Analysis of Multichannel Service Delivery Quality on Customers' Continued Engagement Intention a Context of Multichannel Service in Indonesia

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Abstract. This research is aimed to analyze the factors that affect the continued engagement intention in using the multi-channel service. Based on previous research, the adoption of technology has led to the combination of both internet-based and brick-and-mortar exchanges. On the other hand, enhancing seamless customer experience as the retailers' long-term goal also promotes a shift from siloed multi-channel to integrated multi-channel business. This study adopted a quantitative method approach using the conceptualization of multi-channel customer experience as an analytical guideline. Data was collected from omnichannel restaurant shoppers in Indonesia (n = 412) to achieve the research objective. The founding demonstrates that the model conceptualized was a good predictor which impacts continued engagement intention. Perceived compatibility takes place as the most influential factor for customers to decide on the continued use of the service, aligned with the characteristic of multi-channel service perceived by consumers towards the customer experiences.

Keywords: Multi-Channel Service · Customer Experience · Customer Involvement · Perceived Compatibility · Continued Engagement Intention

1 Introduction

Shopping using various channels is a rapidly growing phenomenon, following retailers' efforts to develop new channels in retailing activities. In addition, it is also supported by the increase in consumer behavior in using various devices anywhere and anytime [1]. Studies on the retail industry also demonstrate the dynamics that occur alongside the adoption of technology either by consumers or by retailers, from the mono channel as the traditional retailing method to multi-channel, cross-channel, or omnichannel with available multiple channels that consumers can choose according to their needs [2]. So, retailers have started using a variety of channels, such as online stores, telephone, catalogs, interactive home shopping (HIS), or mobile shops [2].

Beck and Rygl (2015) note that several academic works of literature use multi-channel terminology as an umbrella term, while cross-channel terminology is used

specifically to define interactions between the spread channels. Wilding (2013) also argues that multi-channel systems usually have separated channel management, which is developed by retailers due to the rapidly changing demands of the e-commerce and information technology industries [2]. Under these circumstances, the channels that are operated separately will result in a fragmented production chain, so the further retailer's effort is to produce a consistent and reliable consumer experience [3].

Multichannel is defined as the operation of various channels separately and simultaneously without any interaction between the channels [3]. Separation of the operation of the channel in the multi-channel strategy resulting further development of the existence of spread channels, including their operational activities both academically and functionally in retailing industries [1]. The literature in retailing also has varying understandings in defining multi-channel. The term multi-channel is also defined as multiple channels, which includes the multi-channel activity itself, which is described as separate channel operations without any interaction between the channels. Multiple channels also classify cross-channels with partial integration and Interaction between channels and also fully integrated omnichannel [2]. This research proposed the general multi-channel term or multiple channels as the key concept. Moreover, the multi-channel service is also demonstrated as an innovative product in which the technology adoption exists in the application process towards the adoption process by consumers. Therefore, the use of perceived compatibility as one of the key factors in adoption intention posits the novelty of this research.

This research also aimed to analyze the effect of the quality of multi-channel service delivery quality on the continued engagement intention towards two elements proposed by Chen et al. (2019) mentioned as information transparency and accessibility and channel integration [1]. Customer involvement also posits in moderating the characteristic of multi-channel services perceived by consumers. For the intervening effect, this research uses customer experiences containing utilitarian, aesthetic appeal, and playfulness, which reflect both the hedonic and utilitarian experiential values in the service. Taken together with the customer experience in using the multi-channel service, perceived compatibility is also constructed to be one of the precedents affecting consumers' decision to reuse the current service in different circumstances.

2   Methods

To measure the relevance between the models proposed in this research and the data collected, this study proposes 40 measurement items gathered from the previous study related. The overall 40 measurement items are linked to each of its variables. There are 8 variables in total. Information transparency and accessibility were measured using 7 items adapted by the scales referring to the channel attributes needed to satisfy the consumer's needs [4, 5]. Channel integration was measured using 6 items adapted from the scales used to assess the customer evaluation of the experience of using offline and online multiple channel services [6] (Fig. 1 and Table 1).

Customer experience is assessed towards utilitarianism, aesthetic appeal, and playfulness. For utilitarianism, the measurement deployed with 3 items adapted from the scales used to measure the customer decision-making process [3]. The variable aesthetic appeal containing three items together with a playfulness that containing 4 items
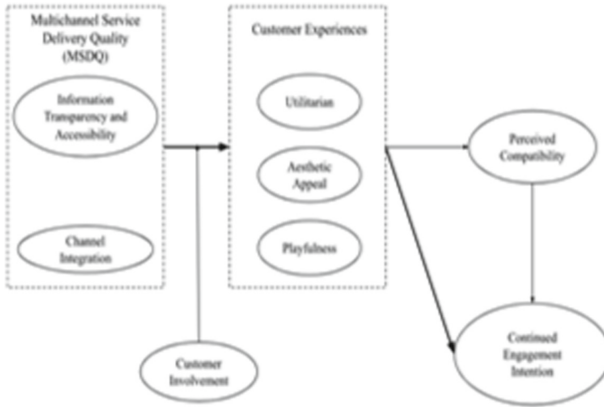
Fig. 1. Research Model

Table 1. Product Category Shopped by Respondent

Product Category	Percentage (%)	n
Foods and Beverages	48,79%	201
Apparel	24,27%	100
Body Care	14,32%	59
Electronic Devices	5,83%	24
Other (each less than 2%)	6,79%	28
Total	100%	412

were assessed using the scale related to customer experiences in using the internet and experiencing catalog shopping [7]. For customer involvement, the measurement items adapted from the scales used to evaluate customer cognitive and emotional responses towards searching and purchasing experiences contain 5 items [1]. Continued engagement intention was measured using 8 items collected from a study that uses the scales to measure customer loyalty, word-of-mouth, and repurchase intentions [1]. Perceived compatibility was measured using 4 items adapted from the scales used to measure customer experience while using omnichannel service [8].

2.1 Population and Sample

This study purposed a sample from the total population in Indonesia using Slovin Formula, resulting (n = 385) to represent the total population in 2022. Otherwise, the sample was also calculated using the minimum of 10 multiplied by the measurement items as (n = 400) from the minimum requirement stated by Hair et al. (2013) [9]. So, the sample required in this study is (n = 400).

2.2   Sampling Technique

Respondents were reached using self-administered questionnaires on the online platform. The beginning part of the questionnaire contains a short introduction about multichannel services, and soon, respondents are asked to answer the screening questions. The first screening question is questioning if they are experiencing a multi-channel service within the past three months, they can continue to complete the survey. On the other hand, if the answer is no, we remove the sample from the data list. The second screening is questioning their usage in current purchasing channels Relating to the physical stores, the online stores, and the mobile app stores combination. Only when the respondents select more than one channel will they be considered for the sample list [1].

We gathered the information and analyzed it using five-point Likert-type scales ranging from strongly disagree, represented in 1 score, to agree, represented in 5 scores strongly. In the final, the survey consisted of 40 questions that represented the measurement items, excluding the screening and profiling questions.

2.3   Method of Data Analysis

The primary data obtained will be processed using the structural equation modeling (SEM) method. According to Hair et al. (2013), SEM is a data processing method using statistical techniques by analyzing the relationship patterns of latent constructs and their indicators between one latent construct and another, then also displays measurement errors directly [9]. In this study, SEM is considered the most suitable method because SEM can see the correlation between variables as a unit, making it possible to carry out exogenous and endogenous variables directly [9].

3   Results and Discussion

This research analysis is conducted by the research model proposed before. Hypothesizing the effect of the multi-channel service delivery quality (MSDQ) containing information transparency and accessibility and channel integration to the customer experience containing utilitarian, aesthetic appeal, and playfulness. Also, the effect of consumer experience on continued engagement intention is either in direct effect or mediated towards perceived compatibility. The hypotheses testing was also conducted to analyze the moderating effect of customer involvement in MSDQ effect on the customer experience (Figs. 2 and 3).

We analyzed the correlation based on the value gathered from respondents using the PLS-SEM model using SmartPLS software. Structural analysis using the PLS-SEM model primarily includes two significant steps, outer model analysis to analyze the relationship between observed variables and their construct, and inner model analysis used to correlate the structural relationship between the exogen variable and the endogen variable. For the outer model, we conducted three steps internal consistency test, convergent validity test, and discriminant validity test. The internal consistency test resulting from eight variables has a strong construct reflected from each of its measurement items, indicated by Cronbach's Alpha score, composite reliability (CR), and average variance
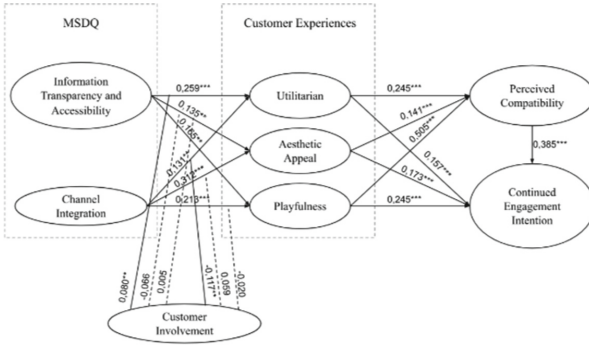
Fig. 2. Pictorial of Path Analysis

	CR	AVE	AA	CEI	CIT	CIV	ITA	PC	PL	UT
AA	0.923	0.800	**0.894**							
CEI	0.926	0.611	0.647	**0.782**						
CIT	0.905	0.613	0.587	0.578	**0.778**					
CIV	0.895	0.631	0.592	0.667	0.623	**0.787**				
ITA	0.915	0.606	0.559	0.608	0.645	0.723	**0.778**			
PC	0.923	0.750	0.6	0.765	0.51	0.584	0.556	**0.866**		
PL	0.885	0.659	0.651	0.733	0.548	0.613	0.563	0.739	**0.812**	
UT	0.883	0.716	0.53	0.624	0.501	0.579	0.566	0.61	0.578	**0.846**

Fig. 3. Result of Discriminant Validity

extracted (AVE) score. So on with the measurement items, the overall 40 measurements are concluded as a strong reflector to each of its variables, assessed from the loading factor value above 0,70. The suitability between the measurement items and each of the variables reflected was also measured by Fornell-Lacker Criterion, resulting strong cross-loading value that indicates a strong correlation. The results of the correlation composite reliability above indicate that from the outer model analysis, the observed variable as the measurement item is a good reflector for each variable, corresponding with the score of CR and AVE being higher than 0,70 while the score for correlation of each for eight variable is higher in the diagonal pattern.

For the inner model analysis, we conduct using three steps R Square analysis, path coefficients evaluation, and also direct and indirect effect analysis. In the total of the 19 hypotheses, we group them into four blocs based to ease the further analysis as follows:

The hypotheses bloc for MSDQ effect on customer experiences contains six hypotheses as H1a, H1b, and H1c. H2a, H2b, and H2c. The overall six hypotheses were stated supported by the analysis process in the inner model steps.

H1. The ITA from MSDQ positively influences customer experiences that contain [a] utilitarianism, [b] aesthetic appeal, and [c] playfulness.

H2. The CI from MSDQ positively influences customer experiences that contain [a] utilitarianism, [b] aesthetic appeal, and [c] playfulness.

Table 2. Hypotheses testing for customer involvement bloc

H Code	Hypothesis	Original Sample	T Statistic	P Values	Conclusion
H4a	CI moderating the effect of ITA on utilitarian	0,080	1,984	0,048	Supported
H4b	CI moderating the effect of ITA on aesthetic appeal	-0,066	1,111	0,267	Not Supported
H4c	CI moderating the effect of ITA on playfulness	0,005	0,104	0,917	Not Supported
H5a	CI moderating the effect of CI on utilitarian	-0,117	2,272	0,023	Supported
H5b	CI moderating the effect of CI on aesthetic appeal	0,059	0,775	0,439	Not Supported
H5c	CI moderating the effect of CI on playfulness	-0,020	0,347	0,729	Not Supported

The second hypotheses bloc describes the effect of customer experience on continued engagement intention, which includes H3a, H3b, and H3c. These three Hypotheses are also stated as supported based on inner model steps in PLS-SEM analysis (Table 2).

H3. Customer experiences that contain [a] utilitarianism, [b] aesthetic appeal, and [c] playfulness positively influence CEI.

The third bloc explicates the correlation in moderating effect of customer involvement in the effect of MSDQ on customer experience. In total, there are six hypotheses consisting of 2 supported hypotheses and 4 not supported hypotheses. The not supported label gained from the insufficient T statistic value, which results below the T table value (1.96).

H4. Customer involvement moderates the effect of ITA on customer experiences, including [a] utilitarianism, [b] aesthetic appeal, and [c] playfulness.

H5. Customer involvement moderates the effect of CI on customer experiences, including [a] utilitarianism, [b] aesthetic appeal, and [c] playfulness.

The last bloc for hypotheses testing is the mediating effect of perceived compatibility, which consists of three hypotheses. The hypotheses testing process also results supported the notion of three hypotheses.

H6. Perceived Compatibility mediates the effect of customer experiences, including [a] utilitarianism, [b] aesthetic appeal, and [c] playfulness on the CEI.

The relationship that occurs in the 6 (six) hypotheses in the first bloc is in line with that described by Chen et al. (2019) that the quality of multi-channel services is assessed by the quality of the integration and the ease of access to the information gives a positive impression on the customer experience [1]. Consumers will find a service that they feel includes cognitive, affective, emotional, social, and sensory responses [10]. These holistic responses are summarized into experiential values consisting of utilitarian and hedonic values as the main rational drivers of consumers in using multi-channel services [11].

The second bloc that depicts the relationship between customer involvement and continued engagement intention is also in line accordance with Chen et al. (2019). The most significant effect of customer experience to create the intention to reuse the service is shown by the playfulness variable, which refers to Chen et al. (2019) that fun is the hallmark of the adoption of technology, especially the internet, where consumers can be "freely involved" to choose and interact with whatever they want [1]. Mathwick et al. (2001) also explain that playfulness occurs from engaging in pleasurable activities, thus offering an escape from the everyday world. Escapism has also been described as an aspect of playfulness that supports consumers temporarily away from their daily activities and often involves a "pretend" element in it. Window shopping or other forms of webrooming are examples of the "pretend" element of escapism in the context of retail shopping [8].

The bloc for customer involvement moderating effect in the effect of MSDQ on customer experiences containing not supported hypotheses that can be caused by the difference of the geographic context of this study with the previous study. Thus, the results of hypothesis testing related to customer involvement moderation are not fully in line with the research of Chen et al. (2019). So, it can be concluded from the hypothesis test that the higher or lower level of consumer involvement does not affect the experience perceived by the consumers in accordance with service quality. If it is related to the hypothesis of the direct influence of MSDQ on customer experience, which results in a positive and significant relationship, consumers in Indonesia tend not to feel that involvement in the effort to satisfy themselves with the use of services which can affect the perceived experience. Refer back to the distribution of product categories consumed by respondents, which covers almost 50% of which are food & beverage categories which are products with low-involvement characteristics. Although retailers also offer the benefits of consumer loyalty, in the consumption process, consumers will tend to choose based on brands or products rather than service delivery. So the consumption process can be considered as a low involved goods consumption.

The positive effects in the mediating effect of perceived compatibility are also in accordance with the previous research conducted by Shi et al. (2020), which defines perceived compatibility as one of the characteristics perceived by consumers in accepting an innovation, in addition to perceived risk [8]. Perceived compatibility of the experience perceived by consumers is based on the compatibility of the values they believe in, beliefs, habits, and experiences that are felt both the in the past and present time [8, 12–14]. Thus, the elements formulated in the customer experience can be accommodated as a form of perceived compatibility by consumers. So that consumers' decisions to reuse multi-channel services that they have used are not limited to their evaluation of the use of

the current services but are also based on much broader things, as stated by Aljabri and Sohail (2012) as being in harmony with what has been felt and believed by consumers all the time [15].

4   Conclusion

This research provides an empirical justification for using the retailing activity using multiple channels. The results of this study indicate that service quality through the MSDQ framework has a positive effect on continued engagement intention, which shows tangible evidence of consumer experience. The findings also show that as long as customers perceive multi-channel services according to their previous experience as a whole, it will result in a positive evaluation of the product innovations faced by customers. In this context, multi-channel services are tested using perceived compatibility. Previous use of multi-channel services also significantly affects consumer confidence in using the same service, so this relationship becomes critical for influencing subsequent consumer decisions. Customer involvement does not have a significant moderating effect because the level of consumer involvement is not always relevant to the level of customer satisfaction.

References

1. Chen, J. S., Tsou, H. T., Chou, C. Y. & Ciou, C. H. Effect of multichannel service delivery quality on customers' continued engagement intention: A customer experience perspective. Asia Pacific J. Mark. Logist. 32, 473–494 (2020).
2. Beck, N. & Rygl, D. Categorization of multiple channel retailing in Multi-, Cross-, and Omni-Channel Retailing for retailers and retailing. J. Retail. Consum. Serv. 27, 170–178 (2015).
3. Sousa, R. & Voss, C. A. Service quality in multichannel services employing virtual channels. J. Serv. Res. 8, 356–371 (2006).
4. Oh, L. Bin, Teo, H. H. & Sambamurthy, V. The effects of retail channel integration through the use of information technologies on firm performance. J. Oper. Manag. 30, 368–381 (2012).
5. Yeo, V. C. S., Goh, S. K. & Rezaei, S. Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. J. Retail. Consum. Serv. 35, 150–162 (2017).
6. Acquila-Natale, E. & Iglesias-Pradas, S. How to measure quality in multi-channel retailing and not die trying. J. Bus. Res. 109, 38–48 (2020).
7. Montoya-Weiss, M. M., Voss, G. B. & Grewal, D. Determinants of Online Channel Use and Overall Satisfaction with a Relational, Multichannel Service Provider. J. Acad. Mark. Sci. 31, 448–458 (2003).
8. Shi, S., Wang, Y., Chen, X. & Zhang, Q. Conceptualization of omnichannel customer experience and its impact on shopping intention: A mixed-method approach. Int. J. Inf. Manage. 50, 325–336 (2020).
9. Hair, Joseph F.; Black, Bill; Babin, Barry; Anderson, Rolph E.; Tatham, R. L. Multivariate Data Analysis. (Prentice Hall, 2005).
10. Verhoef, P. C., Kannan, P. K. & Inman, J. J. From Multi-Channel Retailing to Omni-Channel Retailing. Introduction to the Special Issue on Multi-Channel Retailing. J. Retail. 91, 174–181 (2015).

11. Hossain, T. M. T., Akter, S., Kattiyapornpong, U. & Dwivedi, Y. K. Multichannel integration quality: A systematic review and agenda for future research. J. Retail. Consum. Serv. 49, 154–163 (2019).
12. Crowley, A. E., Spangenberg, E. R. & Hughes, K. R. Measuring the hedonic and utilitarian dimensions of attitudes toward product categories. Mark. Lett. 3, 239–249 (1992).
13. Herhausen, D., Binder, J., Schoegel, M. & Herrmann, A. Integrating Bricks with Clicks: Retailer-Level and Channel-Level Outcomes of Online-Offline Channel Integration. J. Retail. 91, 309–325 (2015).
14. Thakur, R., Angriawan, A. & Summey, J. H. Technological opinion leadership: The role of personal innovativeness, gadget love, and technological innovativeness. J. Bus. Res. 69, 2764–2773 (2016).
15. Al-Jabri, I. M. & Sohail, M. S. Mobile banking adoption: application of diffusion of innovation theory. J. Electron. Commer. Res. JECR 13, 379–391 (2012).