



Co-Creative Service Innovation on Social Media: An Empirical Study in an International Coffee Cafe Chain in Indonesia

Siti Rahayu*

Management Department, Universitas Surabaya, Indonesia

Eva Emilia Tan

Management Department, Universitas Surabaya, Indonesia

Adi Prasetyo Tedjakusuma

Management Department, Universitas Surabaya, Indonesia

Article Info

Keyword:

Co-creative service innovation, Intention to co-create, Adoption intention

JEL ClassificationCode: D71, L81, M37

Corresponding author:

s_rahayu@staff.ubaya.ac.id

DOI: [10.24123/jeb.v4i1.5385](https://doi.org/10.24123/jeb.v4i1.5385)

Abstract

Purpose: This study aims to determine and analyze the effect of consumer innovativeness and attitude toward CCSI on social media, subjective norms, and perceived behavior control on intention to co-create and adoption intention. The object of this study is an international coffee café chain in Indonesia.

Method: This study uses primary data sources by distributing questionnaires online. There are 150 questionnaires used in the data processing. Research data was processed using SEM (Structural Equation Modeling) with IBM SPSS Statistic software and AMOS 22.

Result: The results show that 6 hypotheses are supported and 1 hypothesis is not supported. Consumer innovativeness, subjective norms, and perceived behavior control affect the intention to co-create. Consumer innovativeness, perceived behavioral control, and intention to co-create affect adoption intention. Hypothesis 3: the effect of attitude toward CCSI on social media on intention to co-create is not supported.

INTRODUCTION

Customer participation has been known as a core characteristic of services (Uratnik, 2016). Customer participation is crucial for companies, especially those related to product and service development. The era of technology has made customer participation through social media emerge as an essential platform for interaction and multidimensional information exchange in the form of comments, reviews, invitations, images, photos, and videos (Uratnik, 2016). In recent years, the use of social media has encouraged companies to interact with potential consumers (Lee and Suh, 2016), and increase the ability to influence purchasing behavior (Vermeulen and Seegers, 2009). Technology has changed the global market in various forms, such as information technology, online platforms, and social media. This provides new opportunities for customers to spread ideas, feedback, and other helpful information (Zhang et al., 2015). Social media changes user interaction in service innovation (Uratnik, 2016). Social media allows customers to co-create new services with

companies through social media such as Facebook, Instagram, and Twitter (Kaur, 2016). Customer interaction with companies through technology to provide various inputs related to the products produced is known as co-creation. Research on co-creation is part of service research, focusing on exchange networks, customer interactions, service companies, and technology (Maglio and Spohrer, 2008). Vargo et al. (2008) proposed the concept of service-dominant logic (S-D) based on the increasing importance of the customer's position in services. This concept has been improved by incorporating the "service-ecosystem perspective" (Vargo and Lusch, 2011). Currently, many companies are implementing service ecosystems by building information technology-based systems known as co-creative service innovation (CCSI). Research related to CCSI has been conducted recently in line with the increasing internet use and social media trends.

The present study refers to Sarmah et al. (2017) and Sarmah et al. (2018). Sarmah et al. (2017) conducted research that developed technology-based service research, with the research object being luxury hotels in India with smartphone applications. His research aimed to analyze the impact of technological innovation on guests, willingness to co-create, need for interaction, and engagement in their adoption intention for new services developed together. The findings of this study showed that innovation and guests' need to interact with service staff significantly affect their engagement. Guests' willingness to co-create acts as a partial mediator between innovation and intention to co-create new services. Sarmah et al. (2017) examined the relationship between the main drivers of intention to co-create in social media. The research was conducted on 346 hotel guests in India using the survey method. The results showed that Consumer innovativeness, attitude toward CCSI on social media, subjective norms, and perceived behavioral control positively affect co-creation and adoption intention. Intention to co-create mediates the relationship between two driving factors: Consumer innovativeness and attitudes towards CCSI on social media on adoption intention. Sarmah et al. (2017) and Sarmah et al. (2018) contribute to literature related to co-creation, service innovation, and technology-mediated service ecosystems. Hotels, as the objects in this study, represent an industry that comprehensively conceptualizes CCSI. The findings of this study allow for future research in other tourism sectors (e.g., tour operators, transportation, and food services) and other service sectors (e.g., education, financial services, and healthcare). Research in CCSI will be beneficial as a medium to bring companies and customers closer.

This present study refers to the research model of Sarmah et al. (2018), with the research object being the application of an international coffee shop chain in Indonesia with a community website. This website is designed to collect suggestions and feedback from customers. Other users can also comment and rate these suggestions. Consumer innovativeness shows customers' tendency to adopt new products more frequently and often than other customers (Moreau et al., 2001). Innovative customers tend to adopt new products (Moreau et al., 2001) and are more responsive to the products offered by the company than customers who are not innovative (Walczuzh et al., 2007). Research shows that in the hospitality industry, social media can be used effectively to attract customers who are innovative and happy to use technology to co-innovate (Sarmah et al., 2018). When customers find that new products and services are more unique and superior to existing ones, customers will collect related information and are willing to participate in marketing activities (Yen et al., 2020). Intention to co-create is a process where individuals are actively involved and have a positive intention to create something they want (Sarmah et al., 2018). Customers can be actively involved in co-creating. Based on these arguments, the following hypothesis is proposed:

H1: Consumer innovativeness has a positive effect on the intention to co-create.

Customers who are willing to engage in co-creation activities can increase their expertise, passion, and creativity to innovate in a service. Innovative customers are willing to co-create, and further customer willingness results in positive adoption intention toward new services creatively developed using smartphones (Sarmah et al., 2017). Consumer innovativeness is a human characteristic that reflects the extent to which individuals accept updates that help explain adoption

intention toward innovative products, services, and technologies (Sarmah et al., 2018). Customers who like to innovate tend to adopt new things, including technology-based services. Adoption intention is a person's behavioral tendency to adopt or fully use an innovative product or service in the future (Sholahuddin, 2017). Based on these arguments, the following hypothesis is proposed:

H2: Consumer innovativeness has a positive effect on adoption intention.

Attitude toward CCSI is a positive or negative evaluation or assessment of the behavior (Kraus, 1995). TPB describes the attitude towards the behavior as "the extent to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (Ajzen, 1991). A customer's positive attitude towards co-creating a new service with a service provider will positively influence the intention to co-create a new service. When customers develop a favorable attitude towards co-creation on social media, they may show interest and start fulfilling the co-creation beliefs (Sarmah et al., 2018). Based on these arguments, the following hypothesis is proposed:

H3: Attitude toward CCSI has a positive effect on the intention to co-create.

Subjective norms are social pressures that make someone do certain behaviors. Subjective norms can influence customers to co-create a service innovation (Sarmah et al., 2018). According to Kim et al. (2013), subjective norm refers to a function of a person's normative beliefs about important referrals that influence action and motivate compliance with these referrals. Subjective norm expresses individual beliefs about how the reference group will see the individual if they perform certain behaviors. Subjective norm is another determinant of intention and indicates the perceived social pressure to perform, or not to perform, the behavior. It is the support of others in society that shapes certain behaviors. Building social relationships can also be done in social media context through social network technologies. In the hospitality context, subjective norms may influence customers' intentions to co-create service innovation. Through social networks, customers can feel socially desirable and co-create new services (Sarmah et al., 2018). This forms the following hypothesis:

H4: Subjective norms have a positive effect on the intention to co-create.

According to Sarmah et al. (2018), perceived behavioral control shows the extent to which a person considers the performance of certain behaviors as easy or difficult. This reflects past experiences, obstacles, and anticipated consequences. Control beliefs and perceived facilities consist of perceived behavioral control and individual's perceptions toward the presence or absence of external constraints that determine his/her behavioral intentions. Therefore, the intention to co-create individuals is influenced by perceived behavioral control to perform a behavior on social media. The two factors, in this case, control beliefs and perceived facilities, consist of perceived behavioral control and individual perceptions of the presence or absence of external constraints, which also determine behavioral intentions. This research emphasizes that customers' perceived behavioral control affects adoption intention toward co-creating new services on social media. This forms the following hypothesis:

H5: Perceived behavioral control has a positive effect on the intention to co-create.

H6: Perceived behavioral control has a positive effect on adoption intention.

Fishbein and Middlestadt (1995) studied hotel guests' intention to co-create new services on social media as a significant predictor of the adoption intention of new services. By developing a stronger intention to co-create, customers will put more effort into co-creating services, such as sharing information and knowledge or providing feedback, resulting in positive adoption intention towards co-creating new services on social media. The hypothesis formed is as follows:

H7: Intention to co-create has a positive effect on adoption intention.

RESEARCH METHODS

This study is basic research, a type of scientific research to improve existing theories. Based on its objectives, this research is causal, which shows a causal relationship between two or more variables. This study aims to examine the causal relationship between consumer innovativeness, attitude toward service innovation in social media, subjective norm, and perceived behavioral control on intention to co-create and adoption intention in an international coffee café chain in Indonesia. The type of data used in this study was primary data. Data were obtained from respondents through a questionnaire distributed via Google Forms. The measurement level used was the interval level. The alternative answers for the interval level were arranged based on a numerical scale. Statements were measured on a 7-point Likert scale with "Agree-Disagree" anchor statements. The measuring indicators in this study replicated Sarmah et al. (2018). Consumer innovativeness was measured by 4 items referring to Goldsmith and Hofacker (1991) and Bruner and Kumar (2007) research. Adoption intention was measured by 7 items referring to Handrich and Heidenreich (2013) and Zwass (2010) research. Attitude toward CCSI was measured by 4 items referring to Taylor and Todd's (1995) research. Subjective norm was measured with 2 items referring to Taylor and Todd's (1995) research. Perceived behavior control was measured by 3 items referring to Taylor and Todd's (1995) research. Intention to co-create was measured by 4 items referring to Taylor and Todd (1995), Prahalad and Ramaswamy (2004), Handrich and Heidenreich (2013), and Zwass (2010) research.

The target population in this study was all people who had purchased international coffee cafe products offline and online in the past year. The characteristics set were males or females, often bought products and used international coffee cafe network services online or offline through the application, had a minimum education of high school/vocational school/equivalent, and had used international coffee cafe network services offline and online through the application. The reason for choosing respondents with these characteristics was to enable respondents to provide accurate and reliable information following existing realities. A sample is part of the population to be studied and usually represents the entire population. The population of this study was unknown, so this study uses non-probability sampling. The type of non-probability sampling used was purposive sampling. Purposive sampling is a sample selection based on predetermined characteristics (Cozby and Bates, 2012). Data processing in this study began with validity and reliability testing using the IBM SPSS Statistic program. The validity test is used to identify factors with the right accuracy to be used as a measuring instrument that provides accurate measurement results in the existing research model. The variable is declared valid if the significant correlation value is $< \alpha$ (0.05). The reliability test is used to measure the consistency and stability of indicators. Reliability is measured by Cronbach's Alpha method through SPSS Statistic software. Variables are considered reliable if Cronbach's Alpha value is > 0.6 . The AMOS version 22.0 program is used to perform SEM data processing, namely conducting structural and measurement model tests and hypothesis testing.

RESULTS & DISCUSSION

The validity test is used to test the feasibility of the indicators by distributing 30 initial questionnaires online via Google Forms. Data from 30 initial respondents were tested to calculate the Pearson correlation using the SPSS program. Indicators are valid if the significance value is ≤ 0.05 and have a Pearson correlation value ≥ 0.5 . A valid questionnaire shows that the indicators used in the questionnaire can measure each variable and are understood by respondents. In addition, the indicator is said to be reliable if Cronbach's alpha value is ≥ 0.6 . The validity test results show that all indicators of all research variables, namely Consumer Innovativeness, Attitude toward Co-Creation Service Innovation on Social Media, Subjective Norms, Perceived Behavioral Control, Intention to Co-Create, and Adoption Intention have a significance value < 0.05 and have a Pearson correlation value > 0.5 , so they are declared valid. All variables also have a Cronbach's alpha value

≥ 0.6 . Thus, it can be concluded that all indicators used to measure the variables in this questionnaire are consistent and reliable so that they can be used.

The respondents in this study were 150. Based on gender, there were 91 female respondents (60.7%) and 59 male respondents (39.3%). Respondents aged 18 to 25 years were 127 people (84.6%), aged 26 to 35 years were 17 people (11.3%), and those aged more than 36 years were 6 people (4%). Most respondents who filled out the questionnaire were 18 to 25 years old. Based on the level of education, respondents whose education level was high school/ equivalent were 73 people (48.7%), diploma were 14 people (9.3%), Bachelors were 57 people (38%), Master were 5 people (3.3%), and Doctoral was 1 person (0.7%). Most respondents are those whose education level is high school/equivalent. The measurement model is used as the first step to test validity and reliability. Measurement indicators are feasible if they meet the standard fit test criteria, or called the Goodness of fit Index (GoF). Furthermore, standardized loading analysis is carried out to determine the accuracy of each indicator, or it can also use AVE and CR.

Table 1
The Goodness of fit Measurement model CFA

No.	Goodness of fit	Criteria	Test Results	Description
1	CMIN/DF	≤ 3.00	1.212	Good Fit
2	RMSEA	≤ 0.08	0.038	Good Fit
3	GFI	0.8 – 0.9	0.869	Marginal Fit
4	CFI	0.8 – 0.9	0.981	Good Fit
5	TLI	0.8 – 0.9	0.978	Good Fit

Source: Processed data by researchers

Table 1 shows the goodness of fit index values of the measurement model. The first criterion of CMIN/DF is declared a good fit because it has a value ≤ 3 . The second criterion of RMSEA is declared a good fit because it has a value ≤ 0.08 . The third criterion of GFI is declared a marginal fit because it has a value of 0.8 - 0.9. The fourth criterion of CFI is declared a good fit because it has a value ≥ 0.9 . The fifth criterion of TLI is declared a good fit if the value is ≥ 0.9 . The value of the TLI test results is 0.978, so it is declared a good fit. After measuring the goodness of fit, the authors measured standardized loading. This measurement was carried out to determine the accuracy of an indicator in compiling a construct. Indicators can still be used if they have a standardized loading value < 0.5 ; then, the indicator is declared invalid and unreliable.

Table 2 shows the results of validity and reliability tests using standardized loading by calculating the average variance extracted (AVE) and construct reliability (CR) values. Indicators can be used if the standardized loading value is ≥ 0.5 or has an AVE and CR value according to the criteria, namely the AVE value ≥ 0.5 and the CR value ≥ 0.7 with a minimum of 0.6. Table 2 shows that all variables meet the requirements because they have a CR value ≥ 0.7 . All variables also have an AVE value ≥ 0.5 . Based on the standardized loading calculation test results, all variables meet the standardized loading requirements, namely ≥ 0.5 , so that the measurement results above can be declared to meet the validity and reliability criteria in the measurement model; thus, they can proceed to the next stage.

Table 2
Standardized Loading, AVE, and CR Values of each Variable

Variable	Indicator	Std. Loading(λ)	AVE	CR	Description
CI	CI1	0.861	0.667	0.889	Valid and Reliable
	CI2	0.818			Valid and Reliable
	CI3	0.812			Valid and Reliable
	CI4	0.773			Valid and Reliable
CCSI	CCSI1	0.751	0.609	0.862	Valid and Reliable
	CCSI2	0.766			Valid and Reliable
	CCSI3	0.832			Valid and Reliable
	CCSI4	0.771			Valid and Reliable
SN	SN1	0.784	0.619	0.764	Valid and Reliable
	SN2	0.789			Valid and Reliable
PBC	PBC1	0.861	0.787	0.917	Valid and Reliable
	PBC2	0.926			Valid and Reliable
	PBC3	0.873			Valid and Reliable
ICC	ICC1	0.781	0.615	0.865	Valid and Reliable
	ICC2	0.806			Valid and Reliable
	ICC3	0.804			Valid and Reliable
	ICC4	0.745			Valid and Reliable
AI	AI1	0.724	0.593	0.897	Valid and Reliable
	AI2	0.826			Valid and Reliable
	AI3	0.793			Valid and Reliable
	AI4	0.772			Valid and Reliable
	AI5	0.795			Valid and Reliable
	AI6	0.686			Valid and Reliable

Source: Processed data by researchers

After analyzing the measurement model, the next step was SEM analysis, carried out by testing the structural model. Structural models are carried out to fulfill the research hypothesis. The structural model is carried out first by testing the goodness of fit index. Based on Table 3, the first criterion on the goodness of fit index of the structural model, the CMIN/DF test result value of 1.311, is included in the good fit category. The second criterion of RMSEA is included in the good fit category because it has a value of 0.046. The third criterion of GFI is included in the marginal fit category because it has a value of 0.861. The fourth criterion of CFI is included in the good fit category because it has a value of 0.972. The fifth criterion of TLI is included in the good fit category because it has a value of 0.968.

Table 3
The Goodness of fit Structural Model SEM

No.	Goodness of fit	Criteria	Test Results	Description
1	CMIN/DF	≤ 3.00	1.311	Good Fit
2	RMSEA	≤ 0.08	0.046	Good Fit
3	GFI	0.8 - 0.9	0.861	Marginal Fit
4	CFI	0.8 - 0.9	0.972	Good Fit
5	TLI	0.8 - 0.9	0.968	Good Fit

Source: Processed data by researchers

Based on Table 3, all criteria on the goodness of fit index of the structural model: CMIN/DF, RMSEA, GFI, CFI, and TLI have values according to the criteria, so it can be declared a good fit. For the GFI value, it is declared a marginal fit. The research continued by conducting hypothesis testing. Hypothesis testing is done to analyze the influence between variables through existing hypotheses. Table 4 and Figure 1 show the results of hypothesis testing.

Table 4
The Results of Hypothesis Testing

Hypothesis		Standardized Estimate	C.R	P-value	Description
H1 (+)	CI → ICC	0.318	1.968	0.049	Supported
H2 (+)	CI → AI	0.257	2.074	0.038	Supported
H3 (+)	CCSI → ICC	0.212	1.238	0.216	Not Supported
H4 (+)	SN → ICC	0.288	2.429	0.015	Supported
H5 (+)	PBC → ICC	0.211	2.173	0.030	Supported
H6 (+)	PBC → AI	0.271	3.271	0.001	Supported
H7 (+)	ICC → AI	0.260	1.992	0.046	Supported

*** = significant with a p-value <0.001,

** = significant with a p-value <0.05,

* = significant with a p-value <0.1.

Source: Processed data by researchers

The results of the hypothesis testing show that of the 7 hypotheses in this study, 6 hypotheses are supported, and 1 hypothesis is not supported.

Table 4 shows the results of hypothesis testing. The hypothesis is declared supported when it has the same direction of influence as the test results and has a significant value according to the criteria: a $|C.R. | \geq 1.96$ value or a p-value < 0.1. Based on Table 4 and F1, out of 7 hypotheses, 1 hypothesis of H3 is not supported. In H3, the hypothesis is not supported because, based on the results of H3 testing, it has a standardized estimate value of 0.212, a $|C.R. |$ value of 1.238, and a p-value of 0.216, which exceeds the p-value requirement. Thus, it can be concluded that H3 has the same direction of influence or positive relationship but is not significant. While other 6 hypotheses of H1, H2, H4, H5, H6, and H7 are supported. In H1, the hypothesis is supported because the direction of influence between variables is in accordance with the hypothesis that has been proposed.

H1 has a standardized estimate of 0.318, the $|C.R. |$ value of 1.968, and a p-value of 0.049; thus, it can be concluded that the hypothesis has a unidirectional and positive and significant relationship. Technology-based services are in great demand today. Many companies develop technology-based systems to facilitate customers in providing creative ideas. This service motivates customers to provide creative and innovative ideas to the company. Many companies today are realizing customer ideas, so customers will get new product variants resulting from customer ideas. It gives customers pride if their products are realized and enjoyed by other customers. This aligns with Sarmah et al. (2018), which revealed that the consumer innovativeness variable has a significant effect on the intention to co-create. Innovative customers show more intention to co-create.

H2 is supported because the direction of influence between variables is in accordance with the proposed hypothesis. H2 has a standardized estimate of 0.257, a $|C.R. |$ value of 2.074, and a p-value of 0.038, so it can be concluded that the hypothesis has a unidirectional and positive and significant relationship. When the company gives customers facilities to provide creative and innovative ideas, customers will take advantage of these facilities to give reviews related to company services. Customer participation is also encouraged by a company that facilitates uploading content and gives prizes for the best content. Many other interesting things make customers want to share positive

things about the company's services. This aligns with Sarmah et al. (2018), which stated that the consumer innovativeness variable has a significant effect on the adoption intention variable. Consumer innovativeness is like nurturing a personality in all consumers. Most consumers have adopted several products/services or ideas that are new to the consumer experience while consuming products or services. Adoption intention is a person's behavioral tendency to adopt or fully use an innovative product or service in the future. Customers are usually willing to voluntarily share information about the company's services and atmosphere through social media.

In H4, the hypothesis is supported because the direction of influence between variables is in accordance with the proposed hypothesis. H4 has a standardized estimate of 0.288, a $|C.R.|$ value of 2.429, and a p-value of 0.015, so it can be concluded that the hypothesis has a unidirectional and positive and significant relationship. Co-creation-based services encourage customers to participate and provide input on creating products or services that other customers can enjoy. This is in line with Sarmah et al. (2018), which stated that the subjective norm variable has a significant effect on the intention to co-create variable. Subjective norm is social pressures that make someone want to do a specific behavior. Subjective norm can influence customers to co-create service innovations. According to Kim et al. (2013), subjective norm shows individual beliefs about how other groups see the individual if they are performing certain behaviors. Individuals' existence will affect their desire to provide innovative ideas. Many companies today facilitate the formation of communities. When togetherness among customers is felt in the community, it will encourage customers' desire to co-create with the company.

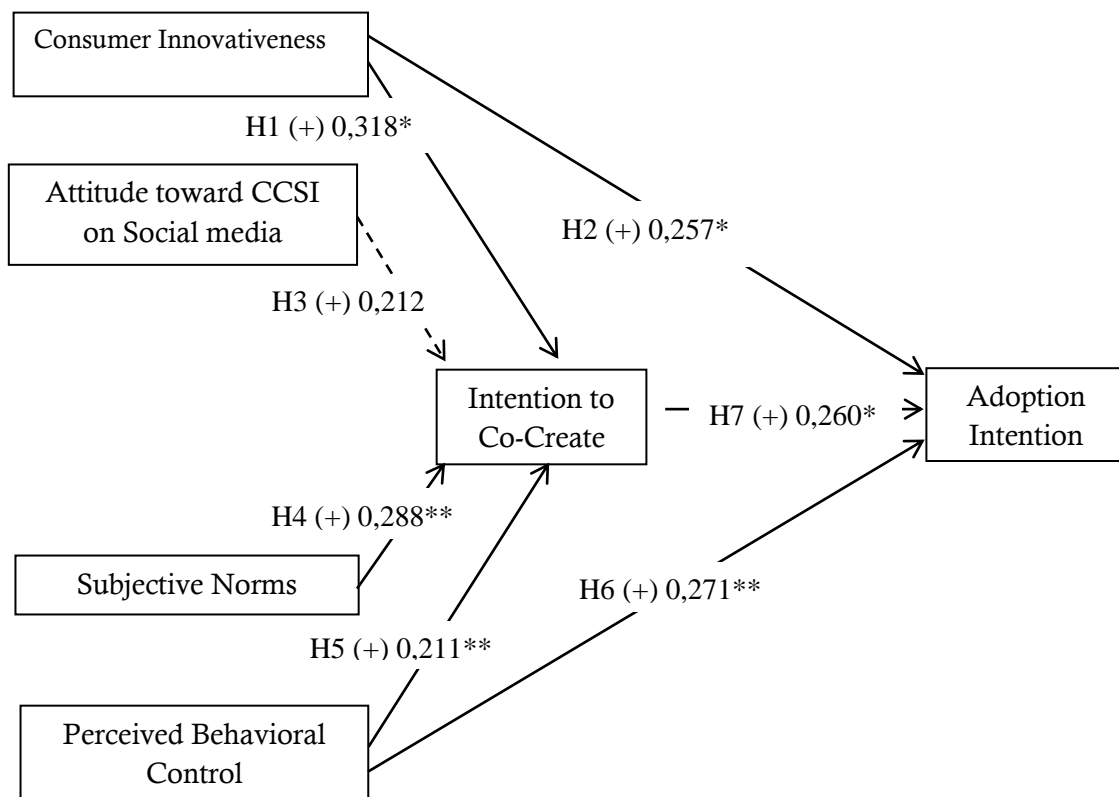


Figure 1. The Results of Hypothesis Testing

Notes:

*** = significant with a p-value <0.001;

** = significant with a p-value <0.05;

* = significant with a p-value <0.1.

In H5, the hypothesis is supported because the direction of influence is in accordance with the proposed hypothesis. H5 has a standardized estimate of 0.211, a |C.R| value of 2.173, and a p-value of 0.030, indicating that the hypothesis a unidirectional and positive and significant relationship. This aligns with Sarmah et al. (2018), which stated that perceived behavioral control has a significant effect on the intention to co-create. According to Lee et al. (2015), the ability to control risk positively influences user confidence when involved in the activities you want to do. According to Kim et al. (2013), perceived behavioral control is the ease or difficulty of doing something. Therefore, perceived behavioral control over social media influences the intention to co-create (Sarmah et al., 2018). Coffee cafes are currently trending restaurants among millennials who are generally users of technology-based services. When companies offer co-creation services, customers find it easy to do. They are very adaptable to technology-based services. This makes customers try to be creative by providing new ideas that can be realized and enjoyed by other customers.

In H6, the hypothesis is supported because the direction of influence is in accordance with the proposed hypothesis. H6 has a standardized estimate of 0.271, a |C.R| value of 3.271, and a p-value of 0.001, so it is concluded that the hypothesis has a unidirectional and positive and significant relationship. Customers' desire to co-create makes them want to give reviews and inform other customers. This is in line with Sarmah et al. (2018), which stated that perceived behavioral control has a significant effect on adoption intention. According to Sarmah et al. (2018), behavioral control affects customer intention to adopt new services. According to Sun et al. (2020), perceived behavioral control is the belief that a factor can facilitate or hinder the performance of a behavior. When the services offered by the company to make co-creation are attractive to customers, and customers have sufficient knowledge related to services, customers will review and communicate various interesting information about the coffee café to other customers and the public.

H7 has a standardized estimate of 0.257, a |C.R| value of 2.074, and a p-value of 0.038; thus, it can be concluded that the hypothesis has a unidirectional or positive and significant relationship. Customers' desire to participate in creating new products or services creates a desire to participate further by giving reviews related to the company's services and sharing them with other customers. This is in line with Sarmah et al. (2018), which stated that the intention to co-create has a significant effect on adoption intention. According to Bitner and Brown (2008), customer adoption intention depends on customer engagement ranging from very to very little involvement in service innovation activities. According to Nambisan (2002), customer involvement indicates the extent to which customers create, produce, and deliver new services. Customers who co-create with the company are loyal customers. They do not just enjoy food and drinks but enjoy the cafe's atmosphere while doing other activities such as working, conducting business meetings, and various other activities. When doing activities at the cafe, they know the café's needs; thus, when services are not suitable, they will quickly provide input so that other customers can enjoy them.

H3 is not supported, indicating that although co-creation is a good idea and beneficial to the company and other customers, it does not affect the customer's desire to give reviews related to the experience of using the company's services. Co-creation is the company's effort to capture customers' creative ideas. However, customer ideas will be strictly screened before being implemented. Implementing a new idea will usually add new efforts for the company to realize it. Co-creation will be carried out by a small number of customers so that it will not significantly affect customer efforts in disseminating information to other customers or the public. This is not in line with Sarmah et al. (2018), which stated that attitude toward CCSI on social media has a significant effect on the intention to co-create. According to Sarmah et al. (2018), a person's attitude toward a behavior is one of the most significant predictors of one's intention to engage in that behavior. Therefore, when customers show a favorable attitude toward co-creation on social media, the customer shows interest in fulfilling the co-creation belief. According to Bitner and Brown (2008), customer engagement can ensure that the service meets customer standards by understanding their needs.

CONCLUSION

The results show that of the 7 hypotheses in this study, 6 hypotheses: H1, H2, H4, H5, H6, and H7 are supported, and 1 hypothesis H3 is not supported. This study shows increased use of social media as an effective medium to increase interaction between companies and customers. International coffee café chains can engage customers to create and develop new and innovative services through social media as an effective communication medium. Businesses should proactively engage with customers to understand their needs and wants and respond with new services to satisfy them (Thomke and Von Hippel, 2002).

This study contributes to literacy related to co-creation, service innovation, and technology-mediated service ecosystems. The results show that technology is an important medium for companies to create applications that can be used to get closer to customers. Customers who feel a close relationship with the company are usually happy to be involved in the company's activities. Co-creation is a means for companies to get new ideas from customers. Among the various customer ideas, the company will realize them to benefit the company and other customers. The findings of this study allow for future research in other sectors, such as tourism (e.g., travel agency, transportation) and other services (e.g., education, financial services, and healthcare). Using social media to facilitate Co-Creative Service Innovation (CCSI) can be the beginning of personalized interactions that lead to the development of new services. Companies can enjoy a superior business performance by adopting CCSI strategies facilitated by social media.

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