



The Role Of Word Of Mouth's Value Co-Creation On The Achievement Of Sustainability

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Keywords

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Abstract

Consumers who buy their products through e-commerce are beginning to pay attention to a company's corporate social responsibility (CSR) status. Due to technological advancements, information became more transparent. Based on this phenomenon, research is required to determine the extent to which word-of-mouth consumers collaborate to increase value in order to achieve sustainability. In this study, the achievements are examined from the perspective of co-creation on the word of mouth aspect, with dimensions of three main factors, namely, social, economic, and environmental. The hypothesis of this study was tested using structural equation modeling (SEM), which includes an assessment of the segments of the related pathways. A total of 297 Indonesians who have completed at least 20 transactions in e-commerce, expressed concern about three important aspects of sustainability: people, profit, and the planet. This finding demonstrates the importance of co-creation of word-of-mouth value in achieving sustainability. Further research into the moderating effects of more detailed aspects of the supporting ecosystem could be conducted in the future.

Kata Kunci

Sustainability,
Value co-creation,
Word of mouth,
E-commerce,
Corporate social
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(CSR)

Abstrak

Konsumen yang membeli produknya melalui e-commerce mulai memperhatikan status tanggung jawab sosial perusahaan (CSR) suatu perusahaan. Karena kemajuan teknologi, informasi menjadi lebih transparan. Berdasarkan fenomena tersebut, diperlukan penelitian untuk mengetahui sejauh mana konsumen dari mulut ke mulut berkolaborasi untuk meningkatkan nilai guna mencapai keberlanjutan. Dalam penelitian ini, capaian tersebut dikaji dari perspektif co-creation pada aspek word of mouth, dengan dimensi tiga faktor utama yaitu, sosial, ekonomi, dan lingkungan. Hipotesis penelitian ini diuji dengan menggunakan structural equation modeling (SEM), yang meliputi penilaian segmen-segmen jalur hubungan. Sebanyak 297 orang Indonesia yang telah menyelesaikan setidaknya 20 transaksi di e-commerce, menyatakan keprihatinan tentang tiga aspek penting keberlanjutan: people, profit, dan planet. Temuan ini

menunjukkan pentingnya co-creation dari word-of-mouth value dalam mencapai keberlanjutan. Penelitian lebih lanjut tentang efek moderasi dari aspek ekosistem pendukung yang lebih rinci dapat dilakukan di masa depan.

Introduction

In 2022, retail e-commerce sales in Indonesia will increase 133.5 percent from 2017 to US\$ 16.5 billion, or around Rp 219 trillion. This expansion is fueled by rapid technological advancements that make shopping easier for the country's retail e-commerce customers. The e-commerce retail industry is a vital industry that significantly contributes to the growth of a country's economy (Oláh et al., 2018). The retail industry plays an important role in providing products and services to consumers as well as promoting sustainable distribution and consumption (Rohm et al., 2017). Consumers are increasingly aware of retail's environmental responsibility; thus, consumers boycott brands that damage the environment and society (Dang, Nguyen, & Wang, 2020). Previous researchers have found that environmentally and socially responsible retail tends to be the first choice among many consumers (Lerro, Raimondo, Stanco, Nazzaro, & Marotta, 2019). These retailers produce preferred brands that can help them easily gain loyal customers and consequently enhance long-term relationships with consumers (Bauer, Linzmajer, Nagengast, Rudolph, & D'Cruz, 2020). Several e-commerces in Indonesia have put CSR into their business strategy and use it as a tool to persuade their customers (Susanti, Hasudungan, & Prasetyo, 2018).

CSR policies that can signify the reliability and reputation of e-commerces. This is very relevant because consumers often access information about CSR activities in these retailers when making purchasing decisions (Borg & Hattenhauer, 2017). In particular, as online shopping has become a necessary trend in today's society, consumers increasingly have higher expectations about socially responsible behavior from e-commerces, plus consumers who perceive that retailers convey CSR signals are more likely to engage in word of mouth (WOM), which therefore affects consumers' intentions to buy products (Mehdikhani & Valmohammadi, 2021).

Online retail CSR activities can shape consumer attitudes and behavior. Consumers may show trust and confidence in these retailers (Iglesias, Markovic, Bagherzadeh, & Singh, 2020). In addition, consumers may have positive attitudes and optimistic beliefs about these retailers because the former believe that the latter seeks to bring goodwill and benefits to consumers and the whole society, furthermore, when

consumers hear or see information that is positive about online retail CSR, consumers tend to share this information on social networking sites and recommend it to others (Martínez, Herrero, & Salmones, 2020). That is, consumers often identify with e-commerces who are involved in CSR activities (Yoon, Fu, & Joo, 2021). When consumers identify with these e-commerces, consequently consumers will spread positive information and buy additional products and services from e-commerces. In addition, consumers recommend and advise their friends to buy from these e-commerces because consumers believe in these retailers (Aljukhadar & Senecal, 2021).

1. Sustainability

The concept of sustainability was first introduced as the Brundtland Report which stated that development should meet the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). The next concept of sustainability is expressed as the Triple Bottom Line (TBL), where sustainability must meet three dimensions, namely, social, economic, and environmental, which means that sustainability focuses on social justice, economic prosperity, and a quality environment (Elkington, 1997). The TBL concept emphasizes that economic development must come from a balanced relationship between a just social situation and a quality environment and has a pattern that can be continuously applied in every era (Laurell, Karlsson, Lindgren, Andersson, & Svensson, 2019).

Sustainability is the ability of our planet's biological systems to sustain and be productive continuously (Geissdoerfer, Savaget, Bocken, & Hultink, 2017). This planet must be able to withstand the effects of man-made creations and emissions and be able to regenerate itself to not only make itself last a long time, but also allow the living things on this planet to last a long time (Hák, Janoušková, & Moldan, 2016). The use of resources that meet human needs must also be carried out simultaneously with environmental conservation to ensure that present and future generations have access to resources. Thus the cycle formed between humans, the economy, and natural resources underlie the idea of the triple bottom line concept (Hartmann, 2020)(Elkington, 1997).

The concept of the triple bottom line (TBL), or also called the three pillars of sustainability, applies management science in the form of operationalizing the responsibilities of an organization, by returning what has been given by the community as a social system that has natural resources that are rich in natural resources. has been managed in an economic form (Ferraro & Agrawal, 2021). Practically, the concept creates

a cycle in which the return of responsibility for resource management is in the form of economic management results in the form of profits being given back to the environment (planet) and human life (people) in a balanced way (Farias, Farias, Krysa, & Harmon, 2020). Balance here means that the three dimensions must receive the same weight (Ritala, Albareda, & Bocken, 2021).

Meanwhile, there are still inconsistencies in the implementation of the three pillars of sustainability-related to the balance of the weight of the three pillars of sustainability (Braun, Trentin, Visentin, & Thomé, 2019). There are still many misperceptions caused by placing economic and social aspects as a priority for the welfare of the current generation, while the environmental aspect is about caring for the future (Skene, 2020). So the perception that arises is that the former is twice as important as the latter (Schiano & Drake, 2021). This violates Brundtland's requirement that development should not occur at the expense of future generations (WCED, 1987). Therefore, sustainability is proposed here to use the meaning as referred to in the Brundtland Report, namely sustainability must be a guideline for preserving productive capacity for an unlimited future (Solow, 2014; Wolf, 2018). Based on the explanation above, this study proposes the following hypothesis:

H1: Sustainability is significantly influenced by value co-creation.

2. Value Co-creation

The value co-creation is a paradigm in management science and is considered a general concept that includes all specific theoretical and empirical events where there are two or more parties that generate value through interaction (Ma et al., 2019). The concept of value co-creation provides a perspective to understand the inter-organizational, dynamic, and systems-oriented view of value creation (Kohtamäki & Rajala, 2016). Therefore, the scope of value co-creation processes and mechanisms will cross company boundaries (Kohtamäki & Partanen, 2016). The value co-creation occurs through mutually beneficial interactions among actors in the business ecosystem (Vargo & Lusch, 2017). This supports the statement that the value co-creation among collaborating partners is best understood in terms of a network of actors (Tian, Vanderstraeten, Matthyssens, & Shen, 2021).

The value co-creation has grown significantly in the context of business to business (B2B) or in the context of inter-organizational relationships (Tóth, Peters, Pressey, & Johnston, 2018). The development is mainly on concepts such as co-design

and co-development for the purpose of value propositions, co-learning, and co-innovation. In all these concepts, the prefix "co" denotes value co-creation work among actors in a multi-stakeholder or multilateral network and ecosystem (Kohtamäki & Rajala, 2016). The value co-creation perspective in the context of B2B collaboration allows providers and users to operate in close collaboration, through the merging of products and services (Appiah, Bonsu, & Sarpong, 2021). The merging of products and services creates a business service advantage based on tacit knowledge (Upadhyay & Kundu, 2020). Tacit knowledge becomes very important when in an ecosystem that is full of technology (Aytekin & Rızvanoğlu, 2018). Therefore value co-creation can be explored and combined while within this ecosystem (Polese et al., 2018).

In the B2B context, actors' subjective experiences of value have been regarded as the result of a value co-creation process, in which the value proposition (e.g., product, "service" or solution) acts as a potential value conveyor in the exchange process between provider and user (Kohtamäki & Rajala, 2016). In order to clarify the definition of co-creation of value, it is important to understand that the exchange of value entails economic and social exchange; both may focus on value (Roy, Balaji, Soutar, & Jiang, 2019). In contrast, collaboration for valuable experiences in the context of use may involve some aspect of the social, physical, and cognitive experience that is valuable to the beneficiary. Economic behavior in general is an applied exchange of resources. This service model is guided by the goal of benefiting multiple actors, potentially including other stakeholders, and even external audiences. Based on the explanation above, this study proposes the following hypothesis:

H2a: Value co-creation is significantly influenced by word of mouth.

H2b: Value co-creation significantly mediates the relationship between word of mouth and sustainability.

3. Word of Mouth

Word of Mouth is more trusted by potential consumers than direct sales by a salesperson (Ferguson, Girona, & Petrescu, 2021). The superior point of WOM lies in its superiority in spreading a recommendation. Word of Mouth is communication that contains information in the form of reviews or testimonials made by consumers in discussing a product or service (Mehra & Mishra, 2021). Word of the mouth involves the following 5 things. First, Talkers, the company must be able to define its audience, it doesn't need all of them, the company needs to know whom it wants to be as a customer,

ideally for a long time. Second, Topics, companies need to adjust the chat topics that consumers want to talk about. Third, Tools, companies need to determine what media or tools so that messages informed by customers can be achieved, at this time the majority of companies use online media. Fourth, Taking Part, what is the company's method of joining a conversation that is already underway, such as responding to all opinions and messages within 24 hours. Fifth, Tracking, in this age of technology it has become very easy to track what people are saying about a company, and as a company, you have to make sure you understand what people are saying (Anastasiu & Dospinescu, 2019).

Word of Mouth is referred to as the exchange of information related to products between consumers with one another and is considered a force or factor that influences consumer behavior, it is a process of creating awareness of a brand and also the basic values of a brand product (Kunja & GVRK, 2020). There are 10 steps for WOM to be successful, namely: Determine prime prospects. To measure the current indicators of loyalty and growth, one should ask others how much consumers recommend a service or product to their friends on a scale of 0 to 10. Listen to consumers' organic conversations. Conduct as many focus groups as necessary to understand all segment needs. To create and accumulate brand followers, brands must be real, genuine, and determined. Determined for cooperation, co-creation, and continuous dialogue. Real Products, Real People, Real Comments. In this phase, the company does not need to pursue the number of numbers that talk about the company but is more concerned with the credibility of the conversation. Create relationships with key consumers. Where the company is good at creating long-term relationships with the most important target market by creating 2-way communication between companies and consumers. Working with the right community, quantity doesn't always lead to quality, which means having a large database doesn't mean the response from these people is in line with reality. Get people to start talking about the product, because a brand that isn't talked about can't grow (Vinh, Thanh, Ngan, & Phuong, 2021). Measuring after the company implements the WOM strategy for a certain period, the company must also measure the loyalty and growth indicators by conducting a post-implementation survey of the WOM strategy (Mele, Gomez, & Garay, 2019). Companies should always be flexible to changes after getting the results of the conclusions received from several consumers.

CSR can act as a positive signal that builds a retail reputation in the eyes of consumers (Liu, Wu, Ko, Chen, & Chen, 2019). By giving a positive signal to the public, retail can influence consumer perceptions and facilitate to convey and spread of messages

about image and reputation (Dang et al., 2020). That is consumers who perceive that retail conveys CSR signals tend to engage in WOM, which therefore affects consumers' intentions to buy products (Ghanem & Quds, 2019). E-commerces can use CSR as an effective signal to convey information about their socially responsible behavior to the public and consumers (Borg & Hattenhauer, 2017). When consumers feel that online retail benefits consumers and society, consumers tend to trust online retail (Thongpapanl, Ashraf, Lapa, & Venkatesh, 2018). Consumers are also willing to praise and recommend this e-commerce to their friends to buy products and services (Iglesias et al., 2020). Furthermore, when consumers hear or see positive information about online retail CSR, consumers tend to share this information on social networking sites and recommend it to others (Yang, Liu, Lv, Ai, & Li, 2021) as a result, consumers tend to buy products and services from socially responsible retailers because consumers may hear and accept recommendations from others (Jacobsen, 2018). Based on the explanation above, this study proposes the following hypothesis:

H3: Word of mouth has a positive and significant effect on sustainability.

Method

This study will use quantitative methods, which are designed for an approach to empirical studies in collecting, analyzing, and displaying data in numerical form so that accurate measurements can be made (Sekaran & Bougie, 2016). Furthermore, an explanatory approach will be used to find correlations between several research variables with a series of hypothesis tests that refer to the analysis of survey data to determine the relationship between the variables studied (Leedy & Ormrod, 2015). This study utilizes structural equation modeling (SEM) with the approach of partial least square (PLS). The analysis is supported by the Adanco software in examining the path relationship of between the variables in order to generate the results. In this study, to test the measurement model is using Confirmatory Factor Analysis (CFA). The validity of the indicators is tested using the loading factor of each indicator. Meanwhile, the reliability test aims to see the consistency between indicators of a variable. Cronbach's alpha value above 0.70 is acceptable. The second stage investigates the structural model of the variable relationship. The coefficient of determination (R²) is used to calculate the exogenous latent variable's influence on the endogenous latent variable. The path coefficient (β) value is then used to draw the conclusion of the pattern of exogenous latent variable effects on the endogenous latent variable (Hair, Hult, Ringle, & Sarstedt, 2017).

In this study, the variable of Word of Mouth was measured using three question items indicator by adopting from the previous study. The statement items used to measure Word Of Mouth, namely: I say positive things about this e-commerce to friends, I recommend this e-commerce to friends, I am very likely to share information about this e-commerce (Acharya, 2020).

Value creation is a strategic function of the interaction of parties whose interests are jointly contributing to create a unique experience. Based on this, the DART model, namely Dialogue, Access, Risk, and Transparency, was developed as the necessary elements for the creation of shared value. Initially, the DART model was created to reduce information asymmetry between customers and companies or between stakeholders (Taghizadeh, Rahman, & Marimuthu, 2019), where this model plays a role in supporting the trust-building process (Buana, Mursitama, Abdinagoro, & Pradipto, 2021).

In this study, sustainability performance as measured through the three-pillar approach to sustainability (triple bottom line/TBL) has become a widely accepted perspective (Ferro, Padin, Høgevoid, Svensson, & Sosa Varela, 2019). Measurement of sustainability performance has become the basis for control processes in business, one of which is used to measure organizational performance, whether sustainability-oriented or not, using three indicators, namely, economic, social, and environmental (Gnanaweera & Kunori, 2018).

The data collection technique used in this research is by distributing questionnaires using the convenience sampling technique (non-probability sampling). The use of this technique has advantages in terms of cost and time. This technique has the ability to generalize research results to population characteristics (Sekaran & Bougie, 2016). The convenience sampling technique was used based on previous studies on variables involving behavior with self-referential perceptions that prioritized the volunteerism of the respondents to reveal the actual situation (Ferradás, Freire, Núñez, & Regueiro, 2020). The criteria for the respondents of this research are, consumers who have bought from e-commerce and know the sustainability activities carried out by e-commerce companies, consumers who have transaction via e-commerce in the last one year and at least 20 times.

Result and Discussion

The received response has 29.4 percent of male and 70.6 percent female. Ages percentage variation of 20 to 30 is 72.8 percent, 31 to 40 is 21.7 percent and above 40

years old is 5.6 percent. The Adanco output leads to Figure 1, which makes it possible to analyze the value and determining factor of the path that can be immediately indicated. Figure 1 shows the coefficient of determination (R²) of 0,1062 explain the variance of the value co-creation (VCC) variable indicated by the word of mouth (WOM) variable at 10,62 percent. Meanwhile, R² of 0,4419 explains the variance of the sustainability (SUS) variable indicated by the value co-creation and word of mouth variable is 44,19 percent. The result of R² is also shown at Table 2.

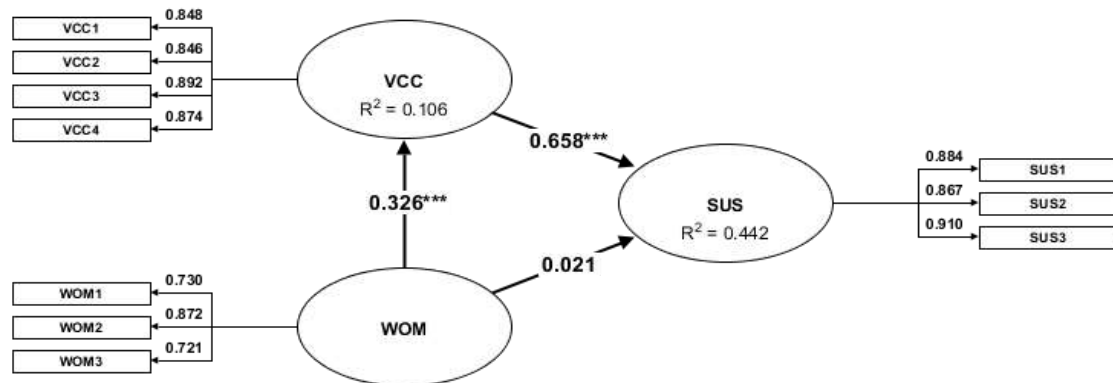


Figure 1. The Adanco software output from the research model

All indicators that measure the word of mouth, value co-creation variable, and sustainability variable are valid and reliable. As shown in Table 1, all loading factor (LF) value of the reflective indicator is higher than 0.5 explain the significance of the respective construct. Also, all of VIF value is lower than 5.0, explain there is no multicollinearity of each indicator (Hair et al., 2017).

Table 1. Descriptive statistic and loading factor of indicators Table Styles

Var.	Items	Mean	VIF (< 5.0)	LF (> 0.5)
WOM	Positive information	6,0789	1,5741	0,7304
	Recommends	6,0461	1,2739	0,8715
	Sharing information	5,9868	1,4303	0,7209
VCC	Dialogic aspect	6,2007	2,0163	0,8485
	Accesibility	5,8882	2,1671	0,8460
	Risk sharing	5,8618	2,9408	0,8918
	Transparancy	5,9770	2,6417	0,8736
SUS	Social aspect	6,3783	2,3221	0,8844
	Economical aspect	6,3651	2,2437	0,8666
	Environmental aspect	6,3092	2,2080	0,9105

VIF : Variance inflation factor

LF : Loading factor

The validity and reliability of the construct variables are shown in Table 2. The Cronbach's α (Cr- α) value is higher than 0.7 explain the validity of the respective construct. The average variance extracted (AVE) values are higher than 0.5 as well as the Dijkstra-Henseler's coefficient (ρA) values are higher than 0.7 which explains the reliability of the measurement model (Hair et al., 2017).

Table 2. Construct validity and reliability

Constructs	AVE (> 0.5)	ρA (> 0.7)	Cr- α (> 0.7)
WOM	0.6043	0.8173	0.7041
VCC	0.7485	0.8900	0.8880
SUS	0.7874	0.8997	0.8669

AVE : Average variance extracted

ρA : Dijkstra-Henseler's coefficient

Cr- α : The Cronbach's α

The results of the structural model from Adanco software output show values like Table III. The results for this model's path coefficient (β) value of the tests are 0.3258 for WOM – VCC, which shows the higher word of mouth, so that value co-creation increases by 32,58 percent. The results for this model's path coefficient (β) value of the tests are 0.0209 for WOM – SUS, which shows the higher word of mouth, so that sustainability increases by 2,09 percent. The results for this model's path coefficient (β) value of the tests are 0.6577 for VCC – SUS, which shows the higher value co-creation, so that sustainability increases by 65.77 percent. Table III also shows the Cohen's (f^2) value. In this study, the Cohen's (f^2) value is shown to indicate the effect size between exogenous variables to endogenous variables. The value of 0.02, 0.15, and 0.35 was interpreted as a small, medium, and large effect respectively. Therefore, Cohen's (f^2) value of WOM – VCC is 0.1188 between the word of mouth and value co-creation explain small effect respectively between them. Cohen's (f^2) value of WOM – SUS is 0.0007 between the word of mouth and sustainability explain ignorance effect respectively between them. Cohen's (f^2) value of VCC – SUS is 0.6928 between value co-creation and sustainability explain large effect respectively between them. (Hair et al., 2017).

Table 3. Output of Structural Model

R ²	Path	β	Cohen (f ²)
VCC: 0.1062	WOM – VCC	0.3258	0.1188
SUS: 0.4419	WOM – SUS	0.0209	0.0007
-	VCC – SUS	0.6577	0.6928

β : Path Coefficient

Cohen (f²) : Effect size

The ADANCO software executed a bootstrap of 2999 samples and 5 percent of significant level to confirm the path coefficient (β) between the relationship. This step indicates the significance of the impact between them, as shown in Table IV. The β value between the relationship of word of mouth and value co-creation, has strengthened by the t-value of 6,2995, which is confirmed to be higher than 1,96, and the p-value of 0,0000, that confirmed to be lower than 0,05. That indication explains that the word of mouth significantly influences the value co-creation. The β value between the relationship of word of mouth and sustainability has strengthened by the t-value of 0,3882, which is confirmed to be lower than 1,96, and the p-value of 0.6979, that confirmed to be higher than 0,05. That indication explains that the word of mouth does not significantly influence sustainability The β value between the relationship of value co-creation and sustainability, has been strengthened by the t-value of 11.2708, that confirmed to be higher than 1,96, and the p-value of 0,0000, that confirmed to be lower than 0,05. That indication explains that value co-creation is significantly influencing sustainability. The total effect indication of a relationship between word of mouth, through value co-creation and toward sustainability, has the total effect of 0.9835 and strengthen by the t-value of 4.2314, that confirmed to be higher than 1,96 and the p-value of 0,0000, that confirmed to be lower than 0,05. This indication explains that the relationship between word of mouth, through value co-creation, and toward sustainability has the significant influence between them (Hair et al., 2017). The above explanation is based on the output result of the Adanco software analysis.

Table 4. Bootstrap Output of Structural Model

Path	Direct effect	Indirect effect	Total effect	t-value (t > 1.96)	p-value (p < 0.05)
WOM – VCC	0.3258	-	0.3258	6.2995	0.0000

WOM – SUS	0.0209	-	0.0209	0.3882	0.6979
VCC – SUS	0.6577	-	0.6577	11.2708	0.0000
WOM – VCC – SUS	-	0.2143	0.9835	4.2314	0.0000

β : Path Coefficient

The acceptance of the hypothesis demonstrates the important role of value co-creation in mediating the word of mouth for the sake of strengthening the achievement of sustainability. The results of this research, therefore, suggest that the achievement of sustainability of the green product could be sounding by word of mouth with the support from value co-creation among e-commerce and shoppers of e-commerce (online shoppers).

Based on the results of the descriptive statistics in table I above, it shows that the average value (mean) of the three statement items of the word of mouth variable is above 5.00. These results mean that the average respondent considers having carried out good word-of-mouth activities. The word of mouth variable was measured using three statement items. The first statement item with a mean value of 6,0789 means that respondents believe that e-commerce has positive information. The second statement item with a mean value of 6,0461 means that respondents believe that e-commerce cares about the recommendations of online shoppers. The third statement item with a mean value of 5,9868 means that respondents believe that e-commerce opens a sharing of information between them.

Still based on the results of the descriptive statistics in table I above, it shows that the average value (mean) of the three statement items of the value co-creation variable is above 5.00. These results mean that the average respondent considers having carried out good value co-creation activities. The word of mouth variable was measured using three statement items. The first statement item with a mean value of 6,2007 means that respondents believe that e-commerce has a good dialog between their shoppers and themselves. The second statement item with a mean value of 5,8882 means that respondents believe that e-commerce cares about the accessibility between the online shoppers and them. The third statement item with a mean value of 5,8618 means that respondents believe that e-commerce has shared their risk to their shoppers. The fourth statement item with a mean value of 5,9770 means that respondents believe e-commerce is transparent between the online shoppers and them.

The last is still according to table I above, it shows that the average value (mean) of the three statement items of the value co-creation variable is above 6.00. These results mean that the average respondent considers having carried out excellent sustainability activities. The word of mouth variable was measured using three statement items. The first statement item with a mean value of 6,3783 means that respondents believe that e-commerce has excellent social activities respectively to their shoppers. The second statement item with a mean value of 6,3651 which means that respondents believe that e-commerce has excellent pricing of their product in an economic manner respectively from their shoppers. The third statement item with a mean value of 6,3092 means that respondents believe that e-commerce has an excellent environmental activity respectively to be attended by their shoppers.

The first hypothesis (H1) examines the significant effect of value co-creation on sustainability. The results of this study indicate that value co-creation activities of e-commerce affect significantly their sustainability activities. The results of this study support the results of previous research (Polese et al., 2018). They stated that value co-creation activities of e-commerce affect significantly their sustainability activities. Therefore the results of this research suggest that the achievement of sustainability of the product of e-commerce is influence by the support from value co-creation among e-commerce and shoppers of e-commerce (online shoppers).

The second hypothesis (H2a and H2b) examines the significant effect of word of mouth on value co-creation and the significance of mediation effect of value co-creation between the word of mouth and sustainability. The results of this study support previous research (Iglesias et al., 2020). It was stated that the word of mouth has a significant effect on value co-creation. The results of this study are also in line with the previous research (Roy et al., 2019). That was stated that value co-creation has significantly mediated the effect of word of mouth toward sustainability. The results of this research, therefore, suggest that the achievement of sustainability of the product of e-commerce that sounding by word of mouth shall be supported with the value co-creation activities among e-commerce and shoppers of e-commerce (online shoppers).

The third hypothesis (H3) failed to prove the examination of the significant effect of word of mouth on sustainability. The results of this study indicate that the word of mouth activities of e-commerce does not significantly affect their sustainability activities. The results of this study do not support the results of previous research conducted by (Anastasei & Dospinescu, 2019). Therefore the results of this research do not suggest the

utilization of the word of mouth activities directly to achieve sustainability of the product of e-commerce, among e-commerce and shoppers of e-commerce (online shoppers). Hence, this study suggests that word of mouth shall be strengthened by the value co-creation activities according to the second hypothesis.

The structural equation modeling (SEM) with the partial least square approach emphasizes on path analysis of the relationship between variables proposed in the hypothesis. Therefore, the results of this study emphasize on indication demonstrated by analysis of the Adanco software, that value co-creation becomes a mediation variable between the word of mouth and sustainability. The implication of this study then emphasizes on the activities of value co-creation that should be provided when the word of mouth activity is being used towards the sustainability goal to be achieved. Therefore, in theory, this study supported the previous study (Anastasiu & Dospinescu, 2019; Iglesias et al., 2020; Roy et al., 2019).

The managerial implications that can be emphasized based on the results of the research, could be revealed that management shall increase value co-creation activity by the time in utilizing word of mouth activity in order to achieve sustainability of their product life cycles. The method in increasing value co-creation is to increase the activity and facility of dialog, accessibility, risk-sharing perception, and transparency of information. Those activities shall be focused at the first manner. In the case that sustainability includes aspects of social, economic, and environmental (triple bottom line), the management must be able to harmonize it in a proportional orchestration.

The management must increase activity on the components of word of mouth, namely, stimulate to create information that can be discussed well by customers, as well as to create good information sharing, which in the end forms mutual recommendations among shoppers of e-commerce. However, this word-of-mouth activity cannot be directly aimed at achieving sustainability in the triple bottom line. This requires situational intervention that is dialogical and provides mutual access to transparent risk sharing.

Conclusion

Based on the results of research and discussion obtained in previous chapters, it can be concluded that all variables in this study influence purchase intention, in the first hypothesis, online retail CSR has a positive influence on purchase intention. In the second hypothesis, it is also found that there is a positive influence of online retail CSR on purchase intention mediated by brand identification. In the third hypothesis, it is found

that there is a positive influence of online retail CSR on purchase intention mediated by Word of Mouth. In the fourth hypothesis, it is also found that there is a positive influence of brand identification on purchase intention mediated by Word of Mouth. There is a positive influence on online retail CSR on purchase intention mediated by satisfaction.

This study has limitations that need to be considered, before generalizing the findings obtained. This study is admittedly limited to respondents who have made repeated purchases 20 times in e-commerce in Indonesia. The sample of respondents for this study was limited to those who had worked for more than ten years, so they did not include the millennial generation. Even though the data was collected anonymously, self-report behavior measurement allows for social desirability bias to occur due to the tendency to respond inappropriately.

Further research is expected to survey the respondents who have done repeated purchases with less frequent purchases. However, it could also be to respondents who bought more specific products. Also, further research can add another variable that can affect sustainability which is strengthened by value co-creation as mediating variable.

Reference

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