

THE EFFECT OF CUSTOMER PARTICIPATION ON CO-CREATION OUTCOME OF ONLINE TRANSPORTATION IN MANADO**PENGARUH PARTISIPASI PELANGGAN TERHADAP HASIL CO-CREATION DARI TRANSPORTASI ONLINE DI MANADO**

By

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Abstract: The significant growth of internet and smartphone users, affecting the development of e-commerce businesses in Indonesia. One of them is the online transportation business. Online transportation companies initiate a strategy to involve the end-users or customer in one or more stages of innovation, this strategy is Co-creation. The aim of this research is to analyze the effect of Customer Participation on Co-Creation Outcome of Online Transportation in Manado using Dimensions of Customer Participation (Information Seeking, Information Sharing, Responsible Behavior, Personal Interaction). The type of this research is a causal research and used quantitative research method. Population in this research is the people that have experienced of using online transportation. The sample size of this research is 100 respondents which are the customer of Gojek and Grab in Manado. This research found that The independent variable which are Information Seeking, Information Sharing, Responsible Behaviour and Personal Interaction simultaneously affect Co-Creation Outcome as the dependent variable. There are 3 independent variables; Information Seeking, Information Sharing and Responsible Behavior significantly affect Co-Creation Outcome. While there is one variable that does not have significant effect on Co-Creation Outcome which is Personal Interaction.

Keywords: *customer participation, co-creation outcome, online transportation*

Abstrak: *Pertumbuhan signifikan dari pengguna internet dan smartphone, mempengaruhi perkembangan bisnis e-commerce di Indonesia. Salah satunya adalah bisnis transportasi online. Perusahaan transportasi online memulai strategi untuk melibatkan pengguna akhir atau pelanggan dalam satu atau beberapa tahap inovasi, strategi ini adalah Co-creation. Tujuan dari penelitian ini adalah untuk menganalisis pengaruh Partisipasi Pelanggan pada Hasil Co-Creation dari Transportasi Online di Manado menggunakan Dimensi Partisipasi Pelanggan (Pencarian Informasi, Berbagi Informasi, Perilaku Bertanggung Jawab, Interaksi Pribadi). Jenis penelitian ini adalah penelitian kausal dan menggunakan metode penelitian kuantitatif. Populasi dalam penelitian ini adalah orang-orang yang pernah mengalami menggunakan transportasi online. Ukuran sampel penelitian ini adalah 100 responden yang merupakan pelanggan Gojek dan Grab di Manado. Penelitian ini menemukan bahwa variabel independen yaitu Pencarian Informasi, Berbagi Informasi, Perilaku Bertanggung Jawab dan Interaksi Pribadi secara simultan mempengaruhi Hasil Co-Creation sebagai variabel dependen. Ada 3 variabel independen; Pencarian Informasi, Berbagi Informasi, dan Perilaku Bertanggung Jawab secara signifikan mempengaruhi Hasil Co-Creation. Sedangkan ada satu variabel yang tidak berpengaruh signifikan terhadap Hasil Co-Creation yaitu Interaksi Pribadi.*

Kata kunci: *partisipasi pelanggan, hasil co-creation, transportasi online*

INTRODUCTION

Research Background

The significant growth of internet and smartphone users, affecting the development of e-commerce businesses in Indonesia. One of them is the online transportation business. Online transport service is currently popular in Indonesia. Not only provide ride-sharing service, but also other services such as food delivery, medicine delivery, and courier service. Ease of use and low cost make online transportation service more favored by consumers.

In April 2017, the Indonesian Consumers Institution Foundation conducted online surveys to users of online transport services involving 4,668 respondents. One of the questions is the reasons Indonesian consumers choose or use online transport. In this survey respondents can choose more than one reason why they use online transport services. The result shows that the reasons are cheaper (84.1%), faster (81.9%), comfortable (78.8%), and safe (61.4%). Various services and features are offered by online transport service providers to consumers and drivers generally to provide convenience and security in transportation services. Apart from all the conveniences and conveniences that exist, the application of online transport services has several issues that reduce the sense of security in using this service. Some issues can even harm consumers.

Online transportation companies initiate a strategy to involve the end-users or customer in one or more stages of innovation that is Co-Creation. Co-Creation should be increasingly utilized in implementing marketing strategy. Because by doing Co-Creation, for customers, they will get the product or service as they want. Co-Creation make company more concerned with customer needs, improve good relationships with customers, increase innovation success, accelerate product deployment on the market, reduce loss risk, increase customer satisfaction, and certainly increase profits for the company.

The aim of this research is to analyze the effects of dimensions of customer participation in customer co-creation outcome of online transportation in Manado. Based on the literature, a research model has been developed that there are four dimensions of customer participation; information seeking, information sharing, responsible behavior and personal interaction in co-creation process.

Research Problem

Based on the research background stated above, this research formulates the problem to be analyzed as follows:

1. Do information seeking, information sharing, responsible behavior and personal interaction have significant simultaneous effect on Co-creation Outcome of Online Transportation?
2. Does information seeking have significant partial effect on Co-creation Outcome of Online Transportation?
3. Does information sharing have significant partial effect on Co-creation Outcome of Online Transportation?
4. Does responsible behavior have significant partial effect on Co-creation Outcome of Online Transportation?
5. Does personal interaction have significant partial effect on Co-creation Outcome of Online Transportation?

Research Objectives

Based on the research background stated above, this research formulates the purposes of this research are stated as follows:

1. To find out the significant simultaneous effect of information seeking, information sharing, responsible behavior, and personal interaction on Co-creation Outcome of Online Transportation.
2. To find out the significant partial effect of information seeking on Co-creation Outcome of Online Transportation.
3. To find out the significant partial effect of information sharing on Co-creation Outcome of Online Transportation.
4. To find out the significant partial effect of responsible behavior on Co-creation Outcome of Online Transportation.
5. To find out the significant partial effect of personal interaction on Co-creation Outcome of Online Transportation.

THEORETICAL REVIEW**Marketing**

Marketing is a social process in which individuals and groups obtain what they need and want by creating, offering, and freely exchanging valuable products and services with others (Kotler and Keller, 2013). Marketing is the activity, set of institutions, and processes for creating, communicating, delivering and exchanging offerings that have value for customers, clients, partners, and society at large. Marketing is so basic that it cannot be considered as separate function (American Marketing Association, 2013).

Co-Creation

Co-creation is a form of collaborative creativity, initiated by companies and customers to reach new innovation (Kambil, 1996). The customer as an active player in co-creation could enhance the efficiency and effectiveness of the value co-creation process. Value obtained through co-creation could help satisfy customers and simultaneously benefit firms (Maglio et al., 2009; Edvardsson et al., 2011).

Customer Participation

Mustak, M., Jaakkola, E. and Halinen, A. (2013) conceptualized participation as the customers' interference to the production/technical core of service activities. The 4 Dimensions of Customer Participation are Information Seeking, Information Sharing, Responsible Behavior, Personal Interaction (Yi & Gong, 2013)

1. Information Seeking

The process or activity of attempting to obtain information in both human and technological contexts.

2. Information Sharing

A set of activities by which information is provided to others, either proactively or upon request.

3. Responsible Behavior

Process where Customer should be able to perform the roles required for co-creation and desired by the service providers.

4. Personal Interaction

The interpersonal relationships between customers and employees.

M-Commerce

M-commerce defined as transaction performed in mobile networks. In m-commerce, customers or users can put order of products or services through internet without using PC (personal computer) (Clarke, 2001). As a form of [e-commerce](#), m-commerce enables users to access online shopping platforms without needing to use a desktop computer. Examples of m-commerce include in-app purchasing, mobile banking, virtual marketplace. (Search Mobile Computing, 2019)

Online Transportation

Watanabe et al. (2016) explained that online transportation services or ride sharing is an on-demand service connecting passengers and vehicle owners (drivers) in real time using mobile technology. It is called ride sharing due to the cars/vehicle used is owned by individual (private cars) which is then 'shared' with other (the customer) when delivering the services (Wallsten, 2015).

Previous Research

According to A. Agrawal and Z. Rahman (2015), acknowledging and incorporating customers' skills and competencies has enabled businesses serve their customers more effectively and efficiently. Customer empowerment through adoption of modern technologies has further accelerated the process of joint value creation between firms and their customers. This article aims to determine the various roles played and resources contributed by customers in the co-creation of value. This study looks upon the various forms of value co-creation from the customer's perspective while elaborating on the various resources contributed by the customer and presents a conceptual framework of value co-creation.

According to Min Liu, Wen Xiao and Opata Christian (2017), Research on the impact of the Internet on consumer value creation that consumers can create value alone is very scanty. The customer-dominant logic and the social network of the value creation theories emphasis the importance of customers, while the traditional value creation emphasis the dominant position of enterprises in different paradigms. Therefore, the new research trend

in value creation covers a wide range of theories, such as, sociology, psychology, and organizational behavior. Enterprises are in a dilemma as to abandoning their dominance role in the value creation process or focus on providing ancillary resources and creating the enabling environment for consumers to co create value. And in recent times, the Internet has changed business models of existing business and created new industries. Is there any possibility for the enterprises to change their business model from B2C to C2C or C2B2C. As a result, researches on consumer participation in value co-creation will increase significantly.

According to Korhonen, Karri (2012), Companies cannot consider customers only as the passive recipients of the service provider’s outputs, but they should be seen as an integrated part of the organization. When customers are used as integrated part of the organization it may result innovative thinking and breakthrough services. If customers are seen only as a source of information it may lead only in minor improvements. Dialogue as an advanced form of marketing communication is noticed because it supports co-creation of value and sustainable competitive advantage. Value co-creation necessarily requires interactions between the supplier and the customer. Co-creation opportunities that suppliers have are strategic options for creating value. The recognized challenges in service design processes are the lack of the knowledge how to get insights directly from customers, the lack of the knowledge how to handle the customer insights with customers, and the lack of knowledge how to participate customers in new service development. This all requires a holistic approach towards service design methods as well as new tools to gather, save, and process the customer insights.

Research Hypothesis

- H₁: Information Seeking, Information Sharing, Responsible behavior, and Personal Interaction have significant effect on Co-Creation Outcome simultaneously
- H₂: Information Seeking has significant effect on Co-Creation Outcome partially
- H₃: Information Sharing has significant effect on Co-Creation Outcome partially
- H₄: Responsible behavior has significant effect on Co-Creation Outcome partially
- H₅: Personal Interaction has significant effect on Co-Creation Outcome partially

Conceptual Framework

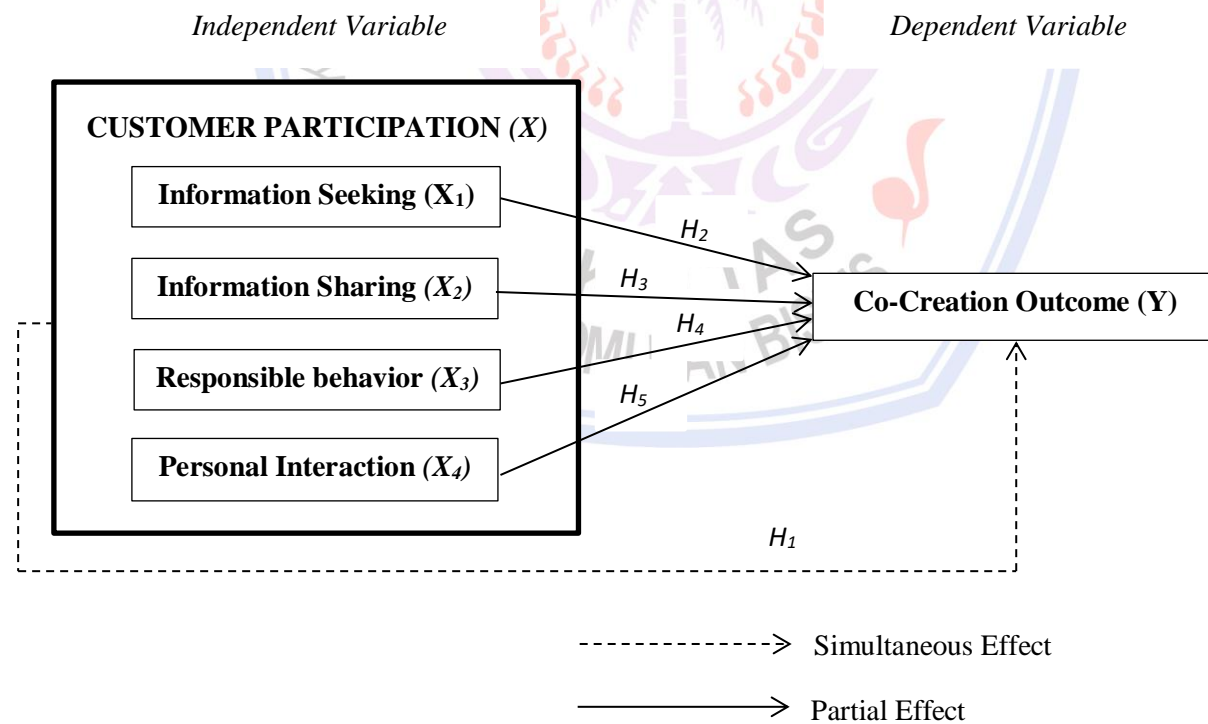


Figure 1. Conceptual Framework

Source: Data Processed, 2019

RESEARCH METHOD

Type of Research

This research is used quantitative methodology and judging from the problems studied, this research is a causal research, which aims to determine and investigate the effects of customer participation in value co-creation on e-commerce, through hypothesis testing (Cooper and Schindler, 2003)

Population, Sample and Sampling Technique

Population in this research is the people that have experienced of using online transportation. The sample size of this research is 100 respondents who have used the services of an online transportation company in Manado, Gojek and Grab user.

Data Collection and Method

Data collection methods are divided into primary and secondary. Primary data in this research is the result of a questionnaire on online transportation customer. Secondary data in this research is about the various theories and related data. The data is taken from books, journals, and relevant literature from library and internet.

Definition of Research Variables

Table 1. Operational Definition of Variables

Variable	Definition	Indicators
1. Information Seeking (X1)	Process or activity of attempting to obtain information in both human and technological contexts.	1. Direct interactions 2. Indirect interactions
2. Information Sharing (X2)	A set of activities by which information is provided to others, either proactively or upon request.	1. Proactively 2. Upon request
3. Responsible Behavior (X3)	Customer able to perform the roles required for co-creation and desired by the service providers.	1. Cooperative 2. Observing rules & policies 3. Accepting directions
4. Personal Interaction (X4)	The interpersonal relationships between customers and employees	1. Courtesy 2. Friendliness 3. Respect
5. Co-Creation Outcome (Y)	Outcome of a collaborative creativity, initiated by companies and customers for new innovation	1. Value 2. Experiences 3. Satisfaction 4. Learning

Source: Data Processed, 2019

Measurements of Research Variable

The measurement tool that used in this research is Likert Scale. Likert type of frequency scales use fixed choice response formats and are designed to measure attitudes or opinions (Burns and Grove, 1997). In this kind of scale, variables will be measured on five points of scale, as shown below:

Table 2. Likert Scale

Statement	Score
Strongly Agree	5
Agree	4
Uncertain	3
Disagree	2
Strongly Disagree	1

Source: Data processed, 2019

Data Analysis Method**Ordinal Regression Analysis**

In ordinal regression analysis, the dependent variable is ordinal (statistically it is polytomous ordinal) and the independent variables are ordinal or continuous-level (ratio or interval) like variables in this research.

The basic form of the generalized linear model is:

$$\ln(\theta_j) = \alpha_j - \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

Description:

X_1 = Information seeking

X_2 = Information sharing

X_3 = Responsible behavior

X_4 = Personal interaction

J = goes from 1 to the number of categories minus 1

$\beta_1 \beta_2 \beta_3 \beta_4$ = the regression coefficient of each variable

RESULT AND DISCUSSION**Result****Characteristics of Respondents**

Data collected from the relevant sources through questionnaire were classified, organized and analyzed based on gender and age. In term of respondents' gender, the largest numbers of sampled respondent are 57% of female respondents, and then followed by 43% of male respondents. In term of respondents' age, the largest number of sampled respondents 42% comes from age 21-30 years and then followed by age ≤ 20 years (26%) and 31-40 years (20%), and the last is ≥ 41 years are 12% of respondents.

Ordinal Regression Analysis**Table 3. Model Fitting Information**

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	188.072			
Final	145.289	42.782	4	.000

Link function: Logit.

Source: Data processed, 2019

Based on the results of the simultaneous test calculation above shows that the value of Chi-Square is 42.782 and the p-value is 0.000. Then, the decision taken is to reject H_0 because the p-value $< \alpha$. Therefore, at a 95% confidence level it can be said that models with independent variables are better than models without independent variables

Table 4. Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	138.860	188	.997
Deviance	120.903	188	1.000

Link function: Logit.

Source: Data processed, 2019

From the above table the results for our analysis suggest the model does fit very well ($p > 0.05$) (i.e. fail to reject the null hypothesis depending on the observed data). Also the model fits adequately.

Table 5. Pseudo R-Square

Cox and Snell	.348
Nagelkerke	.387
McFadden	.186

Link function: Logit.

Source: Data processed, 2019

For logistic and ordinal regression models, it not possible to compute the same R2 statistic as in linear regression so three approximations are computed instead. Here, the pseudo R2 values (e.g. Nagelkerke = 0.387) thus it can be interpreted that the independent variable is able to explain the dependent variable by 38.7%.

Table 6. Parameter Estimates of Ordinal Logistic Regression

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[CCO = 1.00]	2.904	1.406	4.262	1	.039	.147	5.660
	[CCO = 2.00]	5.009	1.407	12.674	1	.000	2.251	7.767
	[CCO = 3.00]	8.047	1.511	28.377	1	.000	5.086	11.008
	[CCO = 4.00]	11.486	1.733	43.928	1	.000	8.089	14.882
Location	ISe	.693	.270	6.575	1	.010	.163	1.222
	ISh	.608	.263	5.322	1	.021	.091	1.124
	RB	.823	.361	5.185	1	.023	.115	1.532
	PI	.259	.270	.915	1	.339	-.271	.788

Link function: Logit.

Source: Data processed, 2019

Table Parameter Estimates above have to notice the Wald value and significance value. Variable X1 (Information Seeking) has Wald value 6.575 with sig. 0.010 (<0.05), variable X2 (Information Sharing) has Wald value 5.322 with sig. 0.021 (<0.05), variable X3 (Responsible Behavior) has Wald value 5.185 with sig. 0.023 (<0.05), and variable X4 (Personal Interaction) has Wald value 0.915 with sig. 0.339 (>0.05). It shows that 3 independent variables; Information Seeking, Information Sharing and Responsible Behavior does have significant effect on Co-Creation Outcome. While there is one variable that does not have significant effect on Co-Creation Outcome which is Personal Interaction.

Based on the analyses, the formula of ordinal regression model in this research is shown as follows:

$$\ln(\theta_1) = 2.904 + 0.693 + 0.608 + 0.823 + 0.259$$

$$\ln(\theta_2) = 5.009 + 0.693 + 0.608 + 0.823 + 0.259$$

$$\ln(\theta_3) = 8.047 + 0.693 + 0.608 + 0.823 + 0.259$$

$$\ln(\theta_4) = 11.486 + 0.693 + 0.608 + 0.823 + 0.259$$

In these coefficients indicated that those variables have positive effects on Co-Creation Outcome. The estimates labeled location are the coefficients for the predictor variables. There appears to be relationship between Co-Creation Outcome and the factors that affect Co-Creation Outcome. Based on the small observed significance level, we can reject the null hypothesis that it is zero. The estimates labeled Location are the ones we are interested in. They are the coefficients for the predictor variables. The Wald statistic is the square of the ratio of the coefficient to its standard error.

Table 7. Test of Parallel Lines

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	145.289			
General	136.185	9.104	12	.694

Source: Data processed, 2019

Based on the results of the parallel lines above, the Chi-Square value is 9.104 and p-value is 0.694. So, the decision taken is a failure to reject H_0 because of the p-value > α . Thus, at a 95% confidence level it can be said that the slope coefficient is the same for all response variables

Discussion

Aim of this research was to identify the effect of Customer Participation on Co-Creation Outcome. The finding shows that there is also a strong association between factors that affect Co-Creation Outcome, even when p-values are less than alpha level. In the Parameter Estimates table we see the coefficients, their standard errors, the Wald test and associated p-values (Sig.), the 95% confidence interval of the coefficients and odds ratios. Since p-values less than alpha level they are statistically significant; otherwise not. The thresholds are shown at the top

of the parameter estimates output. We can see significant for some variables which are Information Seeking, Information Sharing, and Responsible Behavior. While one of the variables; Personal Interaction does not significantly affect Co-Creation Outcome.

1. Information Seeking

The result of this research is Information Seeking does significantly affect Co-Creation Outcome. Based on the questionnaire, most of the respondent answered Neutral and Agree for how they read information on online transportation application carefully, while some answered Disagree and Neutral on how they search for additional information outside the application, and also answered Neutral and Agree on how they obtain information from third party (family, friends, etc.). This shows that Customers are quite active on Information Seeking, by reading the information in-app carefully, but not active in searching for additional information outside the application.

From the previous research, Robinson's (2010) found that people spend substantially more time receiving information passively (i.e., information that they have not requested) than actively (i.e., information that they have requested)

2. Information Sharing

Information sharing behavior occur when customers are asked to provide useful information, they share the information (C. A. Lengnick-Hall, 1996). Since co-creation takes place joint sphere when employees and customers involve in dialogue (C. Grönroos and P. Voima, 2013), information shared by the customers will help employees to provide better service.

The result of this research is Information Sharing does significantly affect Co-Creation Outcome. Based on the questionnaire, most of the respondents respond Neutral and Agree, and some respond Disagree on how they shared information to others without even asked. Respondent also respond mostly Neutral and Agree, some respond Disagree on how they shared information when asked. This shows that the customers are not very active in sharing information asked or not asked.

3. Responsible Behavior

Responsible behavior is an awareness of tasks that must be taken seriously. Sharp sensitivity in addressing the various things it faces and understanding the meaning of responsibilities that must be borne are the main characteristics. For successful value co-creation between themselves and employees, customers need to be cooperative, observing rules and policies and accepting directions (Bettencourt, 1997). Without customers' responsible behavior, little value co-creation occurs in the service encounter.

4. Personal Interaction

Personal interaction is the interpersonal relationships between customers and employees (C. T. Ennew and M. R. Binks 1999). Personal interaction is part of project business relationships at three interaction levels. At the person-to-person level the interaction is focused on exchange of tacit knowledge, social values and trust creation. Since value co-creation takes place in a joint sphere where both parties involve in dialogue (C. Grönroos and P. Voima 2013), there more pleasant are the personal interaction in the joint platform, the more co-creation will takes place (C. A. Lengnick-Hall 1996).

The result of this research is Personal Interaction does not affect Co-creation Outcome significantly. Based on the questionnaire, most of the respondents respond Very Agree, Agree, Neutral on how the customers felt served with courtesy, friendliness and respect during experience in using online transportation services.

CONCLUSION AND RECOMMENDATION

Conclusion

After examining the findings and discussing the result, the conclusions based on this research can be formulated as follows:

1. The independent variable which is Information Seeking, Information Sharing, Responsible Behaviour and Personal Interaction simultaneously affects Co-Creation Outcome as the dependent variable.
2. Information Seeking as one of independent variables partially affects Co-Creation Outcome significantly.
3. Information Sharing as one of independent variables partially affects Co-Creation Outcome significantly.
4. Responsible Behavior as one of independent variables partially affects Co-Creation Outcome significantly.
5. Personal Interaction as one of independent variables partially does not affect Co-Creation Outcome significantly.

Recommendation

Based on the analysis and conclusions from overall result in this research regarding effect of Customer Participation on Co-Creation Outcome, the researcher makes the following recommendations for existing and emerging online transportation company, online transportation customers, and further researcher:

1. Online Transportation Company must be able to increase Customer Participation by enhance or develop tools/facilities to accommodate customer participation. So that customers will be easier in participating comfortably and more actively.
2. Online Transportation Company and customer must be able to cooperate to increase customer participation of personal interaction to improve and maintains the each variable, because the personal interaction does not significant for effectiveness of customer participation towards Co-creation Outcome, the Co-creation Outcome can be increased.
3. Customers must be able to increase their participation in co-creation of online transportation, by more aware and understand the importance of customer participation because it is proven have a positive and significant effect on Co-Creation Outcome in Online Transportation.
4. For the next researcher, is expected to conduct research on other factors that can increase Customer Participation in Co-Creation of Online Transportation, such as other variables that not examined in this study.

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