

Adoption of Cash on Delivery Payment Method in E-commerce Shopping: A Value-based Adoption Model Approach

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Abstract

Objectives: This study examines what factors can influence adoption intention through perceived value and how much influence compatibility can have on the relationship between perceived value and adoption intention. Furthermore, through the results of this research, it is hoped that local retailers can create new services that are appropriate and can help consumers.

Design/Method/Approach: Existing scales are adapted, and the field study is conducted in seven different cities of East Java Province, Indonesia. Based on purposive sampling, 195 respondents in seven telecommunication retail outlets completed a questionnaire related to cash-on-delivery service as a payment method of Topsell. This national telecommunication retailer adopts cash on delivery as their payment method. One hundred fifty-four qualified questionnaires are eventually used for data analysis. Furthermore, this study utilizes explanatory research with quantitative research methods. The sample collection method uses a purposive sampling method.

Findings: The results show that the COD service offered by Topsell can provide technical convenience. Furthermore, compatibility can strengthen the relationship between perceived value and adoption intention.

Originality: Many studies utilize the theory of value-based adoption models, but only a few include the compatibility variable as a moderating variable. This research offers originality, especially in service innovation research. The researcher believes compatibility effectively strengthens the relationship between perceived value and adoption intention.

Practical/Policy Implications: The research results are expected to contribute ideas. This research develops the theory of the value-based adoption model. Further researchers can adopt the research model and framework. Through all the results obtained, it can provide benefits for local retailers to survive amid this tight business competition by paying attention to the attributes of the value-based adoption model and the suitability of services with community trends. It is also recommended that Topsell and other telecommunication retail companies create a friendly web so that there is a good assessment of the COD services offered to consumers.

Keywords: Value-based Adoption Model, Compatibility, Cash on Delivery

JEL Classification: O310, M310, M210



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I. Introduction

With the rapid development and growth of technology, almost all community activities require technology because technology can ease people's activities. Based on data from Statistics Indonesia, the technology sector that experienced the most significant increase was information and communication technology. This sector is proven to grow due to growth in 2019 from 9.43% to 10.58% in 2020 (Visi, 2021). Therefore, it is not surprising that there is an increase in the fulfillment needs of the Indonesian people in information and communication technology. This is supported by data obtained by the Central Statistics Agency, which states that starting from 2012-2020, there will be an increase in household computer ownership, which is 0.50% per year. In addition, the Ministry of Communication and Information also stated that cell phone users in Indonesia increased in 2019-2020 by 4.20%. (Sutarsih et al., 2021)

This increase has encouraged telecommunications retailers to compete to win their target market. However, the increase in the growth of telecommunication retail can create problems for retailers, namely intense competition. This statement is supported by data from the Central Statistics Agency, which states that from 2020 to 2021, one of the business fields most able to grow positively is the business field engaged in information and communication (Herlando, 2021).

With the growth of the business field in the field of information and communication, as well as the increasing needs of the community in this field, if the retailer can provide services that help and facilitate telecommunication retailer will still be able to survive. One of the services that can make it easy, safe, and practical things currently preferred by consumers is the Cash on Delivery (COD) service. COD is one of the payment methods in which it can serve consumers, such as when making purchases in stores directly. This is because there is a process of selling, purchasing, paying at the specified place, exchanging products, and providing information services, all of which are obtained using only the help of the internet (Halaweh, 2018). Anjum & Chai's (2020) research shows that COD is a payment method that can influence customer intentions and is prioritized in Pakistan.

In the face of competition, several telecommunications retailers, such as Erafone and Wellcomm Shop, dare to offer COD services. However, the services provided are in collaboration with E-commerce. Meanwhile, Topsell is a local telecommunications retailer that can provide COD services privately without cooperation with E-commerce. Therefore, this strategy will be able to make Topsell able to survive during competition.

The strategy currently implemented by Topsell is closely related to the Value-based Adoption (VAM) theory developed by Kim et al. (2007). It is known that in VAM theory, there is a benefits attribute (Kim et al., 2007). Kapoor et al. (2022) do not use the usefulness variable and explain that usefulness is related to the product's superiority or previous use and has the same meaning as a relative advantage. Therefore, the usefulness variable is not used in this study because the usefulness of COD is clearly to increase the advantages of the previous service and to make it easier for consumers to make purchases. Thus, it is known that this study only uses the enjoyment variable. In addition, this variable is related to affective value (Kim et al., 2007).

All variables of the sacrifices attribute are used in this study. Technicality is defined as the extent to which potential consumers can trust that the process of a system can be free from mental and physical effort (Hasan et al., 2018; Kim et al., 2007). In addition, perceived fees are also used because of obtaining products from Topsell through COD services. A fee is also required (Halaweh, 2018). Furthermore, the perceived value variable is used in this research, and the researcher considers this variable important for the mediating relationship. The VAM theory has a goal that focuses on consumer adoption intentions based on perceived value. Furthermore, research from Kim et al. (2017), Jun et al. (2018), Hasan et al. (Hasan et al., 2018), Yu et al. (2019), Lau et al. (2019), Yuen et al. (2020), and Vishwakarma et al. (2020) also states that there is a significant relationship if the value perceived by consumers is good, it can also have a good impact on adoption intention.

In addition, the researcher also believes that compatibility is something that consumers pay attention to when adopting COD services. Although not many previous studies have raised compatibility as a moderating variable, researchers believe that in the context of COD adoption, the relationship between perceived value and adoption intention is much stronger if there is compatibility. The COD service is the Indonesian people's most preferred and frequently used payment method (Lestari, 2021).

Using the Unified Theory of Acceptance and Use of Technology (UTAUT), Faqih's research (2016) on students' behavior toward the implementation of e-learning explains that compatibility has a positive impact when it becomes a moderator variable between perceived value and behavioral intention. This research incorporates compatibility as an important moderating variable and provides effective results when developed into the VAM theory framework. Prior researchers integrate the VAM theory's attributes with variety seeking (Kim et al., 2017; Vishwakarma et al., 2020; Yu et al., 2019), innovation resistance (Kim et al., 2017; Yu et al., 2019), and perceived risk (Jun et al., 2018; Kim et al., 2017; Vishwakarma et al., 2020). However, researchers still need to see that compatibility also has a vital role in moderating the relationship between perceived value and adoption intention of a service created by a business.

Based on all these explanations, the researcher builds a new research concept to test and explain how enjoyment, technicality, and perceived fee influence adoption intention through perceived value. In addition, the researcher also wants to examine and explain how compatibility can moderate the relationship between perceived value and adoption intentions. Based on the novelty of the topic developed in VAM theory, this research is essential and can contribute to

creating marketing, business, and innovation science. Especially in the development of new variables in VAM theory. Furthermore, through the results of this research, it is hoped that local retailers can create new services that are appropriate and can help consumers. If all the services provided can be appropriately adopted, local retailers can win the competition with retailers already operating nationally.

The following section contains a literature review of the construct of each variable used and which builds the hypothesis. Then, the method section explains that this research uses explanatory and quantitative methods. Furthermore, their results and discussion section which explains the results and discussion of hypothesis testing. Finally, in the last, there is a conclusion that contains the findings of the results, benefits, limitations of the study, and suggestions for further research.

2. Literature Review and Hypotheses Development

Value-based adoption model (VAM) is the model proposed by Kim et al. (H. W. Kim et al., 2007). VAM is an evolution of the Technology Acceptance Model (TAM), which was also developed by Kim et al. (H. W. Kim et al., 2007) because TAM is considered to explain the intended use only based on usability and convenience. Through this, it is necessary to look at each benefit and sacrifice as a major factor in explaining the perceived value of use or adoption intentions, a development known as VAM. In VAM, several factors can influence consumers' willingness to adopt, including benefits, sacrifices, and perceived value (Kim et al., 2007). Kim et al. (Y. Kim et al., 2017) state that VAM is related to consumers' overall assessment of the need for benefits that are far better than the sacrifices that must be made.

The Theory of Acceptance and Use of Technology (UTAUT) is one of the theories whose model was developed for technology acceptance. This theory was developed by Venkatesh et al. (2003) with a goal devoted to the intention to use information systems. UTAUT is a development of the TAM theory, which includes the addition of user behavior. The UTAUT model states four fundamental constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions. Therefore, it is known that the VAM and UTAUT theories are different. This research differs from the research from Faqih (Faqih, 2016) because the researcher wants to assess the intention to use a new service based on the perceived value in VAM theory and the combination with the compatibility variable.

Relationship between Enjoyment and Perceived Value

Enjoyment is part of intrinsic motivation (Li & Chen, 2019). However, inherent reason requires someone's involvement in it because this motivation is more directed at the positive response, namely one's behavioral intentions and attitudes (Taylor et al., 2018; Zhao & Renard, 2018). In addition, Kim et al. (H. W. Kim et al., 2007) stated that enjoyment is an attribute that can determine how enjoyable the product, service, or technology created for its users is. Therefore, enjoyment perceived by consumers is an assessment of the extent to which the product, service, or technology can be considered enjoyable in its use (Disztinger et al., 2017).

In feeling how pleasant and good the enjoyment is in using a product or service, it is necessary to have a touch that can attract someone personally without any external influence. This interpretation is related to affective value (Kim et al., 2007). Lau et al. (Lau et al., 2019) explain that enjoyment is a pleasure and joy obtained from using technology regardless of the consequences of existing use. Meanwhile, in this study, enjoyment is more aimed at the enjoyment and satisfaction of the service offered.

Halaweh (Halaweh, 2018) states that COD is a payment method whose product selection is similar to buying at a store and is much easier because it only requires internet assistance. If COD can provide pleasure, then that pleasure can affect COD ratings. This explanation is by the VAM theory, which states that a product or service must be able to pleasure that individuals can feel so they can assess perceived value (Kim et al., 2007).

This explanation is also supported by the research results of Kim et al. (Y. Kim et al., 2017) and Vishwakarma et al. (Vishwakarma et al., 2020) showed that perceived benefits in which the enjoyment attribute had a significant effect on perceived value. Both studies examine the enjoyment of technology. In addition, the study of self-customization service adoption conducted by Yu et al. (Yu et al., 2019) shows a powerful positive influence when enjoyment affects perceived value in its use.

HI: Enjoyment has a positive effect on Perceived Value

Relationship between Technicality and Perceived Value

A sacrifice issued by humans is divided into two, namely non-monetary and monetary. Non-monetary sacrifices are more directed at the effort and time spent by a person to obtain a product (Kim et al., 2017). Yu et al. (Yu et al., 2019) explain that technicality is a sacrifice that can affect psychology in providing perceived value during use. Kim et al. (H. W. Kim et al., 2007) explained that technicality is an attribute that can be used to assess how reliable a system is, the ease with which a system is used, and how efficiently a system has been created. In addition, technicality is an attribute used to determine the service process's complexity (Kim et al., 2017). Lau et al. (Lau et al., 2019) state that in augmented reality research, technicality variables include engagement, learning, audio-visual requirements, and

kinesthetic appeal. In this study, the technicality variable is used because in COD, getting the product into consumers' hands also requires a process.

The technicality variable is also defined as the extent to which a technology is considered to have technical excellence and reliability in providing a service (Hasan et al., 2018; Kim et al., 2007). COD is expected to have easy technical use with terms and conditions that are easy to understand and help (Halaweh, 2018). The more accessible and reliable the COD process, the more able to get a good consumer assessment because of the excellent process or technical use. Lau et al. (Lau et al., 2019), Yu et al. (Yu et al., 2019), and Hasan et al. (Hasan et al., 2018) explain that there is a significant positive effect when technicality affects perceived value. COD services can provide a much simpler and easier process for online purchases because they do not require electronic payment resources (Anjum & Chai, 2020).

H2: Technicality has a positive effect on Perceived Value

Relationship between Perceived Fee and Perceived Value

A perceived fee is a component of sacrifice that can be used to show the perception of the accurate fee of a product or service. Fees are divided into monetary and non-monetary (Kim et al., 2017). The perceived fee is the internalization of the objective selling price of a service or product. Furthermore, the perceived fee is to determine how reasonable and affordable the fees incurred are with the benefits obtained (Hasan et al., 2018). Companies usually do not charge their customers a COD fee, and most offer free shipping. In covering all these prices, the trick is commonly to increase the selling price of the products offered so that the price is still within reasonable limits (Halaweh, 2018).

A person's psychology is strongly influenced by the price offered. Therefore, COD is expected to provide a price that follows the benefits obtained. If the price follows the benefits or advantages it offers, it will affect the value perceived by consumers. This explanation follows the VAM theory from Kim et al. (H. W. Kim et al., 2007).

Wibowo et al. (2020) also explain a positive and significant effect when perceived fees affect perceived value. Furthermore, in the research of Hasan et al. (Hasan et al., 2018), it is stated that there is a solid relationship between perceived fees and perceived value. This explanation supports the use of the perceived fee variable in this study, and the lower the price consumers must pay, they will be able to assess the value they have felt.

H3: Perceived Fee has a positive effect on Perceived Value

Relationship between Perceived Value and COD Adoption Intention

According to Kim et al. (H. W. Kim et al., 2007), perceived value is the consumer's overall perception of a product or technology based on the benefits and sacrifices resulting from adopting or using it. Perceived value is the value received by an individual in return for what has been spent to obtain and utilize the product (Al-Debei et al., 2022; Kapoor et al., 2022). Perceived value also reflects a sense of pleasure related to the expected value of the benefits obtained and the sacrifices incurred (Hirata, 2019). According to Yuen et al. (Yuen et al., 2020), perceived value theory is superior to market alternatives owned by a product or service. Through the previous explanation, the use of services is also closely related to perceived value. Therefore, in creating new services, one must also prepare for more significant benefits than the sacrifices incurred to achieve good value consumers can feel.

Li & Chen (Li & Chen, 2019) explain that a person's intention to use a product or service is determined by the intrinsic and extrinsic motivation they get. For example, adopting innovation refers to the consumer's decision to take full advantage of the new offering or innovation manifested by adoption intention (Heidenreich et al., 2017). In marketing research, purchase intention is usually considered the final step of buying behavior and acts as a predictor (Konietzny et al., 2018). Therefore, this new service research can be re-conceptualized as adoption intention to determine how much someone is interested in adopting or using COD services.

Halaweh's research (Halaweh, 2018) explains that in using COD, consumers first assess the benefits or benefits obtained with the risks they face. In achieving the adoption of COD, in this research, it is necessary to have a perceived value because COD is very dependent on the consumer's assessment of the benefits and sacrifices consumers feel. Courier (2020) strives always to provide the best COD service so that consumers get value-added services.

Kapoor et al. (Kapoor et al., 2022) explain that perceived value is a fundamental dimension that can increase one's intentions. The results of the study by Kim et al. (Y. Kim et al., 2017), Jun et al. (Jun et al., 2018), Yu et al. (Yu et al., 2019), and Vishwakarma et al. (Vishwakarma et al., 2020) explained that significantly perceived value was able to have a positive influence on adoption intention. In this study, researchers believe that service can also provide a good value on perceived value in increasing a person's adoption intention.

H4: Perceived Value has a significant influence on Adoption Intention

Compatibility Moderates between Perceived Value and COD Adoption Intention

Compatibility is one of the innovation attributes of the diffusion of innovation theory. Compatibility explains that innovation must be consistent with existing norms and values, and consumers' past experiences are consistent with the needs of potential adopters (Rogers, 2003). Compatibility has an innovation orientation based on the requirements and beliefs of those who use it. That is because compatibility is an attribute based on consumer understanding, standards,

and beliefs to adopt an innovation. Kaur et al. (2020) and Al-Debei et al. (Al-Debei et al., 2022) explain that the services offered to consumers also require variety, value, compatibility, flexibility, and the ability to provide support services.

In the context of services, researchers see that compatibility is crucial in assessing the suitability of services with existing experiences and lifestyles. However, very few studies still use compatibility as a moderating variable to determine the intention to adopt a new service with a builder variable that comes from VAM. Researchers assume that more than a good assessment of perceived value is needed if the services offered are by the community's lifestyle.

Research by Jun et al. (Jun et al., 2018) and Yuen et al. (Yuen et al., 2020) describe compatibility as the level of conformity of a product or technology with existing trends to always follow the development of the lifestyle of its users. In addition, research by Mensah & Mi (2019) states that this compatibility is used as an antecedent of consumer-selected usage intentions and sustainable behavior. Faqih (Faqih, 2016) raised compatibility as a moderator for conducting investigations on e-learning adoption. The variables that build perceived value are the quality of services that can be provided by e-learning. Compatibility is also essential in adopting new services because people choose services that suit their lifestyle or are according to existing trends, especially for COD services. In this research, the researcher argues that for the perceived value to be more vital in determining adoption intentions, it is necessary to have a compatibility variable.

H5: Compatibility moderates the relationship between Perceived Value and Adoption Intention

Perceived Value Mediates the Relationship between Enjoyment, Technicality, and Perceived Fee on Adoption Intention

Research by Jun et al. (Jun et al., 2018) states that perceived value is the number of benefits an individual can enjoy through a product or service and the cost of using it. Research by Lau et al. (Lau et al., 2019) and Wibowo et al. (Wibowo et al., 2020) shows that the perceived value variable is a significant mediating variable in the context of adoption intention research. Previous research also explained that perceived value could have a powerful positive impact on the intention to use. Through all of these explanations, it can be seen that in using COD services, consumers pay attention to every benefit and sacrifice that is felt to assess the perceived value. Furthermore, the perceived value will also positively influence the adoption of COD.

H6: Enjoyment, technicality, and perceived fee significantly influence adoption intention through perceived value

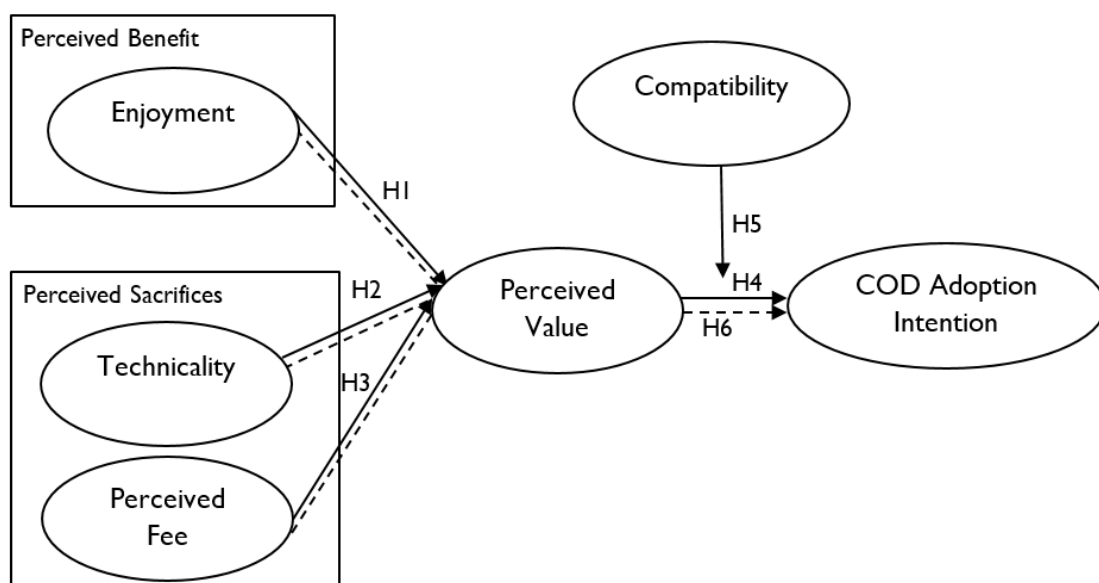


Figure 1. Hypothesis Model

3. Method

This study aims to explain the relationship between one variable and another. Therefore, this study uses explanatory research. Sugiyono (2017) explains that explanatory research is research that can describe the position of each variable and examine the relationship between the variables used. This study uses quantitative research methods and uses social media such as Facebook, Instagram, Telegram, and Twitter to distribute questionnaires. Social media is used to reach Topsell consumers in Indonesia.

A particular questionnaire is aimed at Topsell COD users, so it is distributed to social media followers owned by Topsell. Furthermore, it is also distributed on Telegram to the COD service user group. Maybe from the telegram group, there are COD Topsell service users. The study was conducted during the Covid-19 pandemic. Researchers

believe that during the Covid-19 pandemic, the community can be helped by using COD services to buy telecommunications equipment that supports their activities. Furthermore, the research focused on Topsell's COD service because Topsell is a telecommunication retailer who dares to create COD services personally without any cooperation with third parties. Topsell is also a local company that dares to develop new ideas in competing with national companies.

In this study, the number of samples was determined using the sample calculation from Ferdinand (2014), namely the determination of the optimal number of models ranging from 5-10 times the number of indicators. It is okay to choose any multiplication between 5 and 10, and if the results are not suitable, it can be added up to a multiplication of 10. The researcher decided to start choosing a multiplication of 7 because the number is the middle value from 5 to 10, not too small or too large, so an example of $7 \times 22 = 154$ respondents is needed.

The sample collection method used a purposive sampling method. The researchers decided to use this technique to collect the characteristics of people who purchased Topsell products through COD payments with at least one use of COD services with a minimum age of 17 years. Hurlock (2009) explains that individuals aged 17 years are considered mature and mature in the eyes of the law. The distribution of the questionnaire was done online with 7 Likert scales. According to Joshi et al. (2015), researchers can use seven scales so that the categories in a questionnaire can be more specific. In addition, using seven scales is also adopted by researchers from Kim et al. (Y. Kim et al., 2017) and Casidy et al. (2019).

Table 1. Variable Operational Definition

Variable	Operational Definition	Variable Measurement	Resource
Enjoyment	The extent to which COD services can provide comfort and pleasure.	1. Enjoy interacting with COD services 2. Happy to use COD service 3. COD brings much fun 4. COD doesn't make you bored	Hasan et al., 2018
	The extent to which COD services can provide convenience for users and how reliable COD is in serving purchases from consumers' homes.	1. COD service is easy to use 2. COD can be connected instantly 3. There is a fast response to the COD service 4. There is a service of choice of place and time 5. COD system can be consistent	Hasan et al., 2018
Perceived Fee	How reasonable and affordable are the costs incurred when using COD services are.	1. The costs incurred are affordable 2. The usage fee is still within reasonable limits 3. Happy with the cost of using the COD service	Hasan et al., 2018
	The extent to which innovations and COD services can provide benefits that match the customer's sacrifices or are even far greater than the sacrifices that must be incurred.	1. COD service costs are more efficient 2. The use of COD services is more beneficial than the effort expended 3. The use of COD services is more valuable than the time used to come to the store 4. Topsell COD service can be useful	Hasan et al., 2018
Compatibility	The extent to which COD services can be consistent with the values, lifestyle, and experiences of someone who has done instant shopping only from home.	1. COD service fits the consumer's lifestyle 2. Likes to make purchases through the COD service 3. Prefer using COD services over other payments	Hasan et al., 2018
Adoption Intention	Adoption intention measures the extent	1. Consider taking advantage of the COD service	Casidy et al., 2019

to which COD services can be accepted or adopted by users as new services that can provide benefits.

2. Recommend COD service
3. Use the COD service for your next purchase

4. Results and Discussion

4.1 Description of Respondent's Characteristics

From the 154 respondents obtained, the users of COD services for purchasing telecommunications equipment in this study are dominated by female consumers (113 respondents or 73.4%). On the other hand, respondents aged 22-26 were overwhelmed, with 78 respondents (50.6%). Furthermore, the respondents in this study were dominated by high school educational background (68 respondents or 44.2%), and the activities currently occupied were defeated by those who were students (78 respondents or 50.6%).

The income of the respondents is dominated by income < Rp 2,000,000 (83 respondents or 53.9%). This still makes sense because this research is focused on the COD service developed by Topsell, and the price range offered for its products starts with prices below IDR 2,000,000. In addition, the COD service also provides many promos and cashback for consumers (Topsell Raharja Indonesia, 2022).

Table 2. Respondent Characteristics

		Frequency	%
Age	17-21	58	37.7
	22-26	78	50.6
	27-31	6	3.9
	32-36	2	1.3
	37-41	4	2.6
	42-46	4	2.6
	47-51	2	1.3
	>51	0	0
	Total	154	100
Gender	Male	41	26.6
	Female	113	73.4
	Total	154	100
Education Background	High school/equivalent	68	44.2
	Diploma	13	8.4
	Undergraduate	65	42.2
	Postgraduate	4	2.6
	Other	4	2.6
	Total	154	100
Activity	Students	78	50.6
	Government employees	6	3.9
	Private employees	32	20.8
	Soldier/Police	0	0
	Entrepreneur	12	7.8
	Other	26	16.9
	Total	154	100

Monthly Income (IDR)		
<2,000,000	83	53.9
2,000,000 – 4,000,000	38	24.7
4,000,001 – 6,000,000	23	14.9
>6,000,001	10	6.5
Total	154	100

4.2 Validity and Reliability Test Results

In this research, the validity and reliability tests were conducted on 30 respondents from the pilot test. Furthermore, it is known that all variable items show the entire value of r value $>$ r table with a significance value of $<$ 0.05. According to Sekaran & Bougie (2017), if in the calculation of validity, it is found that the value of r value $>$ r table and a significance value of $<$ 0.05 is found, then the research results can be said to be valid, and vice versa.

Hair et al. (2021) explain that if items have a loading factor $>$ 0.7 and the Average Variance Extracted (AVE) value is $>$ 0.5, it means that all indicators of each construct are valid. Table 3 shows that the convergent validity test has been fulfilled. On average, the variance value explained by each indicator contained in each tested construct is greater than the error value in that construct. Therefore, all existing indicators can explain the construct compared to other factors not measured in this research.

According to Sekaran & Bougie (Sekaran & Bougie, 2017), based on Chronbach's Alpha, an item can be reliable if the coefficient value exceeds 0.6. In the reliability test conducted by researchers, it can be seen that all instruments have a reliability coefficient value $>$ 0.6. Therefore, all items in this research are reliable. The results of this validity and reliability test can be seen in table 3.

Table 3. Validity and Reliability Test

Variable	r value	Sig. ($<$ 0.05)	r table	Outer loading	AVE	Reliability Coefficient
Enjoyment					0.773	0.782
EN 1	0.768	0.000	0,361	0.789		
EN 2	0.679	0.000	0,361	0.762		
EN 3	0.826	0.000	0,361	0.762		
EN 4	0.833	0.000	0,361	0.778		
Technicality					0.804	0.863
TE 1	0.840	0.000	0,361	0.873		
TE 2	0.785	0.000	0,361	0.802		
TE 3	0.903	0.000	0,361	0.904		
TE 4	0.734	0.000	0,361	0.714		
TE 5	0.759	0.000	0,361	0.729		
Perceived Fee					0.877	0.852
PF 1	0.864	0.000	0,361	0.846		
PF 2	0.888	0.000	0,361	0.913		
PF 3	0.883	0.000	0,361	0.871		
Perceived Value					0.828	0.847
PV 1	0.787	0.000	0,361	0.739		
PV 2	0.909	0.000	0,361	0.866		
PV 3	0.826	0.000	0,361	0.860		
PV 4	0.793	0.000	0,361	0.848		
Adoption Intention					0.922	0.910
AI 1	0.917	0.000	0,361	0.917		
AI 2	0.913	0.000	0,361	0.916		
AI 3	0.934	0.000	0,361	0.932		
Compatibility					0.887	0.866
CO 1	0.952	0.000	0,361	0.941		
CO 2	0.896	0.000	0,361	0.854		
CO 3	0.813	0.000	0,361	0.865		

Note: EN= Enjoyment, TE= Technicality, PF= Perceived Fee, PV= Perceived Value, AI= Adoption Intention, CO= Compatibility

Hair et al. (Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, 2021) explained that the discriminant validity test could use the Heterotrait-Monotrait Ratio value to determine whether the construct has adequate discriminant. The HTMT value should be $<$ 0.9 to ensure discriminant validity between the two reflective constructs. Therefore, it can be

seen in table 4 that the Heterotrait-Monotrait Ratio value of each construct is <0.9 , and it is stated that all constructs are valid in this test.

Table 4. Discriminant Validity Test

	AI	CO	PF	PV	EN	TE
AI						
CO	0.553					
PF	0.705	0.538				
PV	0.710	0.516	0.619			
EN	0.645	0.439	0.690	0.611		
TE	0.736	0.438	0.745	0.642	0.707	

Note: AI= Adoption Intention, CO= Compatibility, PF= Perceived Fee, PV= Perceived Value, EN= Enjoyment, TE= Technicality

4.3 Hypothesis Test Results

We are testing the hypothesis in this study using the t-test. The t-test helps individually determine the independent variable's influence on the dependent variable. Before the test, normality and multicollinearity tests must be carried out first. The path analysis test shows that there are two normality tests. The first residual test is 0.71, and the second residual test is 0.89. Both residual tests have results > 0.05 , so in this research, a path analysis test can be carried out because it has a normality value > 0.05 .

In addition, a multicollinearity test is also needed. This study's multicollinearity test can be seen from tolerance and VIF. The data processing results can be seen in table 5. The table shows that all tolerance values have results > 0.1 , and all VIF values have results < 10 . Therefore, in this research, there was no multicollinearity.

The hypothesis in the study can be accepted if the significant value of $t < 0.05$. Furthermore, the idea will be rejected if the considerable result of $t > 0.05$. In addition, it can also be seen from the value of the t value and the t table. The proposed hypothesis can be accepted if the value of t value $> t$ table. The idea will be rejected if the t value $< t$ table.

In table 5, the relationship between EN and PV has a t value of 3.001, which is > 1.65521 . Furthermore, the p-value obtained is < 0.005 , which is 0.003. Therefore, EN can affect PV positively and significantly. Therefore, H1 in this study is acceptable.

TE has a significant positive effect on PV, and H2 can be accepted. That can be seen from the results of the t value > 1.65521 . The results obtained are 4.236. Furthermore, the p-value shows the result of 0.000, which means < 0.05 . In addition, the results show that TE is the most vital variable in influencing PV.

Then, the relationship between PF and PV also shows a result that has a positive and significant effect, then H3 can be accepted. These results are known from the t value, which shows results > 1.65521 , which is 3.018. Furthermore, it is also known that the p-value of the relationship between PF to PV is 0.000, which means < 0.005 .

In addition, PV also has a positive and significant effect on AI. Even the influence is powerful. It is known that the t value is 13.401, which means > 1.65521 . It is also known that the p-value shows the result < 0.005 , which is 0.000. H4 can be accepted, and this solid result shows that the value perceived by consumers is an important variable influencing consumers to adopt new services.

Table 5. Hypothesis Test Results (Path Analysis)

Hypothesis	Correlation	β	t value (> 1.65521)	p-value (< 0.05)	Tolerance	VIF	Result
H1	EN \rightarrow PV	0.248	3.001	0.003	0.362	2.765	ACC
H2	TE \rightarrow PV	0.372	4.236	0.000	0.320	3.127	ACC
H3	PF \rightarrow PV	0.246	3.018	0.003	0.372	2.6791	ACC
H4	PV \rightarrow AI	0.736	13.401	0.000	0.927	1.079	ACC

Before conducting the moderation test, it is necessary to test for normality and multicollinearity. After entering the compatibility variable as a moderating variable, the normality in the study showed a result of 0.127. These results show > 0.05 , and this study meets the requirements for normal distribution. Furthermore, table 6 shows that after the inclusion of the moderating variable, the tolerance result is > 0.1 , and the VIF value is < 10 . Therefore, the moderation test can be carried out because this study is normally distributed, and there is no multicollinearity.

The results of the moderator analysis can be seen in table 6, and the table shows that H5 in this study can be accepted. That explanation is supported by the p-value of the moderating variable, which shows results < 0.05 . Besides that, it can also be seen that there is a much larger adjusted R2 value. Therefore, it can be interpreted that CO can strengthen the relationship between PV to AI.

Table 6. Moderated Regression Analysis Result

	t value	p-value	R ²	Tolerance	VIF
PV → AI	13.401	0.000	0.542	0.927	1.079
Moderate	14.648	0.000	0.774	0.675	1.482

The power of the independent variable causes a direct effect on the dependent variable without any intermediary other variables. Meanwhile, the indirect effect is caused by a relationship mediated by the mediating variable. The results of the indirect effect are obtained by multiplying the first model's path coefficient with the second model's path coefficient. If the results of direct and indirect impacts have a path coefficient value > 0.05, it can be concluded that these variables have a significant direct and indirect effect (Solimun, 2002). Therefore, based on table 7, it can be seen that all the results of the indirect effect show that H6 is acceptable.

Table 7. Results of Direct and Indirect Influences

Direct Influences			Indirect Influences		
Variable Effect	Result	Description	Variable Effect	Result	Description
EN → PV	0.248	Significant	EN → PV → AI	$0.248 \times 0.736 = 0.183$	Significant
TE → PV	0.372	Significant	TE → PV → AI	$0.372 \times 0.736 = 0.274$	Significant
PF → PV	0.246	Significant	PF → PV → AI	$0.246 \times 0.736 = 0.181$	Significant
PV → AI	0.736	Significant			

4.5 Discussion

This research aims to test how capable service innovations are of winning telecommunication retailers in market competition. Therefore, as researchers, we see how interested consumers are in adopting the new service from the consumer's perspective. This research shows that this COD service is highly favored by those aged 22-26 years (generation Z). That is supported because the method of collecting data is through social media, and at that age, they have a very close life with social media. In addition, social media for generation Z has a much more significant influence than when it affects generation Y, significantly influencing purchasing decisions (Accenture, 2017). Therefore, the COD service, closely related to technology, is a service that helps Generation Z and is very suitable for their lives.

Furthermore, the results obtained also state that COD services are services that are of interest to those who are students. The number can see this of respondents who currently have student activities. The student is an individual who primarily has a young soul who always wants to try new things and likes practical stuff. That is supported by the sensation-seeking theory proposed by Zuckerman (1980), where sensation-seeking/adventure peaks until the age of 20 years. Therefore, COD can provide practicality to meet needs that support their learning activities or buy products to satisfy their desires.

Regarding hypothesis testing, all of the proposed hypotheses show that they can be accepted because of the significant results. Therefore, H1 is acceptable because enjoyment can affect perceived value positively. These results show that the happier consumers use COD, the more perceived value will increase. Rahman et al. (2018) explain that there is a fact that the more often consumers visit web stores and the more often consumers are involved in search engines, the more pleasure is felt and will lead to consumer intentions to use the service. COD is closely related to online shopping because this service targets those who do not shop directly at the store, so retailers must be able to provide a pleasant display and service. Like Topsell, the COD service offer applies to a web store developed with a pleasing and easy-to-understand interface. Therefore, to win the competition, telecommunication equipment retailers must be able to create service innovations that can provide pleasure and comfort that consumers can feel. This finding is in line with the research of Vishwakarma et al. (Vishwakarma et al., 2020), Yu et al. (Yu et al., 2019), and Kim et al. (Y. Kim et al., 2017), which state that enjoyment has a positive and significant effect on perceived value.

The results of this study indicate that H2 can be accepted because technicality can provide a robust and significant positive influence on perceived value. Therefore, the respondents are very concerned about the technicality contained in COD services in providing a good perception of value. COD Topsell is proven to provide convenience in every process of using the services offered, such as using only smartphones in ordering and product selection and an obvious ordering menu for COD users on their shopping web. The findings in this study are in line with the results of research from Lau et al. (Lau et al., 2019), Yu et al. (Yu et al., 2019), and Hasan et al. (Hasan et al., 2018), which explain that there is a positive and significant influence when technicality affects perceived value. Meanwhile, the study of Kim et al. (Y. Kim et al., 2017) showed a significant negative effect. The difference in results with previous studies is due to differences in the use of research indicators. In this study, the technicality variable in question is the level of convenience of COD services, while in Kim et al. (Y. Kim et al., 2017), the technicality used is the difficulty level.

The submission of H3 in the study is also acceptable. The study results show that the perceived fee positively and significantly affects perceived value. From these results, it can be explained that the more appropriate the price

offered with the benefits that consumers can receive, the more the service can increase the perceived value for consumers. Therefore, the cost of obtaining COD services is still within reasonable limits in this study. Furthermore, the fairness offered is strongly supported by the free delivery of goods for Topsell consumers who use the COD service. This assumption is by the explanation by Halaweh (Halaweh, 2018). Halaweh (Halaweh, 2018) explains that the cost of COD services will usually be charged to the cost of the product so that retailers can offer free shipping to their consumers. Based on the results found in this study, it is known that there are similarities with the results of Hasan et al. (Hasan et al., 2018) and Wibowo et al. (Wibowo et al., 2020), which explains that there is a positive and significant relationship between perceived fees and perceived value. However, these results differ from the research of Kim et al. (Y. Kim et al., 2017). The results show a negative and significant effect between perceived fees and value. The difference in the results is due to a different focus on the proposed valuation indicators because this study focuses on the level of price affordability. In contrast, the study of Kim et al. (Y. Kim et al., 2017) focused on high price levels.

The test results H4 were also accepted in this study. That is supported by the positive and significant results when perceived value affects adoption intention. Furthermore, the results of this study also show that H6 is acceptable. The results can explain that perceived value is an important mediating variable for COD services because COD will be assumed if the perceived value indicates a benefit value much greater than the assessment of the sacrifices incurred. A significant indirect effect on each variable also supports the mediation relationship. That also supports that COD can provide fun, technical convenience, and affordable prices according to the benefits obtained. The findings in this study are in line with the results of research by Lau et al. (Lau et al., 2019) and Wibowo et al. (Wibowo et al., 2020), which state that there is a positive and significant influence when perceived value affects adoption. It is even explained that perceived value is an essential mediating variable influencing adoption intention, and this explanation follows the results of research from Wibowo et al. (Wibowo et al., 2020).

Then lastly, for testing H5, it is shown that the hypothesis can also be accepted. The compatibility variable can moderate the relationship between perceived value and adoption intention. The study results can show that COD service users will feel more value and tend to adopt COD services when there is a good match between the perceived value of COD and user needs. Therefore, it can be seen that Topsell's COD is proven to conform with the lifestyle of its users in making purchases, where respondents prefer to make purchases using the COD payment method. This statement is strongly supported by statistical data, which explains that in making purchases, Indonesian people prefer to use the COD payment method (Lestari, 2021). Research conducted by Faqih (Faqih, 2016) supports this study's results. Still, the perceived value builder variable is focused on service quality, and the research examines behavioral intention to use e-learning.

5. Conclusion

This research tested the relationship between enjoyment, technicality, and perceived fee on perceived value and how it impacts adoption intention. Furthermore, research is conducted on how compatibility moderates the relationship between perceived value and adoption intention. This research was conducted amid telecommunication retail competition that continues to grow. Finally, this research aims to analyze how well COD service innovations help Topsell attract consumers to adopt COD so that more consumers buy and help their businesses survive.

All the hypotheses proposed in this research can be accepted based on all the research results obtained. Furthermore, this research shows that the perceived value variable is an important variable that can mediate the relationship between enjoyment, technicality, and perceived fee on adoption intention. However, technicality is the independent variable that strongly influences the perceived value. These results show that the COD service offered by Topsell can provide technical convenience. Therefore, telecommunications retailers must be able to provide comfort. This research can prove that with the number of telecommunication retailers emerging to win the target market, the first thing that attracts consumers to adopt the services created is the technical ease of use.

Although technicality is the most substantial variable in influencing perceived value, the results of this research can prove that COD services offered by telecommunication retailers must also be able to provide enjoyment and pleasure in using COD services for purchasing a product. In addition, the COD service created must also be able to have a reasonable price for its use. It can also be concluded that the respondents in this study were familiar with and accustomed to using COD services as a payment method to get the desired product. Therefore, compatibility can strengthen the relationship between perceived value and adoption intention. Furthermore, it can also be concluded that COD services can encourage someone who adopts to be able to recommend the service to others. The results of this moderation are new findings in the context of COD service adoption, and previously, this relationship was rarely studied.

The results of the research that have been obtained are expected to provide benefits and contributions of thoughts and theories in the field of marketing and innovation, especially on the theory or concept of VAM and one's intention to adopt new services. Future researchers can also adopt the development of research models by adding new variables. All the results obtained can benefit local retailers to survive during this intense business competition. Therefore, it is also recommended for Topsell, and other telecommunication retail companies create a friendly web so that there is a good assessment of the COD services offered to consumers.

This study has limitations, where this study did not examine the differences in interest in adopting COD services between men and women. In addition, the selected object is also too small because it is only focused on Topsell. For future research, knowing which gender is more interested in COD services can help companies create the right services and offerings focused on that gender. As in the research of Awan & Ho (2018), Mahawar & Thakur (2018), and Ho & Awan (2019) focused research on testing the influence of gender in using COD services. Future research can also improve broader goals, such as focusing on local companies and developing by analyzing the differences in competitive strategies between local and national companies. This research shows that local companies (Topsell) can provide new services that not all national companies offer. Furthermore, theories, variables, or conceptual models that have not been proposed in this study can also be added.

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Author Contribution

Author 1: conceptualization, writing original draft, data curation, formal analysis, investigation, methodology.

Author 2: provided critical insight into review and editing, writing review and editing, supervision, and validation.

Author 3: provided critical insight into review and editing, writing review and editing, supervision, and validation.

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Conflict of Interest

The authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

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