

## ANALYSIS OF CONSUMER PREFERENCE ON CHOOSING E-COMMERCE IN INDONESIA

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**Abstract:** For people who don't have much free time to shop, they can use e-commerce. because with e-commerce we can do it online, where shopping activities can be done without having to come directly to the store. The purpose of this study is to determine consumer preferences in choosing E-Commerce in Indonesia. The research method used is a quantitative method and data collection by questionnaire. The number of samples in this study was 451 people using the non-probability sampling method. The questionnaire items were 18 statements and the measuring instrument used was a Likert scale. The analysis technique in this study is conjoint analysis. The results of this study indicate that the highest utility value is at the transfer rate is 0.170, the attribute that has the highest importance value is the speed of the delivery attribute is 20,253, and consumers such as E-Commerce use the transfer payment method, shipping costs based on total weight product, 2-4 days delivery speed, has a product warranty that can be exchanged for the same product or product at the same price, website privacy security using a data security system, products sold according to the description given, and website appearance with a design interesting website.

**Key Word:** E-Commerce, Consumer preference, Attribute, Conjoint Analysis

### INTRODUCTION

The internet provides many benefits in various fields, one of them is economics, where the internet can provide many conveniences for the community, including the ease of shopping. According to (Zulfa & Hidayati, 2018), the advantages of shopping online on E-Commerce include being practical, saving time, and a large selection of items that can be purchased. The same thing was stated by (Warayanti & Suyanto, 2015), that through online shopping channels, buyers can save time, expenses and effort. Thus, the internet is considered to be very helpful for people who have busy activities and who do not have much free time to continue shopping. Now, shopping activities can be done online through E-Commerce where shopping activities can be done anytime and anywhere without having to come directly to the store.

The results of the 2018 internet user profile behavior survey conducted by (APJII, 2019) (Association of Indonesian Internet Service Providers) showed that 0.9% of the main reasons

people use the internet are online shopping activities. This figure indicates that the existence of the online shopping style in Indonesian society can be used as a business opportunity for the E-Commerce industry in Indonesia. Very rapid technological growth is considered to create new business opportunities in the pursuit of success of a business, internet technology makes the business borderless and timeless (Widiyanto & Prasilowati, 2015).

There is intense competition between leading players of E-Commerce in Indonesia to win the hearts of consumers. In addition to winning the hearts of consumers, according to (Aisyah & Achiria, 2019), the company utilizes the use of E-Commerce to win the business competition and product sales. The same thing was said by (Maulana et al., 2015) that along with the development of the business world, now E-Commerce is a necessity to improve and win the business competition and product sales. These E-Commerce companies compete by using various methods, one of them is by providing services that

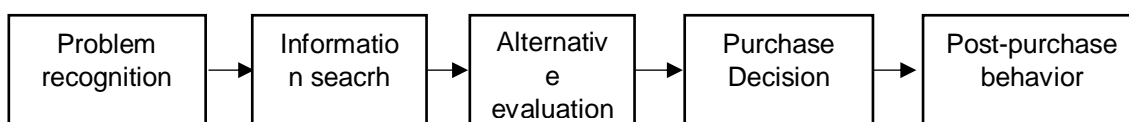
make it easy to attract people to use their E-Commerce.

The number of players in the E-Commerce industry indicates that consumers are increasingly faced with various services or so-called various attributes of each E-Commerce itself. The variety of attributes given by all E-Commerce makes the public or consumers more selective in choosing. Thus, consumers have many things to consider in choosing E-Commerce, the inherent attributes are taken into consideration by consumers to like or dislike and accept or not accept.

consumer characteristics which then influence the buying decision process and ultimately the purchasing decision.

In figure 1, there are five stages that consumers go through in the purchase decision process, namely problem recognition, information search, alternative evaluation, purchase decision, and post-purchase behavior (Kotler & Keller, 2016).

**Figure 1. Purchase Decision Process**



Source: (Kotler & Keller, 2016)

Therefore, existing competition requires companies to be able to know and understand the needs or preferences of consumers. If the company can know and understand the needs or preferences of consumers, the company can win the competition.

According to (Sunyoto, 2014), consumer behavior can be defined as the activities of individuals involved in obtaining and using goods or services, including the decision-making process in the preparation and determination of these activities. Definition of consumer behavior according to (Kotler & Keller, 2016) is the study of how individuals, groups and organizations choose, buy, use and dispose of goods, services, ideas or experiences to meet their needs and satisfy their desires.

According to (Kotler & Keller, 2016) consumer behavior models begin with marketing stimuli consisting of products and services, prices, distribution, and communication. In addition to marketing stimuli, other stimuli are consisting of economics, technology, politics, and culture that influence consumer psychology and

According to (Abdurrahman, 2015), alternative evaluation is the stage of the process of consumers making a purchasing decision using the information to evaluate alternative brands in a choice group. Meanwhile, according to (Kotler & Keller, 2016), alternative evaluation is the stage of the process of consumers making a purchasing decision using the information to evaluate alternative brands in a choice group. Meanwhile according to

According to (Puspitasari et al., 2017), consumer preferences are defined as individual tastes measured by the utility, from the attributes of various goods which will later indicate the level of consumer preference for a product offered. According to (Agustina et al., 2017), consumer preferences indicate the favorite products of consumers who come from a variety of available product choices, the level of likeness seen from one attribute of each other.

According to (Tjiptono & Diana, 2016), products include everything that provides value (value) to satisfy needs

or desires, such as physical goods, services, events, experiences, people or personal, places, property, organization, information, and ideas. According to (Setiyaningrum et al., 2015), a product is a collection of physical, psychological, service, and symbolic attributes that are created to satisfy the needs and wants of customers.

According to (Abdurrahman, 2015), product and service attributes are the benefits offered by the product or service communicated and delivered by product attributes, such as product quality, factors, style, and design. According to (Malau, 2017), product attributes are the factors that consumers consider in making decisions about purchasing a brand or product category that is attached to a product or is part of a product.

E-Commerce Attributes, that is:

#### 1. Payment Method

According to (Pratama, 2015), E-Commerce makes it easy to choose and buy goods that consumers need and to pay online that will facilitate and speed up the payment process without spending time waiting in line, carrying cash, and making other conventional payment processes.

#### 2. Shipping costs

Shipping costs represent the amount of money that consumers need to spend to pay for shipping on products that have been purchased. According to (Suzianti et al., 2015), shipping cost calculation is determined by the total weight of the product purchased, the total quantity of the product purchased, and the fixed cost or fixed cost.

#### 3. Delivery Speed

Delivery speed is the duration of time required by the seller to send products that have been purchased to the address that suits the desires of consumers. If the consumer wants the product to arrive quickly, the delivery duration will be shorter but the price will be more expensive. Conversely, if consumers do not want the product to arrive as quickly as possible, then the

duration of the shipment will not be short and the price will be cheaper.

#### 4. Product warranty

According to (Nisa, 2017), a warranty is a promise that is the obligation of producers on their products to consumers, where consumers will be compensated if the product turns out not to function as expected or promised. Guarantees can include product quality, repairs, compensation (money back or products exchanged), and so on. The guarantee itself is written and some are not written.

#### 5. Security

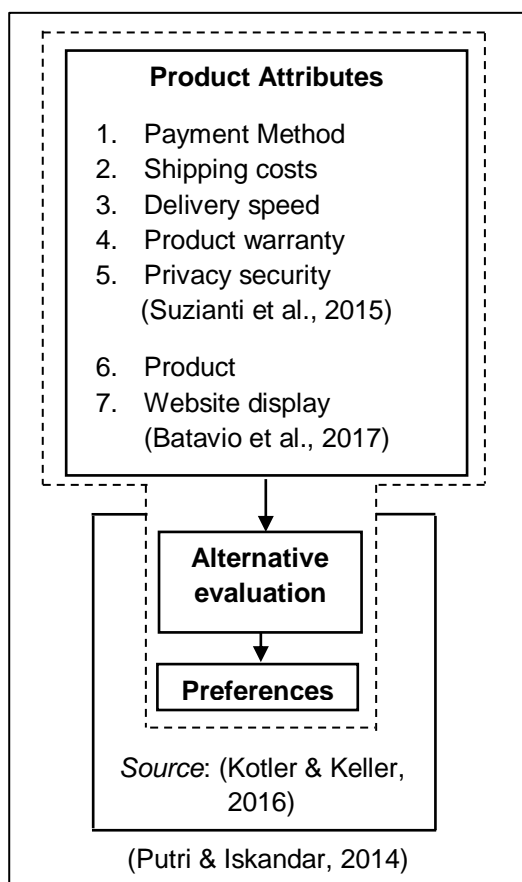
According to (Pratama, 2015) security is essential for business people, both products, services and both. Security provides comfort to users (or in this case consumers) and increases consumer trust.

#### 6. Product

According to (Maulana et al., 2015), E-Commerce uses the internet and computers with web browsers to introduce, offer, buy and sell products.

#### 7. Website Display

According to (Pratama, 2014), an E-Commerce website is a suitable media to introduce to the public at large about various products produced by a company, and the appearance or design of an E-Commerce website is a key factor in attracting consumers' attention. According to (Siagian & Cahyono, 2014), after consumers visit an E-Commerce website, various assessments will appear in the minds of consumers.



**Figure 2. Framework**

Source: Processed data (2020)

Product attributes consisting of payment methods, shipping costs, delivery speed, product warranty, privacy security, product and website appearance are evaluated by consumers by evaluating alternatives. Alternative evaluation is the stage where when consumers have passed the stage of problem recognition and information search. According to (Kotler & Keller, 2016), at the evaluation stage, consumers form preferences among brands on the set of choices and can also form intentions to buy the most

preferred brand. So, in the end, it will be known the attributes of E-Commerce by consumer preferences

## METHODS

This research uses quantitative methods with the aim of the research is descriptive. In this study, the researcher did not intervene in the data and the time of the study was cross-sectional. The population in this study is unknown, so the researcher using the Cochran formula. The calculation results show a minimum sample of 385 people. The number of samples used in this study was 451 people with the sampling technique used is non-probability sampling.

The analysis technique used is conjoint analysis. Conjoint analysis is a multivariate analysis specifically used to understand consumer preferences about the attributes of a product or service being sold (Fauzy, 2014).

In this study, there are 7 attributes and 21 levels listed in table 1, so the stimuli that are likely to appear are  $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 = 2,187$ . The amount of stimuli that are likely to appear is too large, so a reduction needs to be done. According to (Hair et al., 2014), reduction of the number of stimuli can be done using the formula:

$$\begin{aligned} \text{Minimum number of stimuli} &= \text{number of} \\ &\text{levels} - \text{number of attributes} + 1 \\ &= 21 - 7 + 1 \\ &= 15 \end{aligned}$$

From the above calculation, the minimum amount of stimuli obtained in this study is 15. In this study, researchers used SPSS with the orthogonal design method and produced 18 stimuli.

**Table 1. Attributes and Attribute Levels**

Attributes	Level number	Attribute levels
Payment Method	1	Transfer
	2	Credit card
	3	<i>Cash on delivery</i>
Shipping costs	1	Per the quantity of the product purchased
	2	According to the total weight of the product purchased
	3	<i>Fixed cost delivery</i>
Delivery speed	1	Cost-saving (economic fee):> 5 days
	2	Regular (Standard Fee): 2-4 days
	3	Express (premium fee): 1 day
Product warranty	1	Can be exchanged with the same product
	2	Can be exchanged for the same product or refund
	3	Can be exchanged for the same product or products at the same price
Privacy security	1	Company privacy policy
	2	The website uses a data security system
	3	The company cooperates with legal entities
Product	1	Complete and quality products
	2	Products according to the description given
	3	Product functions according to customer needs
Website display	1	Attractive website design
	2	Product advertisements on the website display
	3	Innovative website display

Source: (Suzianti et al., 2015) & (Batavio et al., 2017)

**RESULTS AND DISCUSSION**

In this study, data processed by SPSS produces utility values, importance values, and accuracy of predictions.

**Utility Value**

In this study, the value of utility shows the value of consumer preferences for a level of E-Commerce attributes.

The attribute level that has the highest utility value or utility value is the transfer level on the payment method attribute with a utility value of 0,170.

**Importance Value**

In this study, the importance value shows the assessment given by consumers on each attribute of E-Commerce, where if the higher the value, the attribute is increasingly important and increasingly considered by consumers in choosing E-Commerce. Conversely, if the value gets smaller then the attribute is not

important and is not considered by consumers.

The highest importance value in this study is the delivery speed attribute with an importance value of 20,253 and the lowest importance value is the website display attribute with an importance value of 11,952. This shows that as many as 451 respondents rated that the delivery speed attribute is very important in doing online shopping via E-Commerce

**Predictive Accuracy**

Predictive accuracy is measuring the accuracy of predictions that can be seen with a high and significant correlation value between estimates and actual results (Santoso, 2017).

In this study, the value of Pearson is 0,993 and the value of Kendall is 0,931. Correlation measurement data both in Pearson and Kendall results in a strong correlation because it is above 0,5. This proves that there is a high predictive accuracy or a strong

relationship between estimates and actual. This decision is guided by (Santoso, 2017), that is if the significance level  $> 0,05$  then there is no strong correlation between estimates and actual variables, and if the significance level  $< 0,05$  then there is a strong correlation between estimates and actual variables.

### Ideal combination

In this study, the ideal combination is the stimuli most preferred by consumers. The results are obtained from the sum of each utility level attribute as a whole based on the combination of stimuli assessed by 451 respondents, to produce a score of each stimulus which can then be known the most ideal combination based on consumer preferences. In the table it can be seen that the stimuli that have the highest value are 16 stimuli, thus stimuli 16 is the most ideal stimuli based on consumer preferences. The following form of stimuli 16:

**Table 2. Stimuli 16**

Attribute	Attribute level
Payment method	Transfer
Shipping costs	Based on the total weight of the product
Product warranty	Can be exchanged for the same product or products at the same price
Privacy security	The website uses a data security system
Product	Products according to the description given
Website display	Attractive website design

Source: Processed data (2020)

Table 2 shows that stimuli that contain a combination of attributes most preferred by consumers, namely E-Commerce with transfer payment methods, shipping costs based on the total weight of the product, speed of delivery with regular services (standard costs) which takes 2-4 days, have a

product warranty can be exchanged for the same product or the same price product, privacy security using a data security system, products sold according to the description provided, and have a website appearance with an attractive design.

### CONCLUSION

Based on the results of research on the analysis of consumer preferences in choosing E-commerce, can we conclude that the combination of attributes most preferred by consumers is seen from the stimuli that have the highest score. In this study, the highest score is owned by stimuli 16 with the attributes of the payment transfer method, shipping costs based on the total weight of the product, delivery speed 2-4 days, has a warranty product can be exchanged for the same product or products with the same price, website privacy security using a data security system, products sold according to the description provided, and a website appearance with attractive website design. The delivery speed attribute is the most important attribute with a value of 20.253. This shows that consumers are very concerned, pay attention and consider the speed of delivery in choosing an E-Commerce. In this study, the attribute level that has the highest utility value is the transfer level with a value of 0.170. These results indicate that consumers assume the transfer payment method as an attribute level that has a high usability value.

### REFERENCES

- Abdurrahman, N. H. (2015). *Manajemen Strategi Pemasaran* (5th ed.). Bandung: Pustaka Setia.
- Agustina, I., Sumarwan, U., & Kirbrandoko, K. (2017). Consumer Preferences and Segmentation Analysis of Bogor Culinary Tourism. *Journal of Consumer Sciences*, 2(1), 13.

- <https://doi.org/10.29244/jcs.2.1.13-24>
- Aisyah, L., & Achiria, S. (2019). Usaha Bisnis E-commerce Perspektif Ekonomi Islam (studi pada bisnis @lisdasasirangan). *Jurnal Ekonomi Dan Bisnis Islam*, 3(2), 187–200.  
<https://doi.org/10.30868/AD.V3I2.507>
- APJII. (2019). Penetrasi & Profil Perilaku Pengguna Internet Indonesia Tahun 2018. [www.apjii.or.id](http://www.apjii.or.id)
- Batavio, A. B., Amani, H., & Tripiawan, W. (2017). Preferensi Konsumen Dalam Menggunakan Layanan Website Bukalapak Dengan Metode Conjoint. *EProceedings of Engineering*, 4(2), 2813–2820.  
<http://libraryproceeding.telkomuniversity.ac.id/index.php/engineering/article/view/1215>
- Fauzy, U. (2014). Aplikasi Analisis Konjoin dengan Model Regresi Logistik dalam Mengukur Preferensi Mahasiswa dalam Memilih Handphone. *Jurnal Matematika UNAND*, 3(1), 132–139.  
<http://jmua.fmipa.unand.ac.id/index.php/jmua/article/view/120>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis* (7th ed.). United States of America: Pearson Education Limited.
- Kotler, P., & Keller, K. L. (2016). *A Framework for Marketing Management* (Global). England: Pearson Education Limited.
- Malau, H. (2017). *Manajemen Pemasaran: Teori dan Aplikasi Pemasaran Era Tradisional Sampai Era Modernisasi Global* (1st ed.). Bandung: Alfabeta.
- Maulana, S. M., Susilo, H., & Riyadi. (2015). Implementasi E-Commerce Sebagai Media Penjualan Online. *Jurnal Administrasi Bisnis*, 29(1), 1–9.  
<http://administrasibisnis.studentjournal.ub.ac.id/index.php/jab/article/view/1165/1452>
- Nisa, Z. (2017). Atribut Produk KFC di Restoran KFC Tamini Square Pinang Ranti Jakarta Timur. *Jurnal Utilitas*, 3(1), 40–49.  
<https://utilitas.uhamka.ac.id/index.php/utilitas/article/view/52>
- Pratama, R. (2014). Persepsi User terhadap Desain Website E-Commerce (Studi Pada Pengguna Website JKM Store). *Jurnal Administrasi Bisnis*, 9(1), 1–6.  
<http://administrasibisnis.studentjournal.ub.ac.id/index.php/jab/article/view/397/593>
- Pratama, I. (2015). *E-Commerce, E-Business dan Mobile Commere* (1st ed.). Bandung: Informatika Bandung.
- Puspitasari, E. D., Sarma, M., & Najib, M. (2017). Preferensi Konsumen Dan Strategi Pemasaran Produk Puree Bayam Organik Studi Kasus Di Cv. Addin Abadi Bogor. *Jurnal Teknologi Industri Pertanian*, 27(2), 209–216.  
<https://doi.org/10.24961/j.tek.ind.pert.2017.27.2.209>
- Putri, N. E., & Iskandar, D. (2014). Analisis Preferensi Konsumen dalam Penggunaan Social Messenger di Kota Bandung Tahun 2014 (Studi Kasus : Line, Kakaotalk, Wechat, Whatsapp). *Jurnal Manajemen Indonesia*, 14(2), 110.  
<https://doi.org/10.25124/jmi.v14i2.356>
- Santoso, S. (2017). *Statistik Multivariat dengan SPSS*. Jakarta: PT Elex Metia Komputindo.
- Setyaningrum, A., Udaya, J., & Efendi. (2015). *Prinsip-Prinsip Pemasaran* (1st ed.). Yogyakarta: ANDI.
- Siagian, H., & Cahyono, E. (2014). Analisis Website Quality, Trust Dan Loyalty Pelanggan Online Shop. *Jurnal Manajemen Pemasaran*, 8(2), 55–61.

- <https://doi.org/10.9744/pemasaran.8.2.55-61>
- Sunyoto, D. (2014). *Konsep Dasar Riset Pemasaran dan Perilaku Konsumen* (2nd ed.). CAPS (Center for Academic Publishing Service).
- Suzianti, A., Faradilla, N. D. P., & Anjani, S. (2015). Customer preference analysis on fashion online shops using the Kano model and conjoint analysis. *International Journal of Technology*, 6(5), 881–885. <https://doi.org/10.14716/ijtech.v6i5.1891>
- Tjiptono, F., & Diana, A. (2016). *Pemasaran (Esensi & Aplikasi)* (1st ed.). Yogyakarta: ANDI.
- Warayuanty, W., & Suyanto, A. (Telkom U. (2015). The Influence of Lifestyles and Consumers Attitudes on Product Purchasing Decision via Online Shopping in Indonesia. *European Journal of Business and Management*, 7(8), 74–80. <https://www.iiste.org/Journals/index.php/EJBM/article/view/20944>
- Widiyanto, I., & Prasilowati, S. L. (2015). Perilaku Pembelian Melalui Internet. *Jurnal Manajemen Dan Kewirausahaan*, 17(2), 109–112. <https://doi.org/10.9744/jmk.17.2.109>
- Zulfa, L., & Hidayati, R. (2018). Analisis pengaruh Persepsi Risiko, Kualitas Situs Web, Pembelian Konsumen E-Commerce Shopee di Kota Semarang. *Diponegoro Journal of Management*, 7(3), 1–11. <https://ejournal3.undip.ac.id/index.php/djom/article/view/21024>