

Analysis of Omnichannel in Fixed-Broadband Internet Services to Improve Customer Experience at PT Telkom Indonesia Tbk

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ABSTRACT

Many companies use Multichannel to provide their services to customers. However, these channels are not integrated, making customers get different experiences, and the flow of information is not continuous. The Omnichannel comes by synergizing the management of various channels to achieve a seamless, integrated, and consistent customer experience. PT Telkom Indonesia Tbk (Telkom), a telecommunication company that provides internet fixed broadband service, is already integrating its services at various touchpoints with customers. However, it was found that the Net Promoter Score (NPS), which measures the level of customer experience, is not optimal. This study tends to solve the problem with Omnichannel Customer Experience (OCX) by developing a model based on the Wixom & Todd framework that considers the perceived channel integration quality as object-based beliefs and the perceived Fluency as behavioral beliefs along with the moderating effect of internal and external usage experience from customers. The model is validated using an online survey of 210 customers analyzed by the Partial Least Structural Equation Modeling (PLS-SEM) method. Results indicate that perceived Fluency strongly affects Omnichannel Customer Experience along with 6 out of 10 dimensions of channel integration quality.

KEYWORDS: Telecommunication, Channel Integration Quality, Perceived Fluency, Omnichannel Customer Experience.

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1. INTRODUCTION

The development of digital technology allows companies to expand the way they interact with customers using multichannel by using physical stores, websites, social media, and calls (Lazaris & Vrechopoulos, 2014). However, these channels are not integrated, giving customers a different experience from each channel, and the flow of information does not run seamlessly (Cook, 2014). The Omnichannel concept comes by synergizing the management of various channels to achieve a seamless, integrated, and consistent Customer Experience (Rahman et al., 2022). Customer Experience becomes critical when developing a differentiation strategy in a competitive global market, where customers have many choices, and it is very easy to switch to alternatives. So, the quality of experience influences customer shopping intentions at Omnichannel (Gerea & Herskovic, 2022). The success of the Customer Experience can be measured by the Net Promoter Score (NPS) metric, commonly used globally as a comparison indicator for a brand with its competitors or with the industrial sector in their field (Gerea & Herskovic, 2022).

PT Telkom Indonesia Tbk (Telkom) is a telecommunication company that provides internet fixed broadband service with their Indihome product. Indihome service products include telephone, internet, and interactive TV offered to end customers in Indonesia. Telkom has already integrated its services at various touchpoints using Omnichannel. Telkom categorizes its customer journey into 7 phases, from exploration to termination, and the Omnichannel is available in all of its customer journeys. However, it was found that the NPS value in each phase of the customer journey was not equal.

In contrast, several phases had scores below the target, with the lowest score being in the product usage phase, meaning that the customers had different experiences in every journey. For the Omnichannel System to be able to provide a smooth and seamless customer experience, this study develops the (Wixom & Todd, 2005) model from (Shen et al., 2018), which takes into account perceived Fluency, channel integration quality and Omnichannel Customer Experience (OCX). This study also distinguishes the moderating influence of customer internal usage factors in using a specific technology and customer external usage factors in using similar Omnichannel services on other platforms.

2. LITERATURE REVIEW

According to Taylor (1997) in the journal (Joudeh & Dandis, 2018), Customer Experience aims to build customer loyalty with the emotional and physical values of the shopping experience, making it a cohesive experience. It is known that it's cheaper to build the loyalty of existing customers than to acquire new ones. Therefore, improving customer experience is an effective strategy to increase customer retention, loyalty, and satisfaction (Teeter & Schointuch, 2000). It is also supported by (Rahman et al., 2022), who said that a customer experience that pays attention to aspects of customer service, value, and social communication will be able to get customer satisfaction and loyalty. The existence of Omnichannel makes customers have a different perception of multichannel.

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In the buying process, customers tend to look for experiences that reduce their cognitive load, while the number of channel choices actually increases cognitive load. Therefore, the Omnichannel Customer Experience allows customers to efficiently complete the purchasing process journey and make purchasing decisions quickly (Rahman et al., 2022).

The (Wixom & Todd, 2005) model is a research model that distinguishes object-based beliefs from behavioral beliefs that exist in IT design. Object-based beliefs are related to technical features and functionalities, whereas behavioral beliefs represent how users evaluate the experience of using IT technology. In the research of (Shen et al., 2018) regarding the Omnichannel business, the channel integration quality is categorized as an object-based belief because it describes the ability of omnichannel to integrate various channels. Meanwhile, perceived Fluency is categorized as a behavioral belief because it refers to how customers evaluate their cross-channel experiences.

Channel Integration Quality was first initiated by (Sousa & Voss, 2006) for the Multichannel concept, which is divided into 2 categories of dimension: service configuration quality and integrated interaction quality. This theory was later developed by (Hossain et al., 2020) with the Perceived Channel Integration Quality model, which focuses more on customer perceptions of Omnichannel. There are 10 dimensions of channel integration quality, according to (Hossain et al., 2020), namely Perceived channel breadth, Perceived channel transparency, Perceived channel appropriateness, Perceived information consistency, Perceived transaction data integration, Perceived system consistency, Perceived image consistency, Perceived privacy, Perceived security, and Perceived service recovery accessibility.

Fluency refers to the ease of processing information. Fluency is widely recognized as the main factor that shapes trust, positive impact, and cognitive impact on users (Cassab & MacLachlan, 2006). On Omnichannel, Fluency is where customers experience a natural and continuous cross-channel experience. According to (Majrashi & Hamilton, 2015), there are 5 dimensions of perceived Fluency. Task fluency refers to customers' smoothness when moving tasks from one channel to another. Content fluency is the continued reading or exploring content after a channel transition. Interaction fluency is cross-channel service interaction that is interconnected and continuous. Cognition fluency is a customer's assessment of the service that does not change after the channel transition. Feeling fluency is the same as a customer's feeling towards the service after the channel transition.

In the previous study by (Shen et al., 2018), who used the Wixom & Todd model with objects on the local service platform Dianping, it was found that channel integration quality as object-based beliefs and perceived quality as behavioral beliefs have a strong influence on Omnichannel service usage. Then, (M. Gao & Huang, 2021), it was found that customer engagement and relationship program receptiveness affected customer loyalty. Research by (W. Gao et al., 2021) used the Stimulus – Organism – Response (SOR) framework on retail company objects, which found that the integration of promotions, prices, and transactions influences the cognitive experience of customers in intention to

use Omnichannel. Meanwhile, the integration of customer service influences the customer's affective experience. The SOR framework is also used by (Yin et al., 2022) and (Prassida & Hsu, 2022), who found that Omnichannel can improve customer retention and increase repurchase intentions.

All of the previous studies have discussed the use and role of Omnichannel to increase usage intention, repurchase intention, customer loyalty, and customer retention. However, there is no specific discussion regarding Omnichannel that is specific to the telecommunications industry and aims to improve the customer experience as discussed in this study. This study uses the Wixom & Todd model from (Shen et al., 2018) but with an update on the perceived channel integration quality theory according to (Hossain et al., 2020) and the Omnichannel Customer Experience theory according to (Rahman et al., 2022).

3. METHODS

This study develops the Wixom & Todd model from (Shen et al., 2018) in examining the relationship between object-based beliefs and behavioral beliefs. Object-based beliefs consist of 10 dimensions of Perceived Channel Integration Quality (Hossain et al., 2020) as a first-order reflective construct that influences behavioral beliefs, namely perceived Fluency (Majrashi & Hamilton, 2015). Then, the perceived fluency variable as a second-order formative construct is hypothesized to positively affect Omnichannel Customer Experience (OCX) (Rahman et al., 2022). This study also considers internal and external usage experience as moderating factors for the relationship between perceived Fluency and OCX (Shen et al., 2018). Figure 1 shows a conceptual model that describes the relationship between constructs in this study.

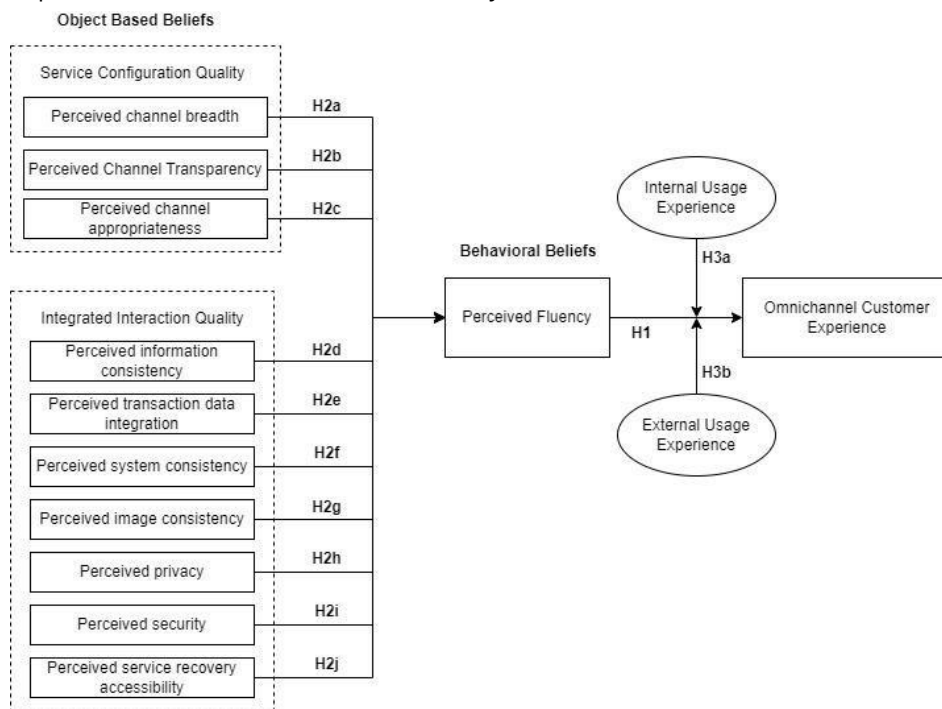


FIGURE 1. Conceptual Model

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This study uses a quantitative descriptive approach by surveying 210 Indihome customers who already have experience interacting with more than one channel touchpoint of Indihome and are located in areas with many competitors in major cities in Indonesia. The measuring tool uses a questionnaire form that has 42 question indicators with a Likert scale (1-5) measurement. The data is processed using the Partial Least Square – Structural Equation Modeling (PLS-SEM) method because it has a complex structural model with many formative relationships and constructs. PLS-SEM is also used because, besides testing theoretical models, this study aims to explore the extensions of established theories (Hair et al., 2019).

4. RESULTS

Demographic Information

The questionnaire distributed via the Google form collected data from 210 respondents. The demographic profile of the respondents can be seen in Table 1, where the majority of respondents (70%) are aged between 26 and 41, with 57% male, their last education is Diploma or Bachelor's degree by 98%, and the most used touchpoint is social media by 100%.

TABLE 1. Demographic Information

Category	C1	N	Valid (%)
Age	17-25	61	29
	26-41	147	70
	42-57	2	1
	> 57	0	0
Gender	Male	120	57
	Female	90	43
Education	Junior High School	1	0
	High School	0	0
	Bachelor	206	98
	Master	3	1
	Others	0	0
Channel touchpoint ever used	147	33	16
	WhatsApp (indihome care)	171	81
	Social Media (@indihomecare)	210	100
	App (Myindihome)	82	39
	Physical store (Plaza)	23	11
Total Respondent		210	100

Validity and Reliability Assessment

This study uses a reflective-formative construct model, in which there is a second-order formative construct, namely the perceived fluency variable, which consists of the formation of several first-order reflective construct variables. The results of the construct reliability and validity tests in Table 2 show that all reflective variables have an Average Variance Extracted (AVE) value above 0.5. All variables also have a Cronbach's Alpha

value above 0.6, indicating that the indicator provides a consistent answer (Hair et al., 2014). So that all first-order reflective variables are declared valid and reliable in this test.

TABLE 2. Validity and Reliability Reflective Construct

Latent variable (Reflective Construct)	AVE	CR	Cronbach's Alpha	Status
Perceived Channel Appropriateness	0.779	0.876	0.719	Valid
Perceived Channel Breadth	0.691	0.870	0.776	Valid
Perceived Transaction Data Integration	0.713	0.882	0.800	Valid
External Usage Experience	1.000	1.000	1.000	Valid
Perceived Fluency *External Usage Experience	1.000	1.000	1.000	Valid
Perceived Fluency *Internal Usage Experience	1.000	1.000	1.000	Valid
Perceived Image Consistency	0.820	0.932	0.890	Valid
Perceived Information Consistency	0.780	0.914	0.859	Valid
Internal Usage Experience	1.000	1.000	1.000	Valid
Omnichannel Customer Experience	0.788	0.949	0.933	Valid
Perceived Privacy	0.846	0.943	0.909	Valid
Perceived Service Recovery Accessibility	0.819	0.932	0.890	Valid
Perceived Security	0.859	0.961	0.945	Valid
Perceived System Consistency	0.820	0.932	0.890	Valid
Perceived Channel Transparency	0.798	0.922	0.874	Valid

The convergent validity and collinearity tests shown in Table 3 show that all correlation values (loading) of the reflective variable dimension of the Channel Integration Quality on the perceived fluency variable have a value greater than 0.8, except for perceived channel appropriateness and perceived channel breath. Therefore, these two variables are removed so that H2a and H2c are rejected. Then, for the VIF, all variable values are less than 5 except for perceived security and system consistency. Therefore, these two variables are removed so that H2f and H2i are rejected. Other than that, all formative variables can be said to have a good correlation.

TABLE 3. Validity and Collinearity Formative Construct

Latent variable (Formative Construct)	Loading (>0.8)	VIF (<5)	Status
Perceived Channel Appropriateness	0.744	2.599	Invalid, H2a rejected
Perceived Channel Breadth	0.770	2.581	Invalid, H2c rejected
Perceived Transaction Data Integration	0.815	2.892	Valid
Perceived Image Consistency	0.903	4.913	Valid
Perceived Information Consistency	0.856	3.659	Valid
Perceived Privacy	0.848	3.888	Valid
Perceived Service Recovery Accessibility	0.881	4.097	Valid
Perceived Security	0.917	5.871	Invalid, H2f rejected
Perceived System Consistency	0.905	5.227	Invalid, H2i rejected
Perceived Channel Transparency	0.879	4.141	Valid

Hypothesis Testing

Hypothesis testing is done by running bootstrapping and looking at the significance of the influence between constructs. The criterion that must be met is a p-value < 0.05 (Hair et al., 2014). Table 4 shows that perceived Fluency significantly affects OCX, so H1 is accepted. It is in line with previous research by (Rahman et al., 2022), which said that the goal of using Omnichannel is for customers to make the buying process more efficient to build trust, satisfaction, and loyalty to customers.

Then, there are six out of ten dimensions of channel integration quality that have a significant effect on perceived Fluency. These dimensions include Perceived Channel Transparency, Perceived Information Consistency, Perceived Transaction Data Integration, Perceived Image Consistency, Perceived Privacy, and Perceived Service Recovery Accessibility. Therefore H2b, H2d, H2e, H2g, H2h, and H2j are accepted respectively. It is also in line with previous research (Prassida & Hsu, 2022), which said that the channel integration quality can provide comfort with no barriers to interacting across all channels. This research provides additional insight into cases in the telecommunications industry, specifically Telkom, in which several dimensions are irrelevant because they are not valid in testing, namely Perceived Channel Breadth, Perceived Channel Appropriateness, Perceived Security, and Perceived System Consistency. It could be due to the conditions in the real world, where Telkom (Indihome) customers tend to focus on completing business on one channel first before moving on to other channels. As well as, the aspects of suitability, security, and system consistency are not things that customers will likely consider when interacting at Telkom's Omnichannel.

In the moderation test, the internal usage experience negatively and significantly reduces the relationship between the variable of perceived Fluency and OCX so that H3a is accepted. It is because the customer's familiar experience with using similar technology will form a habit that makes the customer unable to assess and evaluate the Fluency of the service being used (Shen et al., 2018). Meanwhile, external usage experience has a positive but insignificant effect on increasing the relationship between perceived Fluency and OCX, so H3b is rejected.

TABLE 4. Hypothesis Result

Variable Relationship	Path Coefficient	P Values	Status
Perceived Fluency (FLU) → Omnichannel Customer Experience (OCX)	0.564	0.000	H1
Perceived Channel Transparency (TRA) → Perceived Fluency (FLU)	0.153	0.000	Accepted
Perceived Information Consistency (INF) → Perceived Fluency (FLU)	0.144	0.000	H2b Accepted
Perceived Transaction Data Integration (DAT) → Perceived Fluency (FLU)	0.127	0.000	H2d Accepted

Variable Relationship	Path Coefficient	P Values	Status
Perceived Image Consistency (IMG) → Perceived Fluency (FLU)	0.162	0.000	H2e Accepted
Perceived Privacy (PRI) → Perceived Fluency (FLU)	0.157	0.000	H2g Accepted
Perceived Service Recovery Accessibility (REC) → Perceived Fluency (FLU)	0.158	0.000	H2h Accepted
Perceived Fluency (FLU)*Internal Usage Experience → Omnichannel Customer Experience (OCX)	-0.113	0.009	H2j Accepted
Perceived Fluency (FLU)*External Usage Experience → Omnichannel Customer Experience (OCX)	0.076	0.099	H3

5. CONCLUSIONS

This study proves that channel integration quality significantly affects perceived Fluency because channel integration quality can provide comfort without barriers to interacting across all channels. The results also indicate that perceived Fluency significantly affects the Omnichannel Customer Experience. It is in line to use Omnichannel to make the buying process more efficient to build trust, satisfaction, and customer loyalty. The moderation of internal usage by customers can reduce the impact of the relationship between perceived Fluency and OCX because the customer's familiar experience in using similar technology will form a habit that makes the customer unable to assess and evaluate the Fluency of the service being used. Recommendations for improving customer experience in Telkom are prepared based on the dimensions of channel integration quality that significantly affect perceived Fluency. The improvement aspect consists of people, processes, and tools. The recommendations are also mapped based on the customer journey of Telkom's Indihome product. Telkom must continue improving its Omnichannel service based on recommendations in those three aspects to improve customer experience and the NPS value.

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