risk significantly and negatively affecting repurchase intention.

The mediation test was initially carried out by establishing a significant relationship of direct influence between each construct before estimating the model. Furthermore, the estimation of the model was carried out by adding mediating variables to the model. Mediation is stated not to be supported when the relationship between exogenous and endogenous constructs remains

significant and does not change with the inclusion of the mediating variables. However, when the relationship between these constructs was not statistically significant after mediation was included, the full mediation was stated to be supported (Hair et al., 2010).

Based on these results, the first criterion was met due to each construct's having a significant influence on each other, as shown in H1, H2, and H3. The second criterion is also shown in Table A2. Furthermore, the effect of retail ethic perception remained significant on repurchase intention after the perceived risk was inputted. However, the estimated value was reduced from 0.502 to 0.387, and the perceived risk was observed to be a partial mediation. Therefore, H4 was supported. Besides that, the results of the mediation test were also supported by the Sobel analysis, where the value of z = 4.676 and p = 0,000.

4.2. Discussion

The results of this study provided support for the research framework presented in Figure 1, as well as the hypotheses regarding the directional linkages among the model variables. These analytical results demonstrated that retail ethic perception directly had negative effects on perceived risk and positive effects on repurchase intention. Also, perceived risk was found to have a negative effect on repurchase intention. Furthermore, the results showed that the perceived risk partially mediated the relationship between retail ethic perception and repurchase intention, with a total effect value of 0.502. These also demonstrated that retail ethic perception exerted a stronger effect on perceived risk (−0.387) and on repurchase intention (0.387), compared to the influence of uncertainty on intent (−0.298).

In fact, online shopping has different environments where transaction activities are carried out without direct interaction, and the opportunity for violation of marketing ethics has become greater. However, consumers considered the ethics applied by online retailers to be very important. This indicates that these retailers have to focus on consumers' perceptions regarding the ethics of online shopping practices. According to this study, three of the five dimensions of retail ethics had the biggest role in reflecting customer perceptions of ethics in online shopping. This includes, namely, fulfillment/reliability, security, and service recovery. Consumers want online retailers to be responsible for protecting the security of transactions and the confidentiality of personal information, as well as act fairly and honestly in fulfilling services.

This study proved that customer perception of online retail ethics affected perceived risk and repurchase intention. Customers perceived that online retailers provided accurate services in fulfilling their promises to consumers, possessed good security policies that protected transactions and personal information, and put more effort into responding to complaints about service failures. This positive perception of consumers was confirmed to possess the ability to minimize the level of perceived risk and also encourage the intention to carry out repeated purchases on an online retail website.

Perceived risk also had a negative influence on subsequent consumer behavior in online retail, especially repurchase intentions. This study found that this perceived risk had a high influence on repurchase intention, especially the potential loss associated with the product purchased. Furthermore, consumers were more concerned with product risk as well as the difficulty of assessing the characteristics of products. They were also concerned with the difficulties of feeling the product, the inability to try and experience the goods prior to purchase, and the non-uniqueness of the services as displayed on the computer media. Consumers were further confronted with uncertainty about the suitability of product qualities and expectations. Therefore, risk factors have become a major obstacle for consumers in their determination of the intention to repurchase online.

These findings were consistent with previous research, such as Limbu et al. (2012), who found a direct relationship between perceived ethic, purchased intention, and revisited intention. The research conducted by Agag and Elbeltagi (2014) also stated that there were five factors of online retail ethics

(security, privacy, non-deception, fulfilment/reliability, and corporate social responsibility) that influenced consumers' online repurchase intentions. Elbeltagi and Agag (2016) further stated that consumer perception regarding online retail ethic acted as a second-order construct that predicted virtual satisfaction and repurchase intention. According to Bart et al. (2005), the implementation of collecting consumers' personal data when carrying out online transactions and handling security information negatively affected the perceived risk.

This result was also in accordance with some previous research, as Cho et al. (2014) disclosed that perceived risk negatively affected online repurchase intention for wine. The study by Chiu et al. (2014) also stated that perceived risk negatively affected repurchase intention. Furthermore, research by Chen et al. (2015) found that perceived benefit and risk affected consumer satisfaction and repeat purchase intention online. Martin et al. (2015) also stated that the negative effect of perceived risk and repurchase intention was higher for consumers that seldom shop online, compared to consumers who often shop online.

5. Conclusions

This study highlights the influence of consumers' perceptions of online retail ethics and perceived risk on repurchase intentions in a model and also highlights the role of perceived risk in mediating the relationship between perceptions of retail ethics and repurchase intentions, especially in the context of online shopping, which was seen as less elaborated in previous research. The majority of previous research has confirmed the effect of online retail ethics on website attitude, trust, customer satisfaction and loyalty, word-of-mouth, revisit and repurchase intention. Based on these conditions, this study contributed to the literature by investigating the role of perceived risk in the relationship between retail ethics and repurchase intention.

The results showed that online retail ethics and perceived risk had positive and negative effects on repurchase intention, respectively. Furthermore, the role of perceived risk partially mediated the relationship between online retail ethics and repurchase intention. Therefore, online retailers should consider focusing their marketing strategies on establishing customers' positive perceptions. This should be carried out by creating ethical behavior in their business practices and minimizing the level of perceived risk in order to increase consumers' repurchase intention.

This study did not include the moderating variables that were suspected of playing a role in the evaluation of the relationship between online retail ethics, perceived risk, and repurchase intention. As a result, it is suggested that in future research, consumer characteristics such as social, cultural, and personal factors should be used as moderating variables in order to gain a better understanding of the situation. This study did not specifically target a certain segment of respondents and objects. Further research is recommended to focus on specific sample sections such as generation X and Y, which are more adaptable to technology. It is also recommended that future research should focus on a certain object, such as apparel, which is perceived to have high involvement in the buying process.

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Appendix

Figure A. Structural model

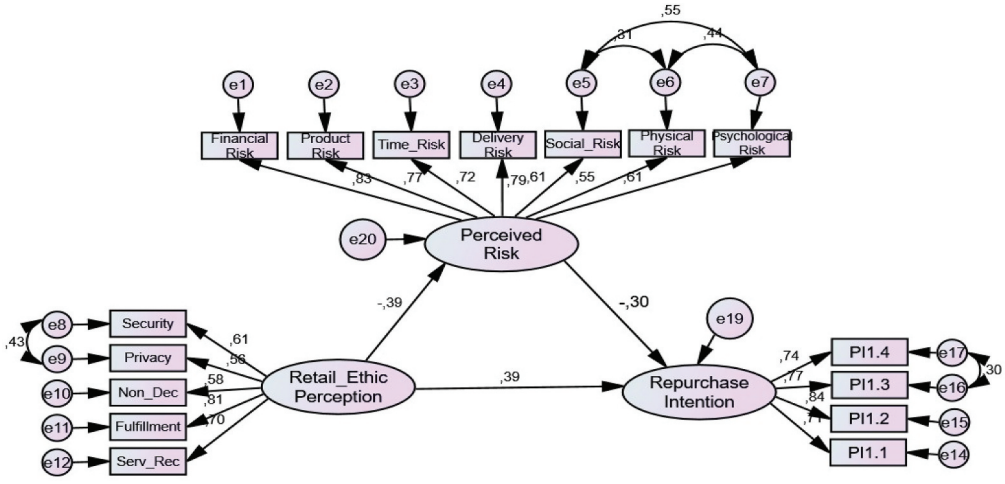

Table A1. Measurement model fit indices for reliability and convergent validity

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
First Order:			
Security	0.875	0.819	0.531
Privacy	0.763	0.874	0.776
Non-deception	0.875	0.816	0.597
Reliability/Fulfilment	0.856	0.772	0.532
Service Recovery	0.818	0.795	0.564
Financial risk	0.701	0.778	0.539
Product risk	0.941	0.911	0.774
Time risk	0.744	0.798	0.575
Delivery risk	0.801	0.810	0.516
Social risk	0.837	0.780	0.542
Physical Risk	0.904	0.831	0.552
Psychological Risk	0.798	0.825	0.542
Repurchase Intention	0.746	0.855	0.599
Second Order:			
Retail Ethic Perception		0.861	0.556
Perceived Risk		0.911	0.598

Table A2. Structural parameter estimates

Hypothesised Relationship	Estimate	S.E.	C.R	P-Value	Conclusion
Before Mediated: Repurchase Intention ← Retail Ethic Perception	0.502	0.026	7.974	***	Supported
After Mediated:					
Perceived Risk ← Retail Ethic Perception	-0.387	0.079	-6.244	***	Supported
Repurchase Intention ← Retail Ethic Perception	0.387	0.026	6.284	***	Supported
Repurchase Intention ← Perceived Risk	-0.298	0.019	-5.127	***	Supported

Table A3. Proposed measurement items for constructs

Constructs	Measurement Item	Loading
Security	The security policy of website is easy to understand	0.668
	The terms and conditions of the online transaction, before the purchase was conducted	0.746
	This website has adequate security features	0.729
	The website offers secure payment methods	0.769
Privacy	The website guarantees the confidentiality of their consumers' personal information	0.864
	The website protects consumers' personal information from hacking.	0.898
	Only the personal information necessary for the transaction to be completed needs to be provided	0.148*
Non-deception	The website exaggerates the benefits and characteristics of its offerings	0.797
	This website capitalizes on less experienced consumers, in order to make them purchase	0.808
	This website tries to persuade through deceptive advertisements and promotions	0.710

(*Continued*)

Constructs	Measurement Item	Loading
Reliability/ Fulfilment	The price shown on the website is the actual amount billed	0.638
	I obtain what I ordered from this website	0.777
	The website serves consumers as its promised	0.765
Service Recovery	This website responds to customer complaints promptly.	0.730
	This website has a return policy, and compensate for any failures of products/services	0,763
	This website has a tracking mechanism for service recovery, in order to identify customer satisfaction.	0.759
Financial risk	Should be charged extra fee when shopping online.	0.686
	When shopping online, the products quality are not consistent with the price I paid.	0.789
	Do not feel secure using a credit card for shopping product online.	0.724
Product risk	It is difficult to ascertain the characteristics of product such as quality, colour, and style by just looking at the pictures on website.	0.854
	It is difficult to feel, try and experience the product prior to purchase during shopping online.	0.904
	Shopping product online, I'm concerned based on the product delivered not being exactly as displayed on the computer screen.	0.881
Time risk	It requires a lot of time, due to being difficult to locate appropriate websites for shopping product.	0.837
	Locating the right product on online retail is difficult and requires a lot of time.	0.839
	Too complicated communicating with the seller, and placing the order on online retail website require a lot of time.	0.567

(*Continued*)

Table A3. (*Continued*)

Constructs	Measurement Item	Loading
Delivery risk	The product purchased online is likely to be lost during delivery process.	0.701
	The product purchased online is likely to be delivered to a wrong place.	0.667
	The product purchased online is not likely to be delivered on time.	0.729
	The product purchased online is likely to be damaged during the delivering.	0.772
Social risk	When shopping online, the product purchased is likely to end up being disapproved by family.	0.702
	Shopping online reduces unity with my family.	0.750
	Shopping online reduces my relationship with others.	0.755
Physical risk	Shopping online leads to eyestrain, because of frequent exposure to computer screen during shopping.	0.778
	Shopping online causes physical exhaustion, because of frequent use of computer during shopping.	0.771
	Virus is likely to infect my computer while shopping online	0.669
	Shopping online is likely to damage to my computer.	0.748
Psychological risk	The thought of shopping online makes me feel uncomfortable.	0.724
	The thought of shopping online makes me experience unnecessary tension.	0.733
	The thought of shopping online lead to too much social isolation.	0.757
	The thought of shopping online reduces my social interaction.	0.730
Repurchase intention	I prefer to shop online rather than offline.	0.634
	I am likely to continue repurchasing online.	0.768
	I expect to repurchase online as much as possible in future.	0.858
	I expect to regularly use the same website to purchase online	0.817

*Loading factor lower than 0.50, the indicator removed from the construct.

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