# Lia_Lia

*by* Jurnal Lia

---

**Research Paper**

# The Effect of Perceived Usefulness and Perceived Ease of Use on Perceived Value and Actual Usage of Technology on the Online Service of Pt. Garuda Indonesia Tbk

Raden Roro Lia Chairina[1)]

[1](Department of Management Agribusiness, State polytechnic of Jember, Indonesia)
Corresponding Author: Raden Roro Lia Chairina

**ABSTRACT**

This research is designed as the explanatory research, aimed to explain the causal effect of the variables. The target population of this research is the consumer of PT. Garuda Indonesia Tbk. who made an online purchase. The sampling technique used is accidental sampling, with the sample size of 137 respondents. The analysis technique used Structural Equation Modeling (SEM). This study concluded that: (1) perceived usefulness had a significant effect on perceived value; (2) perceived ease of use had a significant effect on perceived value; (3) perceived usefulness had a significant effect on actual usage of technology; (4) perceived ease of use had no significant effect on actual usage of technology; (5) perceived value had a significant effect on actual usage of technology. The novelty of this study is that the consumer of PT. Garuda Indonesia online service will gain many good value since there are many benefits by using PT. Garuda Indonesia services.

**KEYWORDS:** Perceived Usefulness, Perceived Ease of Use, Perceived Value, Actual Usage of Technology, Online Service, PT. Garuda Indonesia Tbk.

## I. INTRODUCTION

Technology Acceptance Model (TAM), is widespreadedly used to predict the online purchase decision. TAM is a model introduced by Davis for the first time in 1989, to explain the upcoming technology acceptance to use. The main purpose of TAM is to explain the factor which affects the acceptance of a wide range of technology and information from the user's information technology. In this research, technology acceptance is internet technology acceptance to perform the online purchase. The empirical study review showed that Theory Reasoned Action (Ajzen and Fishbein, 1975), is a theory which explained the online purchase behavior. TAM is used to predict the intention of using information technology. The TAM model explains the behavior which leads to the usage of new technology affected by the benefit gained (Perceived Usefulness, abbreviated as PU) and the ease of use (Perceived Ease of Use, abbreviated as PEoU). The company which provides online selling will design an interesting website with interesting content included the product offers, product availability, payment method, that the consumer will be interested to perform a purchase.

Garuda Miles is the company program for the loyal passenger of Garuda. The passenger may get miles in every flight with Garuda and partner by exchanging the accumulation into award ticket which provides a chance for every passenger to visit their favorite destination or passenger upgrade awards from the economic class to business class in your desired flight. As the member of Garuda Miles, the passenger may also enjoy many benefits and exclusive privileges, such as: special check-in at the departure airport, baggage capacity increase and the baggage priority and waiting time priority for ticket reservation, access for Garuda Indonesia lounge, and interesting offers from Garuda Indonesia partners worldwide. At present, Garuda Indonesia has two Executive Lounges in Soekarno Hatta International Airport and Ngurah Rai International Airport, Executive Lounge is available for the Executive Class passengers, Platinum GFF member, and Gold GFF member.

The information technology division of PT. Garuda Indonesia Tbk affiliate with the marketing. Since marketing in the present days is closely related to information technology. Garuda Indonesia Tbk. as the full-service airline and having a positioning as the airline which has the best cabin crew, maintain the on-time performance or avoid delay, a competitive environment, and keep on surviving. PT. Garuda Indonesia Tbk. has several selling channels, such as the conservative, travel agent, and the Garuda sales office, and also they try to

utilize the digital channel, such as Garuda Indonesia online system. With the online system technology, there is some information related to schedule, reservation, and transaction. The number of users who download it is important, however, the most important thing is that how the number will help in increasing sales. It is included the consumer who opens the application will be attracted to make a transaction, awareness is an important thing, but it will be useless if they made no transactions. Therefore, this research was aimed at the customer of PT. Garuda Indonesia Tbk. who perform and receive the online services, and determine how the application could get a good response from the public.

## II. REVIEW OF LITERATURE

The TAM explains the information technology system designed by the company with the perceived usefulness and PEoU models affect the actual usage with attitude and behavioral intention as the intervening variables (Davis, 1989). The TAM theory was developed in studies of online purchase behavior (O'Cass, 2003; Jayasingh and Eze, 2009; Alagoz and Hekimoglu, 2017; Lin, 2007). Kim et al (2008) explained that PU affect the prediction by using sustainable short message service which provides utilitarian benefit the user who is seeking for an effective communication alternative. Yang et al (2016) explained that PU had a significant effect on the desire of using the information system.

The research conducted by Yang et al, 2016; Yu et al, 2015; Wang et al, 2013; Cheng et al, 2011 explained that PU had a significant effect on perceived value with positive direction. Still, there is a gap with the research conducted by Fariman (2014) PU had a significant effect with negative direction on perceived value. Because the benefit given by purchasing books online was not as much as what the consumer expected (Fariman, 2014). The research conducted by Fariman, 2014; Geri and Naor-Eliza, 2008; Cheng et al, 2011 showed that PEoU had a significant effect with positive direction on perceived value.

The consumer's decision to adopt online media has a bigger benefit in terms of usage rather than the existing conventional media (Carlson et al., 2015; Choudhury and Karahanna, 2008; Yang *et al.*, 2013). According to Kushwaha and Shankar (2013), a consumer who adopt several media from the same retail will save more time and money. PEoU had a significant positive effect on perceived value (Geri and Elaiza, 2008).

According to Davis (1989) perceived usefulness was defined from the word useful "how far people will believe that using a certain system will increase the job performance". Davis (1989) stated that PU had a significant positive effect on computer system usage (actual use of technology). The PU affect the usage since the performance wish is within the definition of usage (Venkatesh et al 2002). The PU had a direct effect on the actual use (Shih and Huang, 2009), besides, Karahana et al (2006) PU had a significant effect on the CRM system usage.

## II. FRAMEWORK AND HYPOTHESIS

Perceived value has an important role in the market. The customer gains the value of the product and value, satisfaction and intention of purchase will increase. Value and actual usage are closely related, related to the real life which brings various external that either support or limit a certain product (included game) usage (Hamari and Nousiainen, 2015). Based on the literature review, a conceptual framework can be made as follows.

Based on the theory and empirical, a research model conceptual framework for this study can be seen in the Figure 1.
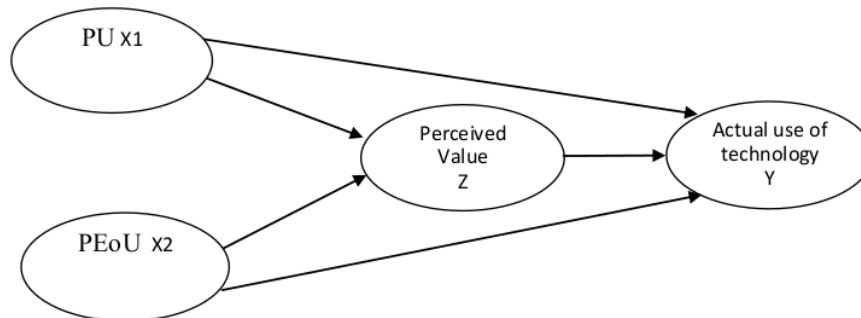


Figure 1: Model of Conceptual Framework

Based on the literature review and the research model conceptual framework, the following hypothesis was made:

H1: PU had a significant effect on perceived value.

H2: PEoU had a significant effect on perceived value.

H3: PU had a significant effect on the actual usage of technology.

H3: PEoU had a significant effect on the actual usage of technology.

H3: Perceived value had a significant effect on actual usage of technology.

## IV. RESEARCH METHOD

This research designed as the explanatory research, since it is aimed to explain the causal effect of the variables. The target population is the consumer of PT. Garuda Indonesia which performs online purchase more than one time. The sampling method used is in the research is the accidental sampling, with the sample size of 150 respondents. The analysis technique used Structural Equation Modelling (SEM) by using Analysis of Moment Structure (AMOS) program package.

## V. HYPOTHESIS TESTING

This step will discuss the model compatibility test and causality significance test. The test result using the AMOS program provided the SEM model result as in the following which showed the effect of PU and PEoU on perceived value and actual usage of technology.
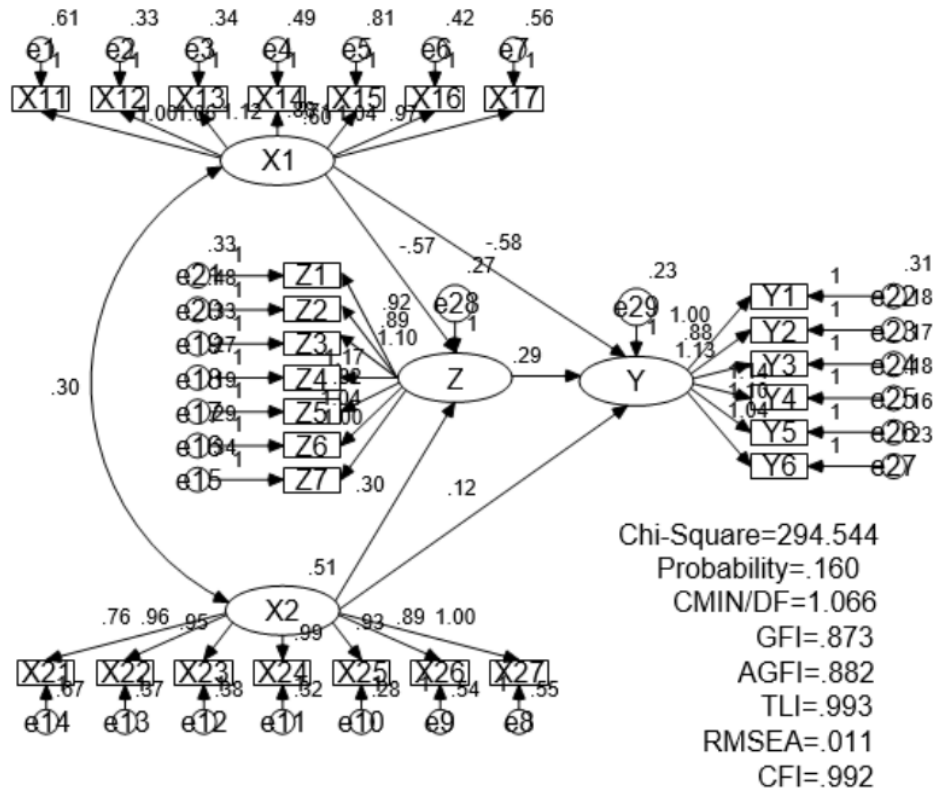


**Figure 1** SEM Analysis Result
Source: Analysis Result

## 1. Model Suitability Test (Goodness of Fit Test)

The test on the SEM model was aimed to determine the model suitability, the result of this test in this study was listed in Table 1. Based on the table, it can be concluded that from the 8 criteria used to assess the model quality has been fulfilled. That it can be stated that there was compatibility between the model and the data. Based on table 1 it can be concluded that from 8 criteria, there were 2 criteria included in the marginal category, however the model is acceptable. It referred to the opinion of Ferdinand (2002) which stated that based on the parsimony rules if most of the fit models are fulfilled then the model was considered as fit. From the various index of the goodness of fit can be concluded that the modified model proposed was fit or having a quite good compatibility.

**Table 1.** SEM Compatibility Index

| Criteria | Cut Off Value | Testing Result | Description |
|---|---|---|---|
| Chi Square | Expected to be lower than $X^2$ on df = 279 that is 341,395 | 294,544 | Good |
| Sig. Probability | ≥ 0,05 | 0,160 | Good |
| RMSEA | ≤ 0,08 | 0,011 | Good |
| GFI | ≥ 0,90 | 0,873 | Marginal |
| AGFI | ≥ 0,90 | 0,882 | Marginal |
| CMIN/DF | ≤ 2 or 3 | 1,066 | Good |
| TLI | ≥ 0,95 | 0,993 | Good |
| CFI | ≥0,95 | 0,992 | Good |

Source: Analysis Result

## 2. Causality Test

After conducting a research model compatibility test, then the next step is testing the causality developed in the research. From the compatible model, each path coefficient can be interpreted. The detail path coefficient testing was listed in the following table 2.

Table 2 Causality Test Result

| Effect | | | Estimate | S.E. | C.R. | P Value | Result |
|---|---|---|---|---|---|---|---|
| Z | <--- | X1 | 0,768 | 0,129 | 6,545 | 0,000 | Significant |
| Z | <--- | X2 | 0,533 | 0,122 | 4,681 | 0,000 | Significant |
| Y | <--- | X1 | 0,790 | 0,130 | 6,791 | 0,000 | Significant |
| Y | <--- | X2 | 0,432 | 0,125 | 2,225 | 0,080 | Non Significant |
| Y | <--- | Z | 0,892 | 0,125 | 8,223 | 0,000 | Significant |

Source: Analysis Result

Based on Table 2 it can be concluded that the path coefficient test of the PU (X1) on Perceived Value (Z) had a positive path of 0,768 with CR of 6,545 and probability (p) of 0,000 which means that PU (X1) had a significant effect on perceived value (Z). The result of path coefficient test of the PEoU effect (x2) on perceived value (z) had a positive path of 0,533 with CR of 4,681 and probability (p) of 0,000 which means that PEoU (X2) had a significant effect on perceived value (Z). The result of path coefficient test of the PU effect (X1) on actual usage of technology (Y) had a positive path of 0,790 with CR of 6,791 and probability (p) of 0,000 which means that PU (X1) had a significant effect on actual usage of technology (Y). The path coefficient test result of PEoU effect (x2) on actual usage of technology (Y) had a positive path of 0,432 with CR of 2,225 and probability (p) of 0,080 which means that PEoU (X2) had no significant effect on actual usage of technology (Y). The path coefficient test result of perceived value (Z) on actual usage of technology (Y) had a positive path of 0,892 with CR of 8,223 and probability (p) of 0,000 which means that perceived value (Z) had a significant effect on actual usage of technology (Y).

## VI. DISCUSSION

### 1. PU had a significant effect on the perceived value of PT Garuda Indonesia online service.

The regression coefficient had a positive value which indicates that both variables are in line, that is the higher PU will cause a higher perceived value. This discovery confirmed and extended the research of Yang et al. (2016) stated that there was a positive significant effect between PU on perceived value. Yu et al. (2015) also stated that PU had a significant positive effect on perceived value.

**2. PEoU had a significant effect on the perceived value of PT. Garuda Indonesia online service**

The regression coefficient had a positive value which indicates that both variables are in line, that is the higher PEoU will cause a higher perceived value. That the hypothesis which stated that PEoU had a significant effect on the perceived value of PT. Garuda was proven right. It means that a better PEoU will increase perceived value. This discovery confirmed and extend a research result which stated that there was a significant positive effect of PEoU on perceived value ( Fariman, 2014; Geri and Naor-Elaiza, 2008; Cheng *et al,* 2011). According to Kushwaha and Shankar (2013), a consumer who adopts several media from the same retail will adopt the media which offers ease for the consumer to save the time and money when the consumer performs a purchase. This research found that the consumer of PT. Garuda Indonesia online service will gain perceived value since there is a PEoU from PT. Garuda Indonesia. The relationship between PT. Garuda Indonesia and the consumer is a process which caused the consumer gained the perceived value of PT. Garuda Indonesia online site. The consumer will perceive an excellent feedback between PT. Garuda Indonesia and the consumer which is caused by the efforts of online service management of PT Garuda Indonesia in creating PEoU for the customer in their process which later on it is used in the online site of PT. Garuda Indonesia.

**3. PU had a significant effect on the actual usage of PT. Garuda Indonesia online services**

The discovery of this research confirmed and extended a research result which explained that PU had a positive and significant effect on actual usage (Venkatesh et al. 2002; Moore dan Benbasat, 1996; Shih and Huang, 2009; Karahanna et al.2006). Moore and Benbasat (1996) in predicting personal workstation usage only in the us age perception, ease of use, and compatibility significantly related to the usage. This research explained that the Actual usage benefit was affected significantly by the PU. Actual usage is the usage frequency of PT. Garuda Indonesia online service which is reported by the consumer. PU is a concept related to the benefit appraisal gained by an individual by using the online site of PT. Garuda Indonesia.

**4. PEoU had no significant effect on the actual usage of PT. Garuda Indonesia Online services**

The regression coefficient had a positive value which indicates both variables are in line but insignificant. The higher perceived ease of use will cause higher actual usage but the effect is insignificant in increasing actual usage. So that the hypothesis stated that PU had a significant effect on actual usage of the technology of PT. Garuda Indonesia cannot be proven. It means that a better PU will increase actual usage of technology insignificantly.

This discovery is not matched with previous research which stated PEoU had a significant effect on actual usage (Radner dan Rothschild, 1975; Nysveen *et al,* 2005a; Nysveen *et al,* 2005b). The research of Moore and Benbasat (1996) stated that ease perception had a significant effect related to the usage. However, this research confirmed and extended the research conducted by Karahanna and Straub (1999) stated that the relation of PEoU and actual usage is in line with the result obtained by Davis (1989), had no direct effect on the usage.

Discovery of this study is that the PU had an indirect significant effect in increasing actual usage but it is more like forming the perceived value first. Actual usage is the usage frequency and volume of PT. Garuda Indonesia online service which is reported by the consumer. PEoU related to the individual appraisal on efforts involved in the usage process of PT Garuda Indonesia online site. PEoU had an insignificant positive effect on actual usage. This is because the respondent is the consumer of PT. Garuda Indonesia who is included in the society which has been accustomed to PU on actual usage (Mathieson, 1991; Karahanna dan Straub, 1999). Mathieson (1991) explained that perceived of use had no direct effect on actual usage, but the PEoU needs to be mediated to create actual usage.

**5. The perceived value had a significant effect on the actual usage of technology**

Value and actual usage are closely related, related to the real life which brings various external factors that either support or limit certain product usage (included game) (Hamari and Nousiainen, 2015). This study explained more about the significant role of perceived value which has the biggest direct effect on actual usage but also becomes the significant mediation on the indirect effect of the PU on actual usage. Besides, the important effect of PEoU can be seen although it has no significant effect on actual usage still it has a direct and significant effect variable on perceived value and by mediating the perceived value, then the PU has the biggest indirect effect on actual usage. This referred to the explanation of Karahanna and Straub (1999) which explained that the relation of PEoU and actual usage is the indirect effect where the effect of PEoU shall be mediated by the other variables before affecting the actual usage. This caused perceived value as the mediation variable can significantly mediate the effect of PEoU.

# Lia_Lia

| | | |
|---|---|---|
| **1** | **e-journal.uajy.ac.id**<br>Internet Source | **5**% |
| **2** | **repository.wima.ac.id**<br>Internet Source | **3**% |
| **3** | Dolores M. Frías-Jamilena, Jose A. Castañeda-García, Salvador Del Barrio-García. "Self-congruity and motivations as antecedents of destination perceived value: The moderating effect of previous experience", International Journal of Tourism Research, 2019<br>Publication | **1**% |
| **4** | Yaobin Lu. "Exploring factors affecting Chinese consumers' usage of short message service for personal communication", Information Systems Journal, 03/2010<br>Publication | **1**% |
| **5** | **www.questjournals.org**<br>Internet Source | **1**% |
| **6** | Sherriff T.K. Luk, Ben S.C. Liu, Esther L.Y. Li. "Effect of multilevel trust on effort-in-use and | **1**% |

service co-design behaviour", Journal of Services Marketing, 2018
Publication

7   dspace.uphsurabaya.ac.id:8080
Internet Source                                                   1%

8   www.garuda-indonesia.com
Internet Source                                                   1%

9   Submitted to Universitas Gunadarma
Student Paper                                                     1%

10  Submitted to Brunel University
Student Paper                                                     1%

11  Submitted to RDI Distance Learning
Student Paper                                                     1%

12  Submitted to University of South Australia
Student Paper                                                     1%

13  Wang Xia. "Customer satisfaction and
subjective well-being: A study of auto
consumption", 2009 6th International
Conference on Service Systems and Service
Management, 2009                                                  1%
Publication

14  Submitted to Udayana University
Student Paper                                                     1%

15  Submitted to Universitas Kristen Satya
Wacana                                                            1%
Student Paper

16 M Igbaria. "The effects of self-efficacy on computer usage", Omega, 1995
Publication
<1 %

17 "Proceedings of the Twelfth International Conference on Management Science and Engineering Management", Springer Science and Business Media LLC, 2019
Publication
<1 %

18 Dan Zhu, Jianfeng Wang, Marina Marjanovic, Eric J. Chaney et al. "Differentiation of breast tissue types for surgical margin assessment using machine learning and polarization-sensitive optical coherence tomography", Biomedical Optics Express, 2021
Publication
<1 %

19 Debajyoti Pal, Syamal Patra. "University Students' Perception of Video-Based Learning in Times of COVID-19: A TAM/TTF Perspective", International Journal of Human–Computer Interaction, 2020
Publication
<1 %

20 Lee, S.M.. "The role of exogenous factors in technology acceptance: The case of object-oriented technology", Information & Management, 200606
Publication
<1 %

21 Nisreen Ameen, Robert Willis, Media Noori Abdullah, Mahmood Shah. "Towards the
<1 %

successful integration of e‑learning systems in higher education in Iraq: A student perspective", British Journal of Educational Technology, 2018
Publication

22  Raden Roro Lia Chairina, Raden Andi Sularso, Diana Sulianti K Tobing, Bambang Irawan. "Determinants of nurse performance in accredited Indonesian private hospitals", Problems and Perspectives in Management, 2019
Publication
<1%

23  www.journaltocs.ac.uk
Internet Source
<1%

24  www.koreascience.or.kr
Internet Source
<1%

25  Submitted to Da Yeh University
Student Paper
<1%

26  Syed Ali Raza, Nida Shah, Muhammad Ali. "Acceptance of mobile banking in Islamic banks: evidence from modified UTAUT model", Journal of Islamic Marketing, 2019
Publication
<1%

27  Zulkifli, N., R. G. Hashim, and J. Ahmad. "Information mining capabilities in Malaysian SMEs: Specific use of enterprise resource planning system", 2012 IEEE Symposium on
<1%

Business Engineering and Industrial
Applications, 2012.
Publication

28  Kyuhong Park, Chanhee Kwak, Junyeong Lee,
Jae-Hyeon Ahn. "The effect of platform
characteristics on the adoption of smart
speakers: Empirical evidence in South Korea",
Telematics and Informatics, 2018
Publication

<1 %

29  mpra.ub.uni-muenchen.de
Internet Source

<1 %

| Exclude quotes | Off | | Exclude matches | Off |
|---|---|---|---|---|
| Exclude bibliography | Off | | | |