

CUSTOMER SATISFACTION AND REVERSE LOGISTICS IN E-COMMERCE: THE CASE OF KLANG VALLEY

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ABSTRACT

The e-commerce sector has been significant growth in Malaysia. Customer satisfaction has become an essential issue in the success of e-commerce customer experience. Customer satisfaction is essential for online retailers by providing a metric that they can use to manage and improve their online businesses. In Malaysia, online shoppers are facing difficulties in returning products, though they are facing with a faulty product. Hence, reverse logistics plays a vital role in e-commerce for increasing online shoppers' buying confidence and customer satisfaction. However, there is limited studies focus on the impact of reverse logistics on customer satisfaction in e-commerce. Thus, this paper aims to determine the relationship between the variables of situational factors (advertising and accessibility) and customer satisfaction towards reverse logistics in e-commerce in the surrounding area of Klang Valley. The data are collected through the online survey and paper survey with 400 respondents who had an online shopping experience. The data are analysed using Pearson Correlation Analysis and Multiple Regression Analysis. The result of this study is expected to provide positive contributions to online retailers in understanding customer needs and wants, thereby creating a good return policy that committed to customers satisfaction and sustainable online shopping experience.

Keywords: customer satisfaction, reverse logistics, e-commerce.

1. INTRODUCTION

The e-commerce sector has been significant growth in Malaysia with the support of internet connection and convenience of smart device (U.S. Embassies, 2018). According to U.S. Embassies (2018), 50 per cent of Malaysians is online shopper, which involved 15.3 million people due to e-commerce provides convenience to the consumers in payment, compares price and saves time. Furthermore, online shopping always needs to be supported by a proper supply chain management included the inventory management, warehousing, customer service and logistics to fulfil and increase the effectiveness and efficiency of service.

Reverse logistics plays a vital role in helping online retailers to deal with product return. Online retailers can increase online shoppers' buying confidence and customer satisfaction as well as obtain a good reputation by fulfilling the demand of customer through reverse logistics, which is about the return policy in e-commerce. The return policy has the capability of assisting in recovering and handling service failures such as poor product quality and wrong items to keep customers enhance customer satisfaction as well as building loyalty. It is also can be used to gain competitive advantages that are capable of satisfying the customer and winning customer loyalty in a competitive online environment.

2. PROBLEM STATEMENT

Under Revolution 4.0, technology is starting to replace by the human resource and help to increase the efficiency of operation. Fast-pace of live increased the customer demand in increasing the efficiency and effectiveness of logistics, especially in reverse logistics. The customer wants the easiest way to return the faulty item at the lowest cost. However, online consumers lack the information for returning the product (Charles, 2014). There is limited information about product return in the internet shopping site and even unable to find at different sources such as Facebook and YouTube. Hence, limited information on returning product has restricted online consumers to return a faulty item. Also, the online consumers who bought items on social media are unable to access the return policy (Massey, 2018) as the online retailers did not provide the return policy for their customers. When online consumers would like to return a product, there are limited ways to get in contact with online retailers (Massey, 2018). Furthermore, the free return shipment sometimes is not available and must be burden by the online consumers and result in the increasing cost for them (Zumbach, 2016).

According to Pissed Consumer (2018), few cases happened in Lazada Malaysia, which are the online shoppers unable to get refund or return of goods when they received a faulty item. Also, there is limited studies focus on the impact of reverse logistics on customer satisfaction in e-commerce. Thus, some variables of situational factors which are the one part of symbiosis theory that developed by A Jalil et al. (2016) have adopted in this study in order to further investigate the relationship between the variables of situational factors (advertising and accessibility) and customer satisfaction towards reverse logistics in e-commerce in the surrounding area of Klang Valley.

3. LITERATURE REVIEW

3.1 Customer Satisfaction

Oliver (2014) defined that customer satisfaction is the consumer's fulfilment response. It is the customer's evaluation of a product or service for determining whether that product or service has met the customer's needs and expectation. If the product or service has met the customer's needs and expectation, it will be assumed to result in satisfaction with the product or service. Customer satisfaction has become an essential issue in the success of e-commerce. Customer satisfaction is vital for marketers and online retailers by providing a metric that they can use to manage and improve their online businesses. However, satisfaction is dynamic; it may evolve and affected by a variety of factors. Customer satisfaction is influenced by the perception of service quality, product quality, and price as well as personal factors and situational factors (Zeithaml, Bitner, & Gremler, 2013). According to Khan, Liang, & Shahzad (2015), the factor of price, product information, convenience and return policy have a positive and significant influence on customer satisfaction to repurchase in online stores.

Moreover, in the study of Ogunleye (2013), the product return experience can influence customer perception of the service they receive. When the customers do not satisfy the product due to the product did not meet their need and expectations, the product will be returned, and a return may make customer dissatisfied. Hence, online retailers should take the product return to be their service recovery opportunity. Service recovery is essential for handling the service failure. The customer who experiences service failure might be more loyalty to the online retailer and repurchase if they are satisfied with the service recovery taken by the online retailer. Besides, the return policy also can assist online retailers in handling customer complaints.

Provision of an acceptable return policy can be used to influence customer satisfaction and generate customer loyalty.

3.2 Reverse Logistics

According to Alfonso-Lizarazo et al (2017), reverse logistics is known as "the process of planning, implementing, and controlling the efficient, cost-effective flow of raw materials, in-process inventory, finished goods, and related information from the point of consumption to the point of origin for the purpose of recapturing or creating value or proper disposal". In the B2C e-commerce model, the term of reverse logistics defined by American Reverse Logistics Executive Committee which is to retrieve the value of the product or make it appropriately handled, the process of moving the product from the consumer to the source (Li & Li, 2015). Reverse logistics refers to the return of products to sellers or manufacturers due to their problems or consumer dissatisfaction. According to Kok et al (2016), the term of reverse logistics in online shopping is about the return policy which allows online consumers to return products based on the rules and procedures that listed in the return policy.

In recent years, reverse logistics has become an essential issue in e-commerce because it can generate revenue and meet the satisfaction of online customers. When a customer wishes to return a product, the online retailers must organise, retrieve, and then determine the outcome of the returned product and ship the new product to the customer. Product return may be caused by the vast differences between the real product and product descriptions as well as the human error made by online retailers. According to Rao, Lee, & Connelly (2018), online consumers might want to return or exchange the products when consumers are not satisfied with the product. Hence, a clear return policy able to guarantee the product quality being purchased and make consumers feel security when they received wrong items.

3.3 E-commerce

Based on the context and research objective of the researchers, the term of e-commerce has been defined in many ways. Pandey & Agarwal (2014) stated that e-commerce is an activity of buying and selling products using the Internet. Meanwhile, Turban et al (2015) provided more detail and specific definition where they refer e-commerce is an activity of buying and selling products, exchanging products, services, and information over an electronic network, mostly the Internet. A transaction can be done at anywhere and anytime with the click of a mouse (Omar & Anas, 2014). We adapted the definition of e-commerce that provided by Turban et al (2015) in this research, which involves the activity of exchanging information between the online retailers and online buyers lead to the process of returning and making refunds and exchanges through the online networks. The growth of the e-commerce sector contributed to Malaysia's economic growth. According to the report that released by MDEC and A.T. Kearney in 2016, e-commerce contributed RM 68.3 billion or 5.9 per cent to Malaysia's gross domestic product (GDP) in 2015 and increased to RM 74.6 billion or 6.1 per cent in 2016.

However, B2C e-commerce market in Malaysia is still considered as a new medium. According to PwC's Total Retail 2016 survey, they found that about 56% of Malaysia respondents only began online shopping within the last three years compared to the 82% of respondents in China have been beginning online shopping for more than three years. In the survey, about 75% of respondents in Malaysia want paid return label provided. 72% of Malaysia respondents are more favourable return online purchase to store, whereas 71% of Malaysia respondents want the ability to return an online purchase to a convenient location. Hence, the online retailers in Malaysia should experiment a range of return options and policies and learn from other countries as well as emulate their return options and policies to attract more people to purchase online and hence growing sales, profits, and have a deep relationship with their customers.

3.4 Advertising

Advertising is one of the forms of communication that helps to deliver information from the organisation to consumers (Moriarty et al, 2014). It also is known as marketing communication, which is role importantly in marketing, communication, economic and sociocultural. It mostly operates with the objective and strategic to get the attention of consumers. According to the study of Okazaki & Taylor (2013), social media advertising may help to integrate global market supported by networking, image transferability and personal extensibility. It may help to solve the geographic and psychological boundaries compared with traditional advertising such as newspaper or magazine. Social media also will help the organisation collect feedback from consumers (Rajeswari, 2015). Furthermore, most of the people like to search for information by using social media (Muntinga et al, 2011). Therefore, social media can use as the bulletin board as known as an information board to share the information. It may increase the interaction between advertisers and customers.

According to Rawal (2013), advertising is useful when the audience has received the message and takes the next action. Advertising able to deliver information to inform consumers about product return included return procedures (Dao et al, 2014) in order to achieve their needs and helping them to deal with specific issues as well as accomplishing specific tasks (Rodgers & Thorson, 2000). Besides, advertising can fulfil the needs and wants of consumers and hence creating pleasure and enjoyment. According to the previous study of Dao et al (2014), they stated that advertising able to satisfy the needs of consumers by offering them the necessary information.

3.5 Accessibility

According to Ho & Lee (2007), accessibility refers to the extent to which information provided by the website can be obtained and used without difficulty. Online consumers can easily find the information in the website or gather information by contacting online retailers (Jun, Yang, & Kim, 2004; Eisingerich & Bell, 2008; No & Kim, 2015). Online consumers are likely to have multiple methods to contact online retailers, such as email and telephone. Due to the rapid growth of information technology (IT) in recent years, online live chat becomes the best choice for the online consumers to contact the online retailers quickly and efficiently as they are busy and do not want to waste time by calling and mailing the online retailers. In e-commerce, online chat can help online retailers to increase the level of customer satisfaction as they can receive the response from online retailers on the spot in real-time (Elmorshidy, 2013).

On the other hand, according to Sohaib & Kang (2016), they found that accessible websites are becoming ever more important to online shoppers. Online consumers often want to access online retailer's chat rooms and bulletin boards, or others in order to get up-to-date and useful information for making online purchasing decisions (Jun, Yang, & Kim, 2004). In the study of Yang et al (2005), accessibility has a significant effect on customer satisfaction. However, Jun, Yang, & Kim (2004) found that the access dimension had a significant and positive influence on overall service quality, but it did not show a significant relationship with customer satisfaction. Thus, this result piqued our curiosity in order to drive us to determine whether the degree of accessibility in affecting customer satisfaction towards reverse logistics in e-commerce.

4. RESEARCH METHODOLOGY

4.1 Research Design

Quantitative is used to conduct this research. A correlation study is chosen to determine the relationship between predictor variables (convenience, education, advertising, and accessibility) and the criterion variable (customer satisfaction). The proposed research framework as in Fig 1.0.

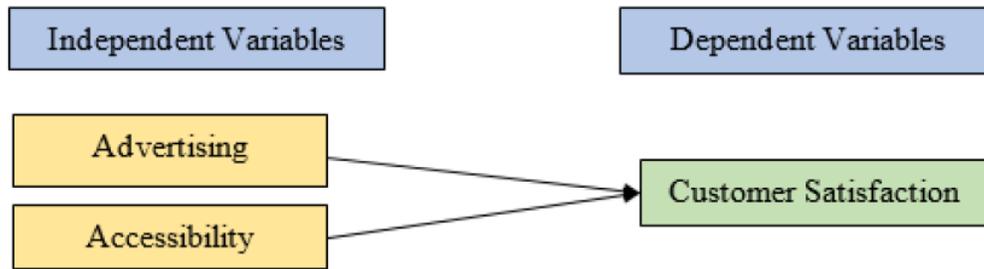


Figure 1. The research framework of customer satisfaction

From the research framework we hypothesis as followed.

4.2 Research hypothesis

H1: There is a significant relationship between advertising and customer satisfaction towards reverse logistics in e-commerce.

H2: There is a significant relationship between accessibility and customer satisfaction towards reverse logistics in e-commerce.

4.3 Sampling and data collection method

Convenience sampling method was used in this study. The data are collected through the online survey and paper survey with 400 respondents who had an online shopping experience. Seven-point Likert-type scale will be used to measure independent variables (advertising and accessibility) and dependent variable (customer satisfaction) with 7 alternative options, which are 1=extremely disagree, 2=strongly disagree, 3=disagree, 4=neutral, 5=agree, 6=strongly agree, 7=extremely agree” in the statement.

4.4 Data analysis

Cronbach’s alpha reliability test was used in research to measure internal consistency. The higher the Cronbach’s alpha score, the higher the internal consistency reliability. Based on table 1, it is indicated that all the variables Cronbach’s Alpha value was more than 0.7. According to Sekaran & Bougie (2016), Cronbach’s alpha value less than 0.60 is poor; 0.60 to 0.80 is acceptable; more than 0.8 is good. Hence, this shows that the data that we collected is having an acceptable and reliable to measure the five variables consistently.

Table 1. Reliability Test of Each Variable (n = 400)

Variables	Number of items	Cronbach’s Alpha Value
Convenience	7	0.736
Education	7	0.813
Advertising	7	0.835
Accessibility	6	0.839
Customer Satisfaction	7	0.823

Besides, Pearson correlation analysis was used in this study to measure the strength of the linear relationship between two variables (Chong, 2014). Moreover, multiple regression analysis was also used to determine the overall fit of the model, and the relative contribution of each of the independent variables to the dependent variable is explained (Soo, 2018).

5. RESULTS

Based on Table 2, the p-value of the two variables is equal to 0.000, and it is less than α value of 0.01. Hence, it indicates a statistically significant correlation between independent variables (advertising and accessibility) and dependent variable (customer satisfaction).

Table 2. Correlation between Independent and Dependent Variables

Items	Customer Satisfaction	
	r	p-value
Advertising	0.620	0.000
Accessibility	0.625	0.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3. Result of regression analysis (Model summary and ANOVA)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. error of the Estimate
1	0.713 ^a	0.508	0.503	0.63931

ANOVA						
Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	167.000	4	41.750	102.148	0.000 ^b
	Residual	161.445	395	0.409		
	Total	328.444	399			
a. Dependent Variable: Customer Satisfaction						
b. Predictors: (Constant), Advertising, Accessibility						

From the above analysis, the R² value is 0.508, which shows that all the independent variables explain 50.8% of customer satisfaction. Also, the table shows that the set of predictors of customer satisfaction is statistically significant at the 0.01 level ($F(4, 395) = 102.148$ and p-value is smaller than 0.01). Therefore, it confirms the fitness of the model.

Table 4. Significant predictors of structural model (N=400)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.642	0.246		2.612	0.009
	Advertising	0.286	0.050	0.289	5.714	0.000
	Accessibility	0.343	0.052	0.327	6.610	0.000
a. Dependent Variable: Customer Satisfaction						

Based on the findings, the independent variables are significantly related to the dependent variable when the p-value is less than 0.05. The table shows that accessibility and advertising are

significantly related to customer satisfaction. Also, accessibility has the highest beta value (0.327) between all the independent variable, which indicated that this variable has the strongest influence on customer satisfaction.

6. DISCUSSION

The purpose of this study is to determine the relationship between the variables of situational factors (advertising and accessibility) and customer satisfaction. The results showed that accessibility is the strongest predictor on customer satisfaction towards reverse logistics in e-commerce. The result of accessibility was consistent with the previous study of Yang et al (2005), which stated as accessibility has a significant effect on customer satisfaction. Also, advertising is the second important predictor and has a significant influence on customer satisfaction towards reverse logistics in e-commerce. Advertising can fulfil the needs and wants of consumers and hence creating pleasure and enjoyment. This is also supported by the previous study of Dao et al. (2014) which stated that advertising able to satisfy the needs of consumers by offering them the necessary information. Therefore, the outcomes of research indicated that accessibility and advertising in returning the online item would influence customer satisfaction towards reverse logistics in e-commerce.

7. CONCLUSION

This study was conducted to investigate the factors that influence customer satisfaction towards reverse logistics in e-commerce in the surrounding area of Klang Valley. This research has achieved the objective to identify the variables of situational factors and examine the relationship towards customer satisfaction. Based on the research findings, it indicated that the variables of situational factors (advertising and accessibility) had a significant relationship on customer satisfaction. In conclusion, the outcome of this research indicated that accessibility is the most crucial factor to influence customer satisfaction. Although accessibility has the most substantial influence on customer satisfaction, the factor of advertising should not be ignored. However, there are several limitations found in this study. Hence, several suggestions for future research have been discussed for further improvement.

8. REFERENCES

- A Jalil, E. E., Grant, D. B., Nicholson, J. D., & Deutz, P. (2016). Reverse logistics in household recycling and waste systems: a symbiosis perspective. *Supply Chain Management: An International Journal*, 21(2), 245-258.
- Alfonso-Lizarazo, E. H., Montoya-Torres, J. R., & Gutiérrez-Franco, E. (2013). Modelling the reverse logistics process in the agro-industrial sector: The case of the palm oil supply chain. *Applied Mathematical Modelling*, 37(23), 9652-9664.
- Charles, J. (2014). Refunds and returns: *What to do when your online orders fail to deliver*. Retrieved from <https://www.theguardian.com/money/2014/dec/22/refund-returns-online-orders-fail-deliver-christmas>
- Chong, H. T. (2014). *Factors affecting online shopping of purchasing apparels among young adults* (Doctoral dissertation, UTAR).
- Dao, W. V. T., Le, A. N. H., Cheng, J., & Chen, D. C. (2014). Social media advertising value. *International Journal of Advertising*, 33(2), 271-294.
- Elmorshidy, A. (2013). Applying the technology acceptance and service quality models to live customer support chat for e-commerce websites. *Journal of Applied Business Research*, 29(2), 589-595.
- Eisingerich, A. B., & Bell, S. J. (2008). Perceived service quality and customer trust: does enhance customers' service knowledge matter?. *Journal of service research*, 10(3), 256-268.
- Ho, C., & Lee, Y. (2007). The development of an e-travel service quality scale. *Tourism Management*, 28(6), 1434-1449.

- Jun, M., Yang, Z., & Kim, D. (2004). Customers' perceptions of online retailing service quality and their satisfaction. *International Journal of Quality & Reliability Management*, 21(8), 817–840. doi:10.1108/02656710410551728
- Khan, S. A., Liang, Y., & Shahzad, S. (2015). An empirical study of perceived factors affecting customer satisfaction to re-purchase intention in online stores in China. *Journal of Service Science and Management*, 8(03), 291.
- Kok, C. C., Siew, S. L., Hoe, C. Y., and A Jalil, E. E. (2017) *the importance of logistics competencies towards online shopping behaviour among university students*. In: Symposium on Technology Management & Logistics (STML–Go Green) 2016, sixth - 7th December 2016, Universiti Utara Malaysia, Sintok, Malaysia.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Li, G., & Li, W. (2015). The Analysis of Return Reverse Logistics Management Strategy Based on B2C Electronic Commerce. *International Conference on Economics, Social Science, Arts, Education and Management Engineering*.
- Malaysia Digital Economy Corporation (MDEC), & A.T Kearney. (2016). *Malaysia's National eCommerce Strategic Roadmap*.
- Massey, M. (2018). Update: *House of Fraser delivery problems – your consumer rights*. Retrieved from <https://www.which.co.uk/news/2018/08/house-of-fraser-delivery-problems-your-consumer-rights/>
- Moriarty, S., Mitchell, N. D., Wells, W. D., Crawford, R., Brennan, L., & Spence-Stone, R. (2014). *Advertising: Principles and practice*. Australia: Pearson.
- Muntinga, D.G., Moorman, M. & Smit, E.G. (2011). Introducing COBRAs. Exploring motivations for brand-related social media use. *International Journal of Advertising*, 30(1), 13-46.
- No, E., & Kim, J. K. (2015). Comparing the attributes of online tourism information sources. *Computers in Human Behavior*, 50, 564-575.
- Ogunleye, A. (2013). *Reverse Logistics Return Policies And Their Possible Impacts On Customer Loyalty In E-Retailing Environment* [Ebook]. Helsinki: Aalto University. Retrieved from https://aaltoodoc.aalto.fi/bitstream/handle/123456789/21331/hse_thesis_14509.pdf?sequence=1&isAllowed=y
- Okazaki, S., & Taylor, C. R. (2013). Social media and international advertising: theoretical challenges and future directions. *The international marketing review*, 30(1), 56-71.
- Oliver, R. L. (2014). *Satisfaction: A Behavioral Perspective on the Consumer: A Behavioral Perspective on the Consumer*. Routledge.
- Omar, C. M. Z. C., & Anas, T. (2014). E-commerce in Malaysia: Development, implementation and challenges. *International Review of Management and Business Research*, 3(1), 291-298.
- Pandey, D., & Agarwal, V. (2014). E-commerce Transactions: An Empirical Study. *International Journal of Advanced Research in Computer Science and Software Engineering*, 4(3), 669-671
- Pissed Consumer. (2018). *Lazada Malaysia - trying to make return difficult, not sincere in business*. Retrieved from <https://lazada-malaysia.pissedconsumer.com/trying-to-make-return-difficult-not-sincere-in-business-201807201308151.html>
- PricewaterhouseCoopers (PwC). (2016). *They say they want a revolution: Total retail 2016- Southeast Asia & Singapore highlights*. Retrieved from <https://www.pwc.com/sg/en/publications/assets/total-retail-sea-2016.pdf>
- Rajeswari, M. (2015). A study on customer satisfaction towards online shopping in Chennai city. *International Journal of Sales & Marketing Management Research and Development (IJSMMRD)*, 5(1), 1-10.
- Rao, S., Lee, K. B., Connelly, B., & Iyengar, D. (2018). Return time leniency in online retail: A signaling theory perspective on buying outcomes. *Decision Sciences*, 49(2), 275-305.
- Rodgers, S., & Thorson, E. (2000). The interactive advertising model: How users perceive and process online ads. *Journal of interactive advertising*, 1(1), 41-60.

- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Sohaib, O., & Kang, K. (2016, August). Assessing Web Content Accessibility of E-Commerce Websites for People with Disabilities. In *25th International Conference on Information Systems Development*. AIS.
- Soo, J.(2018). “SPSS Analysis”. Research Methodology. DKG 2/9, UUM, Malaysia.
- Turban, E., King, D., Lee, J. K., Liang, T. P., & Turban, D. C. (2015). *Electronic commerce: A managerial and social networks perspective*. Springer.
- U.S. Embassies. (2018, July 19). *Malaysia - eCommerce*. Retrieved from <https://www.export.gov/article?id=Malaysia-E-Commerce>
- Yang, Z., Cai, S., Zhou, Z., & Zhou, N. (2005). Development and validation of an instrument to measure user perceived service quality of information presenting web portals. *Information & Management*, 42(4), 575-589.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2013). *Services marketing: Integrating customer focus across the firm* (6th ed.). New York: McGraw -Hill Education.
- Zumbach, L. (2016). *Online shopping makes it easier for consumers, but returns are still a hassle*. Retrieved from <https://www.chicagotribune.com/business/ct-retail-returns-1228-biz-20161227-story.html>