

An Examination of the Retail Omnichannel Customer Journey:
Understanding Customer Interaction and its influences on Customer
Experience

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Abstract

The omnichannel strategy brings a new avenue to the creation of customer experience. The vanishing of the boundary between physical and virtual channels, which then complemented by the integration of both has been the hallmark that defines an omnichannel retailer. Customers face myriad options on how to shop with an omnichannel retailer yet expect to come across consistent experience. This research aims to understand an omnichannel retail strategy through the lens of customer interaction. Positioning customer interaction as a multi-dimensional concept, this study analyses two distinct dimensions: the number of contact points (breadth) and the number of activities involved (depth). Using a large-scale customer's survey and a pre-test from an experiment study, the findings suggest that both dimensions of customer interaction have curvilinear relationships to customer experience. This finding opens new direction to explore the role of customer interaction in creating customer experience.

Keywords: *Omnichannel Retailing, Customer Experience, Customer Interaction*

Track: *Retailing & Omni-Channel Management*

1 Introduction

Retailers have continuously evolved to adapt to the changes in customer's behaviour and as a response to capitalise on the opportunity provided by the advancement of technology. As a result, an omnichannel business model has emerged to be a model that makes the most of customer experience through the integration of virtual and physical channels and touchpoints (Brynjolfsson, Hu, & Rahman, 2013). Many suggest that the objective of omnichannel retailing is to create a positive customer experience from a synergy of both channels and touchpoints (Verhoef, Kannan, & Inman, 2015). Thus, it is crucial to shed more light on the interplay between customer's interaction with omnichannels and customer experience.

Prahalad and Ramaswamy (2004) discuss that individual customer experience shaped through the process of co-creation that is enabled by customer interaction. Similarly, Gentile et al. (2007) and Lemke et al. (2011) also echo the positioning of customer interaction as the antecedent of customer experience. Customer interaction, in this sense, is generally understood as any direct or indirect contact between a customer and a retailer that occurs along the way throughout the customer journey (Meyer and Schwager, 2007). It involves the interaction with processes, people, and physical elements (Bolton & Saxena-Iyer, 2009). The customer interacts with the process through activities that enable communication and exchange (Yadav & Pavlou, 2014). During the interaction, some elements of people are key to the outcome. It can be a direct consultation with front-liners or an indirect occurrence with other customers. Lastly, the interaction with physical elements in an omnichannel environment may refer to retailer's channels and touchpoints.

To date, there is no research examining how exactly customer interaction relates to customer experience in the omnichannel retail context. The past studies focus on the customer value between single-channel and multichannel customers (e.g. Kumar & Venkatesan, 2005), segmentation of multichannel retailer (De Keyser, Schepers, & Konuş, 2015), and channel-specific experience (e.g. Rose, Clark, Samouel, & Hair, 2012). These studies tend to focus more on the variety of channels and touchpoints that customer used in their journey but overlook how involved they are within each channel or touchpoint. Other studies, however, argue that customer interaction has an impact to value-in-use (Lemke et al., 2011) and satisfaction (Wallace, Giese, & Johnson, 2004); which are both associated with customer experience (Pansari & Kumar, 2017). Thus, it implies the possible link between customer interaction and customer experience.

This research investigates how customer interaction shapes customer experience. In doing so, this research draws from the organizational behaviour and search for external knowledge literature to conceptualize customer interaction. Specifically, we borrow the concepts of breadth and depth to capture the two dimensions of complexity of customer interaction with omnichannel retailers. This research empirically links customer interaction breadth and depth to customer experience (affective, cognitive, behavioural, sensory, and social), exploring how the differences in number of channels and touchpoints (breadth) and variety of activities involved (depth) influence an evaluation of customer experience.

The term breadth and depth are adapted from organisational behaviour study regarding how organisations search for knowledge. In the study, the breadth relates to the variety of search-channel, while the depth is related to the extent of the usage of that particular search-channel (Laursen & Salter, 2006). Organisational behaviour in the search for knowledge and customer behaviour in acquiring product are both similar in that they both use channels as a pathway to attain certain output; knowledge (for organisations) and product (for customers). They both utilise channels to collect information and form an expertise for a certain purpose; innovation (for organisations) and purchase decision (for customers).

This approach builds on and extends previous literature in three ways. First, this study is the first one to thoroughly theorise around and empirically examine the relationship between customer's interaction with retail omnichannels and overall customer experience. Second, the preceding studies of customer interaction say relatively little about the way in which customers utilise individual channel (depth). This current research can answer whether different depth of channel involvement can result in different levels of customer experience. Third, by using customer experience as an outcome of interaction, this study helps omnichannel retailers to understand how to manage their channels effectively.

2 Theoretical Background and Proposed Hypotheses

2.1 Social Penetration Theory

Personalisation is perceived to be an integral part of retailer's strategy which makes the relationship between a customer, and a retailer becomes more personal too (Cao & Li, 2015). Therefore, to approach how a relationship between customer and retailer emerges, this research borrows the theory behind the interpersonal relationship, a social penetration theory. According to this theory, an interpersonal relationship grows as individuals exchange more information, in terms of the variety of discussions and the degree of intimacy (Altman & Taylor, 1973). The progress of a relationship can be achieved through the assessment of cost

and reward, and expected the level of satisfaction. According to this theory, increasing or decreasing level of interaction and the subjective feeling towards the counterpart can either be an initiation or dissolution of a relationship, respectively. This theory relates to this study in two ways. First, it suggests customer interaction as the basis of interpersonal relationship, which can be applied for a relationship between a customer and a retailer. Second, this theory suggests that such interactions will lead to satisfaction before it eventually transforms into a relationship, which is a useful background how interaction may lead to customer experience.

2.2 Customer experience

Customer experience captures affective and cognitive responses of customer towards all cues in their shopping journey (Lemon & Verhoef, 2016), which can be represented by emotion and satisfaction (McLean, Al-Nabhani, & Wilson, 2018). Moreover, customer experience also encompasses behavioural, sensory, and social responses (Gentile et al., 2007; Verhoef et al., 2009). Pansari and Kumar (2017) suggest that customer experience is derived from customer interaction, and it will influence customer engagement through satisfaction and emotion. Combining what is suggested by the theory behind the interpersonal relationship and customer experience, this study proposes that customer interaction can influence customer experience. The following section will further discuss the linkage between variables.

2.3 Customer interaction complexity

Customer interaction with a retailer becoming more complex as customers interact with different channels and touchpoints with different level of involvement within each channel. In order to analyse customer interaction holistically, this research introduces the concept of customer interaction complexity, which consists of two dimensions: customer interaction *breadth* and customer interaction *depth*. It is inspired by the study of external search of knowledge by Laursen and Salter (2006). They use the term breadth and depth in assessing the complexity of organisation's external search of knowledge. There are similarities in a way organisations and customers utilise channels. Both face many channels as they try to innovate (for organisations) or to purchase (for customers). Both have to sacrifice cost such as investment (for organisations) or time and effort (for customers) when interact with the channels. Eventually, both are expecting return as a result of their interaction in a form of knowledge and information to aid their objective; innovative performance (for organisations) and satisfactory consumption (for customers).

Customer interaction breadth (CIB) refers to a variety of channels and touchpoints that customers rely upon in their shopping activities. Past studies show a positive outcome in

favour of high CIB. Kumar and Venkatesan (2005) show that customers who shop in more channels are more profitable than those who only shop in one channel. They are profitable because these customers show a deeper relationship, have greater trust and perceived lower risk when they interact. One caveat is that their study was conducted in a B2B setting which employs rational decision-making. In a B2C setting, customers with high CIB only profitable when it comes to hedonic product (Kushwaha & Shankar, 2013). The mechanism behind it is due to the creation of positive satisfaction and enjoyment in interacting with different channels and touchpoints (Wallace et al., 2004). Accumulatively, past research suggests that CIB encourages positive outcome both on the customers' feeling and retailers' profitability (e.g. Montaguti, Neslin, & Valentini, 2016). It seems clear to suggest that higher CIB influences positive customer experience.

Meanwhile, customers with low CIB are not at all disadvantageous for retailers. Results from different studies have consistently shown that single-channel (low CIB) customers are the most loyal customers (De Keyser et al., 2015; Konuş, Verhoef, & Neslin, 2008). In the literature, many have developed the link between loyalty and satisfaction, and as Chandrashekar et al. (2007) pointed out, loyalty is a result of a strongly held satisfaction. As satisfaction is one of the signals of customer experience; hence, the conclusion from the previous findings suggest that low CIB could also create a positive customer experience due to the high satisfaction in their journey. In sum, the hypothesis can be stated as:

H1: CIB is curvilinearly (taking a U-shape) related to customer experience.

The second dimension, **customer interaction depth (CID)**, portrays the degree of channel usage, in terms of the level of customer involvement during stages of the buying process. This is defined by the range of activities that a customer conduct when interacting with a retailer. An involved customer would participate in most of the activities from pre-purchase, purchase, to post-purchase. Differently, a customer with a low CID, only interacting with a retailer to a limited set of activities. For example, the activities may be limited to price and promotion comparison. This research proposes that CID has a relationship with customer experience. The more activities involved in a customer journey, the more service outputs being fulfilled by the retailer. Wallace et al. (2004) find that such a condition could promote a positive customer experience and satisfaction. Involved in more activities can also represent the level of effort that customer put in their journey. The more they put their effort, it signals how important the product or the journey for them, which leads to a higher perceived value and eventually affect satisfaction positively (Hult, Sharma, Morgeson, & Zhang, 2019).

On the other hand, the customer always tries to minimise effort and find simplicity in their journey (Spenner & Freeman, 2012). The low level of customer effort indicates a high level of convenience as Berry et al. (2002) suggest “If they can proceed the task quickly, easy, and paid less effort, then they have high transaction convenience”. High convenience shopping task evidently could affect customer satisfaction positively (Hunneman, Verhoef, & Sloot, 2015). This creates two different high points for CID, where past studies suggest that either low CID or high CID could contribute to a higher customer experience. Hence, the hypothesis is:

H2: CID is curvilinearly (taking a U-shape) related to customer experience.

3 Methodology

3.1 Study 1

A total of 485 useable responses was collected using Amazon M-Turk, which consist of customers in the US who have prior experience in interacting with an omnichannel retailer.

3.1.1 Operationalisation of variables

The operationalisation of CIB and CID follows the similar fashion as Laursen and Salter (2006) when they operationalise breadth and depth of external search of knowledge. The CIB is constructed as a combination of the eight channels and touchpoints used by customers in the past year within a specific omnichannel retailer. The list of channels and touchpoints consists of eight options (e.g. offline, online, catalogue), which is coded as a binary variable, 0 being no use and 1 being used. Subsequently, the eight channels and touchpoints are added up so that each respondent gets 1 when they only use 1 channel or touchpoints, and maximum 8 when they use all channels and touchpoints.

The CID is measured by calculating the number of activities that the respondent performed during pre-purchase until the post-purchase stage. Depending on the channels or touchpoints, there were maximum 19 activities to select; these include activities such as “check product availability”, “redeem a coupon”, and “exchange a product”. If an activity was selected, regardless of which channel or touchpoint it has occurred, it is coded as 1 and 0 if not. Then, an accumulation of all activities is computed represent the CID.

The variable of customer experience is adapted from brand experience scale which consists of affective experience, cognitive experience, behavioural experience, sensory experience (Brakus, Schmitt, & Zarantonello, 2009) and the additional dimension of social experience adapted from social experience value (Sweeney & Soutar, 2001). In combining

these scales, this research captures the holistic view of customer experience suggested by Verhoef et al. (2009). All items are assessed on 7-point Likert scale.

3.1.2 Measurement model

A measurement model is assessed by conducting a confirmatory factor analysis. The result indicates a good fit for the sample data, with $\chi^2 = 226.607$, $df = 85$, $\chi^2/df = 2.666$, $p < .05$, $NFI = .960$, $CFI = .975$, $IFI = .975$, $TLI = .964$, $RMSEA = .059$. The internal consistency of all multi-item constructs, measured by the construct reliability and Cronbach α values, fell in between .825 to .915, which exceed the minimum of .70. The convergent validity assessed by the average variance extracted (AVE) met the criterion of .50. Discriminant validity is confirmed for all latent constructs because the square root of each construct's AVE is higher than the correlation with the other constructs in the model.

3.1.3 Hypotheses testing

Using STATA, regression analyses were tested to see the linear effect (Model 1) and the curvilinear effect (Model 2) of all dimensions of customer interaction to customer experience. A significant model emerged from Model 1, where $F_{11,473} = 15.50$, $R^2 = 0.206$, $p < .05$. Model 2 also shows a good fit with $F_{13,471} = 15.59$, $R^2 = 0.301$, $p < .05$. In line with H1 and H2, the result shows support on the curvilinear relationship between customer interaction breadth and depth to customer experience. Both relationships are U-shaped which indicate that moderate level of CIB and CID has the lowest customer interaction ($\beta_{CIB} = -.378$, $t\text{-value} = -3.33$; $\beta_{CIB_SQ} = .039$, $t\text{-value} = 2.76$; $\beta_{CID} = -.247$, $t\text{-value} = -2.47$; $\beta_{CID_SQ} = .014$, $t\text{-value} = 3.83$).

3.1.4 The Analysis of Non-Linear Relationships

A follow-up analysis to test the significance of the nonlinear relationship was conducted using *utest* command in STATA. The results show a significant slope in both lower and upper bound at $p < .05$. It also displays that the extreme point fell in between the data-point interval, which suggests the presence of curvilinear effect. Several tests were performed to rule out the alternative specification such specification. The results showed that quadratic terms is a better model ($AIC_{quadratic} = 1451.428$, $AIC_{cubic} = 1454.758$, $AIC_{exp} = 1465.183$).

3.2 Study 2: Follow-up test

In this study, H2 was also tested using an experimental approach in which employed a 2 (Offline-only vs. Online-only retailer) x 3 (Low vs. Moderate vs. High CID) between-subjects design. A total of 92 participants from Amazon M-Turk were presented one versions of a hypothetical fashion retailer, *Wearable Goods*. The CID was tested by manipulating the number of activities in the participant's shopping journey; three, six, and nine activities for

Low, Moderate, and High CID, respectively. The manipulation check was successful and the differences across conditions are significant ($p < .05$). The hypothesis testing using ANOVA shows insignificant differences between all three conditions of CID ($p > .10$) regarding their evaluation of their customer experience. However, the lowest mean score was contributed by the Moderate CID ($M_{Low} = 4.58$, $M_{Moderate} = 4.11$, $M_{High} = 4.28$), which resembles the U-shaped, as suggested in H2.

An additional analysis was conducted to see whether the result is uniform across the types of retailer (offline versus online). The result was statistically insignificant for both type of retailer (Offline: $F_{2,43} = 1.602$, $p > .10$; Online: $F_{2,43} = 1.548$, $p > .10$), although the small samples may cause it. However, the finding suggests that the U-shaped relationship is retained in the offline retailer ($M_{Low} = 4.60$, $M_{Moderate} = 3.88$, $M_{High} = 4.69$), while the negative relationship is found in the online retailer ($M_{Low} = 4.56$, $M_{Moderate} = 4.35$, $M_{High} = 3.85$).

4 Preliminary Results and Concluding Remark

Preliminary analysis shows that after controlling demographic variables of age, income, gender, as well as some customer characteristics such as length of relationship, purchase frequency, and spending per trip, all dimensions of omnichannel customer interaction have a significant impact to customer experience. Upon a closer look, both CIB and CID formed a U-shaped relationship with customer experience.

Align with what was suggested in the beginning; the result shows that the moderate level of CIB delivers the minimum level of customer experience. The result implies that a retailer should go big by having many integrated channels and touchpoints or solely focus on specific channels and touchpoints as their speciality. This explains why online-only or brick-and-mortar only retailer can still be a fierce competitor to an omnichannel retailer. However, once a retailer decided to be an omnichannel retailer, it should employ numerous channels and touchpoints in its channel mix, to make sure superior customer experience.

The CID, as expected, shows that an average number of activities contributes to the lowest level of customer experience. Insights from this research suggest that features in the channels should be enhanced to aid customers in accomplishing all the activities they want to perform. For example, an online store can be completed with an online review, a virtual salesperson, or a product return procedure. These features ensure customers to be able to start and finish whatever shopping goal they want to achieve in their journey. Moreover, the result from the pre-test of the experimental study gives a promising result to explore more of the link between CID and customer experience.

It is important to understand how the complexity of customer interaction affects customer experience because it could help retailers to engage better with their customers. There is a positive outcome for having a superior customer experience, such as repurchase. Overall, the preliminary results provide empirical evidence that could enrich the literature of omnichannel retailing. However, it also postulates further research to strengthen the conceptualisation of customer interaction as a critical construct in the customer journey.

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