Does retail type matter? Consumer responses to channel integration in omni-channel retailing

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Abstract

A critical issue faced by marketing practitioners today is orchestrating strategies that provide a smooth consumer experience in an omni-channel environment. The extant literature offers limited guidance on managing the consumer journey in an omni-channel environment across different retail types. Using the S-O-R framework as its basis, this study generates novel insights by examining how different types of retailers influence consumer perceptions of channel integration (CPCI) as well as consumer empowerment, trust, satisfaction, and patronage intention. Data from 736 consumers was collected using purposive sampling to target those who interact with retailers from high-end specialty stores, department stores, and hypermarkets. The data was then analysed using partial least squares structural equation modelling (PLS-SEM). We find that consumers from high-end specialty stores, hypermarkets, and department stores have different perceptions when patronising the omni-channel retail business. The implications of the study are discussed and suggestions for future research are presented.

Keywords: Channel integration; S-O-R framework; Retail types; Omni-channel retailing; PLS-SEM

1. Introduction

Imagine going to a retail store to get presents for a party. Unfortunately, the items you want are out of stock. The salesman then asks you to place an order online so those items can be shipped directly to you in three days. This is a shopping experience most consumers have had. The integration of retailers' shopping channels to offer a unified and seamless purchasing experience is a concept driven by omni-channel marketing (Sopadjieva et al., 2017). The fusion of brick-and-mortar shopping with mobile experiences due to ongoing social changes have compelled retailers to pursue a more holistic approach in an increasingly connected business environment (Groß, 2018; Kang, 2018; Zhang et al., 2018).

The omni-channel is defined by Rigby (2011) as "an integrated sales experience that melds the advantages of physical stores with the information-rich experience of online shopping" (p. 65). Drawing from current omni-channel research, Shen et al. (2018) described the omni-

channel as a unified approach that allows retailers to manage their channels as intermingled touch points (i.e., in-store, website, mobile device) to offer consumers a seamless experience within a single ecosystem. Unlike the multi-channel approach that utilises multiple selling platforms separately, the focal point of omni-channel systems is to integrate online-offline channels in a way that provides consumers a cohesive and seemingly uninterrupted purchasing experience, irrespective of channel or touchpoint (Abrudan, Dabija, & Grant, 2020; Piotrowicz & Cuthbertson, 2014; Verhoef et al., 2015; Yrjölä et al., 2018).

In Asia, a survey by Digital News Asia (2019) reported that around 90% of consumers prefer to use different combinations of channels (e.g., mobile app, in-store, or desktop) to shop online. Recent marketing statistics also reveal that retailers who employ an omni-channel approach can increase their annual growth rate by up to 30% while retaining 89% of their existing consumers (Hamstra, 2019; Lee et al., 2019; PRWIRE.asia, 2017). Consequently, to remain competitive and enhance the purchasing process, many leading retailers such as Amazon, Disney, Nike, Ikea, Timberland, and Sephora are focusing on omni-channel marketing to connect all possible touchpoints between in-store and online experiences. This phenomenon is even more critical during black swan events such as the COVID-19 pandemic, which caused great uncertainty and panic around the world. Unfortunately, the longer the pandemic outbreak extends, the greater the observed casualty within the retail industry (Pantano, Pizzi, Scarpi, & Dennis, 2020; Watson & Popescu, 2021). The future of retailing must depend on sound and brilliant strategies to consolidate demand through integrated channels while effectively responding to consumer demand and maximising revenues (Adivar, Hüseyinoğlu, & Christopher, 2019; Griva, Bardaki, Pramatari, & Doukidis, 2021; Rydell & Kucera, 2021).

Although the omni-channel is better positioned to cope with business loss in this competitive environment, a retailer's success in maintaining its existing consumers depends heavily on its provision of the highest level of value via a unified and agile ecosystem (Global Trade Mag, 2021; Meilhan, 2019). Compared to the multi-channel in which the different channels operate independently, investing in and deploying an effective omni-channel business requires great efforts as it is more complex than typical systems (Abrudan et al., 2020). When designing an omni-channel system, it is also essential for retailers to adopt integrative and distinctive approaches to achieve the goals of connecting, coordinating, and synchronising all channels to eliminate friction during the purchase journey. This concern has thus created a direction for marketing scholars

seeking knowledge on how to define a better plan for omni-chain retailers to increase consumers' patronage intention across different types of outlets.

Although scholars have previously suggested that retail type should be considered in the agenda of developing a successful business model (Bloch & Kamran-Disfani, 2018), the omni-channel retailing literature shows a relatively limited exploration of this factor (see Figure 1). A similar concern was outlined in the work of Lee et al. (2019), who stated that different types of retailers should employ different strategies to provide consumers diverse experiences. Likewise, Wang, Zheng, and Liuões (2020) cited that the execution of an omni-channel retailing strategy cannot be regarded as universal across retailers; rather, it is important for retailers to adopt different models based on their own retail type to achieve remarkable results. This issue was further highlighted as a priority by the Marketing Science Institute (2018), whose study reported stated that the combination of omni-channel retailing and the fragmented nature of different retail channels "…makes channel management substantially more complex" (p. 9).

Consequently, extending the model proposed by Zhang et al. (2018) and Gao, Fan, Li and Wang (2021), this study aimed to bridge the extant gap by introducing retail types (i.e., high-end specialty store, department store, and hypermarket) as a moderator that alters the interrelationships between channel integration and customer relationship management factors. As stated in the literature, "channel integration" refers to a retailer's ability to provide customers a seamless purchasing experience across channels (Sousa & Voss, 2006); it is regarded as the heart of omni-channel retailing. To embrace the omni-channel retailing model, it is imperative for different types of retailers to ensure the synergistic integration of their channels, for instance "buy online, pick up in-store" and vice versa, to greatly improve their relationship with target customers. As such, channel integration is indeed a "must-have" context-specific variable in appraising the performance of different omni-channel retailers.

The contemporary marketing literature has also shown that relationship management is another vital element that potentially improves patronage intention for virtual-based channels, making it a dominant force among businesses and consumers (Steinhoff, Arli, Weaven, & Kozlenkova, 2019). For relational exchanges to develop and persist, it is important to establish a link that brings mutual benefits to both retailers and consumers (Mathwick, 2002). To this end, customer empowerment, trust, and satisfaction are among the key impactful factors to achieve the

aforementioned goal and establish successful retailer-consumer relationships (Auh, Menguc, Katsikeas, & Jung, 2019; Brown, Crosno, & Tong, 2019; Fernandes & Moreira, 2019). From the marketing aspect, customer empowerment is defined as the extent to which a consumer is given the avenues to not only connect and collaborate with the retailer through information sharing, but also to decide his/her preferred method of transactions (Ramani & Kumar, 2008). The emergence of this phenomenon is crucial in the digitalisation era, as the consumer is changing his/her role from a passive receiver to an active participant, which grants a sense of control. Trust, on the other hand, indicates a consumer's willingness to rely on retailers in whom he/she is confident in to fulfil an obligation (Brown, Crosno, & Tong, 2019), which can assist in forming a comfortable environment that elicits positive behaviour. Satisfaction is another primary outcome of relationship management, referring to the extent to which a chosen retailer meets or exceeds a customer's expectation (Fernandes & Moreira, 2019). These factors were included in the present model to understand how omni-channel consumers of different retail types react differently in forming their patronage intention.

Despite myriad marketing scholars having highlighted the importance of differentiating retailers' strategies based on their unique characteristics, the examination of this aspect in the omni-channel literature remains sparse. By addressing the abovementioned research gap, this study offers important insights to the body of knowledge and to practice. Particularly, we move a step forward by understanding consumers' perceptions when dealing with different types of omni-channel retailers (i.e., high-end specialty store, department store, and hypermarket). In doing so, the results of this work are expected to provide the various types of retailers with actionable insights that would enable them to tailor their omni-channel system in a manner that stimulates consumers' patronage intention.

The remaining sections are structured as follows. The theoretical background and proposed hypotheses are presented in Sections 2 and 3. This is followed by the methodology and data analysis in Section 4 and Section 5, respectively. Subsequently, the discussion and implications are articulated in Section 6, while future research directions conclude the last section.

[Insert Figure 1 here]

2. Literature review

2.1 Stimulus-Organism-Response (S-O-R) Model

Mehrabian and Russell's (1974) stimulus-organism-response (S-O-R) model was adopted as the basis to investigate how environmental or marketing stimuli affect the purchasing process. Past studies have found that well-designed multisensory cues (e.g., visual, auditory, olfactory) offer consumers a more appealing in-store experience (Helmefalk & Hulten, 2017). Features of the store environment (e.g., lighting, store design, cleanliness, layout, and scent) are also important stimuli that positively impact consumers' enjoyment and buying behaviour (Hashmi et al., 2020). Moreover, the literature has consistently shown that emotional bonds, including consumer engagement, satisfaction, and pleasure, are key factors in creating a long-lasting and meaningful relationship with consumers (cf: Koo & Kim, 2013; Huang et al., 2017; Eroglu et al., 2003). This underscores the internal state of consumers as an organism that evaluates stimuli before yielding any response.

Scholars have begun to use the S-O-R framework as a foundation to explain consumers' online behaviour. Wu et al. (2014) elucidated the role of layout design and atmosphere in e-commerce websites, reporting that website cues have a significant impact on consumers' emotional state, attitude, and purchase intention. Lim et al. (2020) also looked into the effect of s-commerce cues (i.e., trust, responsiveness, reliability, and compatibility) on consumer engagement (organism) and subsequently, repurchase intention (response). Wang, Cheah, Lim, Leong, and Choo (2022) utilised the S-O-R framework to identify the inhibitory factor (i.e., concern about cost) that deters consumers' decision to checkout their purchase, which as a result, leads to both online shopping cart abandonment and the decision buy from a land-based retailer. Similarly, Chopdar and Balakrishnan (2020) adopted the S-O-R framework to understand the drivers of repurchase intention and a satisfying experience in the m-commerce retail environment. Finally, both Gao et al. (2021) and Zhang et al. (2018) investigated consumer perceptions towards channel integration in omni-channel retailing with the S-O-R framework. All in all, the S-O-R framework serves as a suitable theoretical premise to interpret the impact of stimuli on consumers' organismic states and their subsequent responses. The present study therefore adopted consumer perceptions of channel integration (CPCI) as the stimulus cue in the context of omni-channel retailing. Consumers' emotional states (i.e., customer

empowerment, satisfaction, and trust) and patronage intention were incorporated into the study as the organism and response elements, respectively.

2.2 The characteristics of retail types

As cited by Chocarro et al. (2013), consumers' priority for patronage behaviour or buying decision will frequently differ based on situational factors like type of retailers' channel integration. Corresponding to this notion, different retail outlets target different consumer segments; therefore, they require unique marketing approaches (Shi et al., 2018). For example, high-end specialty stores target affluent consumers, hypermarkets target consumers seeking variety, and department stores target 'smart shoppers' who value convenience and product quality. Failure to consider the effects of this heterogeneity can lead to erroneous conclusions in understanding consumer responses to channel integration in omni-channel retailing. In terms of product sales, high-end specialty stores focus on selling specific high-quality products and related items. They tend to maintain considerable depth in a specialised product line, selling items at premium prices with good service quality and delicate guidance (Bishop-Gagliano & Hathcote, 1994). Hypermarkets, on the other hand, provide one-stop shopping convenience for a wide range of products, including food and groceries, appliances, and furniture (Levy et al., 2013). In contrast, department stores are large retail establishments that sell an extensive assortment of goods (Rintamäki et al., 2006). Generally, a department store houses several departments under the same roof to facilitate buying, service, and merchandising.

Drugău-Constantin (2019) suggested that consumers' decision on where to purchase is not based only on product attributes or price. Instead, consumers make trade-offs between those factors and service (i.e., how the product is bought) when choosing a retail store. For instance, Koistinen and Järvinen's (2009) qualitative study found that consumers in high-end specialty stores are more concerned about personalised service compared to consumers in hypermarkets. Similarly, Messinger and Narasimhan (1997) found that large product assortments are more attractive to variety-seeking consumers. In our review of numerous articles on omni-channel retailing, we observed that the literature on retail type is still quite sparse. As a result, this study posited that different strategies should be applied for different types of retail outlets when targeting consumer segments with varying preferences and desires.

3. Development of Hypotheses

3.1 Consumer perceptions of channel integration (CPCI)

According to the extant retail literature, CPCI includes the integration of: (1) consumer service, (2) information access, (3) order fulfilment, (4) product and price, (5) promotion, and (6) transaction information (Lee et al., 2019; Zhang et al., 2018). Specifically, integrated consumer service and information access emphasise the provision of uniform services and information to consumers across all channels to make purchasing more efficient (Oh & Teo, 2010). Further, integrated order fulfilment enables consumers to track and complete their transaction process through one or more channels (Gao, Fan, Li, & Wang, 2021; Zhang et al., 2018). Integrated transaction information, meanwhile, concerns the possibility of using a single account to track and update all purchase records at different touchpoints. Finally, integrated promotion as well as product and price refer to the situation in which marketing information (e.g., rebates, advertising, freebies, etc.) can be consistently obtained from offline and online stores in order to reduce consumer confusion (Daniel & Wilson, 2003; Zhang et al., 2018).

Numerous studies have examined the effect of channel integration (i.e., offline-online or online-offline) from different perspectives. For instance, when both selling and distribution channels are integrated in an efficient system, consumers exhibit lower perceived risk and higher repurchase intention (Emrich et al., 2015; Herhausen et al., 2015; Seck & Philippe, 2013). Indeed, successful channel integration provides consumers an additional and consistent source of information. It also helps minimise uncertainty during the shopping process (Broniarczyk & Griffin, 2014) while affording consumers a sense of control that lets them enjoy collateral benefits across different channels (Popa, Dabija, & Grant, 2019). Similarly, both Gao et al. (2021) and Cheah et al. (2022) argued that channel integration is regarded as a "high personal contact" service that enhances customers' shopping utility and facilitates more efficient, enjoyable, and convenient shopping decisions, hence making the channel integration system an effective driver of customers' emotional states, including empowerment (Ürgüplü & Hüseyinoğlu, 2021), satisfaction (Pantano & Viassone, 2015), and trust (Van Nguyen, McClelland, & Thuan, 2022). In light of previous findings indicating a positive relationship between CPCI and customer empowerment, we posit that this path is moderated by retail type. In other words, omni-channel consumers

interacting with retailers in high-end specialty stores, department stores, and hypermarkets react to CPCI differently in developing empowerment. The first hypothesis was thus formulated as follows:

H1: Retail type moderates the relationship between CPCI and customer empowerment.

3.2 Customer empowerment, satisfaction, and trust

With the advances in retail technologies (i.e., artificial intelligence, omni-channel, mobile shopping, etc.), today's consumers are more empowered than ever, such that they can freely choose transactional channels, personalise their messages and services, and participate in the creation of products and services based on their convenience (Berraies & Hamouda, 2018). Bonnemaizon et al. (2008) asserted that customer empowerment shifts decision-making power from sellers to consumers, giving the latter more freedom to choose their own terms of participation. This is consistent with the assumptions of the self-determination theory (Deci & Ryan, 1985), which states that consumers who are more autonomous in making decisions are more likely to have a higher level of satisfaction (Gilal et al., 2019), and subsequently, to produce positive outcomes (Fang et al., 2016; Zhang et al., 2018). Prentice et al. (2016) further posited customer empowerment as a form of relationship management that can improve business profitability, as consumers who gain a sense of control tend to exhibit a higher degree of trust. It is therefore reasonable to infer that a similar phenomenon will occur in the omni-channel retail system, where a high degree of perceived empowerment can effectively influence consumers' levels of both satisfaction and trust; notably, these relationships are likely to vary depending on retail type. The following hypotheses were therefore proposed:

H2: Retail type moderates the relationship between customer empowerment and trust.

H3: Retail type moderates the relationship between customer empowerment and satisfaction.

3.3 *Trust and satisfaction*

Trust is another popular concept that has been extensively explored by scholars for its impact on consumer behaviour (Lim et al., 2020; Park, Kim, & Kwom, 2017). It is a psychological state that positively affects the building of long-term relationships in both offline and online businesses

(Xiao, Zhang, & Fu, 2019). Studies have observed that a high level of trust can mitigate anxiety, which ultimately increases consumer satisfaction and creates a strong emotional bond with a particular retailer or brand (Jin, Line, & Merkebu, 2016; Wang, Law, Guillet, Hung, & Fong, 2015). It is true that consumers feel more comfortable dealing with retailers that they believe, whereby such confidence leads them to acquire satisfactory experiences. It should also be considered that consumers tend to behave heterogeneously when responding to different retail environments (Fuentes-Blasco, Moliner-Velázquez, & Gil-Saura, 2014). Thus, we suggest that retail type acts as a contingency factor that impacts the relationship between trust and satisfaction. The hypothesis was suggested as:

H4: Retail type moderates the relationship between trust and satisfaction.

3.4 *Trust, satisfaction, and patronage intention*

Substantial empirical evidence shows that successful consumer-retailer relationship management is a prerequisite for generating consumers' positive behavioural intentions (Veloutsou, 2015; Voss et al., 2012). In the relationship marketing literature, both trust and satisfaction are documented as two key predictors of omni-channel patronage and usage. Specifically, trust has consistently been found to be essential in fostering ongoing relationships with consumers in retailing (Seo et al., 2019). Similarly, the ability to satisfy consumers is well-documented in the retail literature due to its impact on repeat purchases (Liu & Jang, 2009; Namin, 2017). As such, both these factors are often included as predictors of business profitability, customer retention, and long-term customer relationships (Graessley, Horak, Kovacova, Valaskova, & Poliak, 2019; Mirică, 2019). In this study, we assumed that omni-channel consumers interacting with retailers from different types of stores respond differently to those that they trust and are satisfied with. The hypotheses were formulated as:

H5: Retail type moderates the relationship between trust and patronage intention.

H6: Retail type moderates the relationship between satisfaction and patronage intention.

A research model (see Figure 2) was developed to test the hypotheses. Gender, education, and income were included as control variables in this study. This is because several prior studies (Homburg & Giering, 2001; Mitchell & Walsh, 2004) have suggested that wealthier, better educated, and female consumers are more likely to use integrated channels when seeking and purchasing products from a retail outlet.

[Insert Figure 2 here]

4   Methodology

4.1 Data Collection

Following recommendations from previous research (see Cui et al., 2022; Foroudi et al., 2020; Mimoun et al., 2021), the purposive sampling approach was used to recruit respondents from three different types of retail stores, namely high-end specialty stores (i.e., Louis Vuitton and Gucci), department stores (i.e., Ikea and Metrojaya), and hypermarkets (i.e., Tesco and Aeon). The target respondents comprised young consumers (often labelled as Gen-Y) who had visited and purchased products from omni-channel retailers. This generation is endorsed to be digital natives, well-educated, and highly involved in and connected with emerging retail concepts like the omni-channel (Carlson et al., 2020). Similarly, Donnelley and Scaff (2020) reported that over 68% of young consumers are more attracted to retailers who can transition their data from their physical store to the desktop and smartphone and vice versa whenever necessary.

To ascertain relevant knowledge on omni-channel retailing, three selection criteria for the retailers, suggested by Zhang et al. (2018), were adopted. First, the omni-channel retailers must have operated for more than 10 years with a good reputation and large consumer base. Second, they must be early adopters of online retailing platforms. Third, they must have started implementing omni-channel marketing strategies and moved beyond independent multi-channel operations, such as through their websites, social media sites (e.g., Facebook, Twitter, Instagram, etc.), and mobile applications. Finally, a screening question was included in the questionnaire to ensure that respondents had engaged in omni-channel interactions (i.e., "Did you frequently buy products and interact with the retailer across its online and offline channels in the last month?") (see Cui et al., 2022). Those who responded "Yes" were permitted to continue to the rest of the survey.

A total of 900 questionnaires were distributed via the retail company's internal survey system to customers who used their omni-channel app, whether in the store or on their private devices[1]. In the invitation message, respondents were informed of the purpose of the research and the time to complete the survey, following which their consent to participate was obtained. Data collection took place over three month (July to October 2021) and reminder messages were sent after the third week to those who had not responded. Only 800 returned questionnaires were usable, which accounted for a response rate of 88.89% [see Appendix A (i)]. Of these, data cleaning excluded 64 questionnaires due to incomplete and straight-lining responses. Therefore, 736 questionnaires were retained for analysis. A frequency analysis indicated that the respondents across the three retail types were proportionate, with high-end specialty stores comprising 31.2%, department stores comprising 37%, and hypermarkets comprising 31.8%. Most of the respondents were female (61.0%), Malay (60.6%), corporate employees (37.2%), bachelor's degree holders (78.0%), and earners of a monthly disposable income between RM 4,501 (~US$1,050) and RM 6,500 (~US$1,500) (31.5%) [see Appendix A (ii)].

4.2 Measurement

All measures were adapted from existing validated scales (see Appendix B) and measured on a 7-point Likert scale (i.e., 1 = strongly disagree to 7 = strongly agree). CPCI was measured using six dimensions: (1) integrated consumer services (three items), (2) integrated information access (four items), (3) integrated order fulfilment (five items), (4) integrated product and price (four items), (5) integrated promotion (four items), and (6) integrated transaction information (four items). The items for these dimensions were adapted from scales developed by Bendoly et al. (2005), Jiang et al. (2015), and Zhang et al. (2018). Customer empowerment was measured using five items adapted from Hunter and Garnefeld (2008) and Prentice et al. (2016). Trust was evaluated with five items from Doney and Cannon (1997), Jarvenpaa et al. (1999), and McKnight et al. (2002). Satisfaction was measured using five items adapted from Gustafsson et al. (2005). Finally, three items adapted from Kim et al. (2008) were used to measure patronage intention.

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[1] Each retailer agreed to distribute 150 questionnaires via their internal survey system [see Appendix A(i)]. We explained to the retailers that the questionnaire was only targeted at Gen-Y consumers who had visited and purchased products using their omni-channel system.

To validate the items, a pre-test was conducted on five industry experts and 15 consumers with omni-channel shopping experience. Based on the pre-test results, the survey questionnaire's descriptions and items were modified before being pilot tested on 30 respondents to check for errors, item ambiguity, and survey design issues (Hulland et al., 2018).

5   Data Analysis

In assessing the proposed hypotheses, partial least squares structural equation modelling (PLS-SEM) was regarded the most suitable technique, as the nature of our research objective was to explore, predict, and compare the complex relationships measured in the research model (Chin et al., 2020; Hair et al., 2019). PLS-SEM is acknowledged as the most appropriate tool to estimate complex measurement and structural models, such as to handle model specifications of reflective-formative higher-order constructs (HOCs) like CPCI (Sarstedt et al., 2022) and to examine advanced moderating effects through permutation and omnibus group tests (Hair et al., 2018). Such complexity in estimating HOCs and advanced moderation entails extremely restrictive assumptions (i.e., constraining parameters) in covariance-based structural equation modelling (CB-SEM), which makes it difficult to consider for application (Sarstedt et al., 2022). To accommodate such reasons, SmartPLS version 3.3.7 was thus used to analyse the data and facilitate the examination of differences in consumer responses to omni-channel retailing across retailer types (i.e., high-end specialty stores, department stores, and hypermarkets).

5.1 Preliminary checks

Common method bias was not an issue in this dataset since Harman's one-factor test indicated that the one-factor solution accounted for only 38.64% of the explained variance, which is less than the suggested 40% maximum threshold (Babin et al., 2016). Moreover, we performed a post-hoc test using one-way ANOVA to detect significant differences between retail types across the ten main constructs. As illustrated in Appendix C, the type of retailer exhibited significant variations among all the constructs since p-values were all below 0.05.

5.2 Measurement model assessment

Cronbach's alpha (CA), composite reliability (CR), loadings, and average variance extracted (AVE) results were examined in the measurement model (Hair et al., 2019). All item loadings were above the recommended value of 0.50, except for item IP2. Since IP2 did not add additional theoretical value and demonstrated low loadings across all datasets, it was deleted from the analysis (Hair et al., 2017). CA and CR values exceeded the 0.70 criteria, while AVE values were greater than the 0.50 rule of thumb (Dijkstra & Henseler, 2015; Nunnally & Bernstein, 1994). Therefore, convergent validity was established for the study's data.

Discriminant validity was then examined using the Heterotrait-Monotrait (HTMT) ratio technique (Henseler et al., 2015). As shown in Appendix D (ii), the $HTMT_{.90}$ threshold was not exceeded; therefore, discriminant validity was achieved by all the datasets (Gold et al., 2001).

Finally, this study employed the procedures suggested by Sarstedt et al. (2018) to assess higher-order constructs (Type 2: Reflective-Formative). First, convergent validity was established for the dimensions that form CPCI, as indicated by path coefficients above 0.70 for all the datasets (see Cheah et al., 2018). Second, the results showed that variance inflation factor (VIF) values for all the dimensions were less than 3.3, indicating each dimension was distinct and free of collinearity. Lastly, the outer weights and significance were examined. The results for all dimensions in each dataset were not full statistically significant [see Appendix D (iii)]; nevertheless, none of them were removed to fully capture the operational definition of CPCI, as suggested in Zhang et al.'s (2018) study.

5.3 Measurement Invariance

Prior to conducting multiple group analysis (MGA), measurement invariance was assessed to determine whether the construct measurements were acceptable across the three datasets (Henseler et al., 2016). First, configural invariance was established, as presented in Appendix D. Second, compositional invariance was assessed (see Appendix E), wherein all permutation c value results (c = 1) fell within the upper and lower bounds of the 95% confidence interval. Finally, the composites' equality of mean values and variances across the three pairs of comparison were not significantly different from each other, since the confidence intervals of the differences in mean values and variances between the construct scores

of the three different groups straddled zero. In accordance with the measurement invariance of composite models (MICOM) procedure, full measurement invariance was established, allowing the comparison of standardised path coefficients across the groups in a MGA (Henseler et al., 2016).

5.4 Structural Model

The assessment of the structural model was performed using the five-step approach. In terms of collinearity issues, all VIF values from the three datasets were reported to be below the threshold of 3.0; therefore, collinearity was not a critical concern (Hair et al., 2019).

To calculate the path coefficients (β), a bootstrapping procedure with 5,000 re-samples was employed. First, the bootstrapped results showed that all three control variables (i.e., level of education, gender, and personal income) demonstrated insignificant effects across the models (see Table 1). As shown in Table 1 and Figure 3, the relationship between CPCI and customer empowerment was significant and positive in all datasets, with β values ranging from 0.467 to 0.779 at $p < .00$. Substantial explanatory power was demonstrated as well, with R^2 values ranging from 21.8% for high-end speciality stores to 60.7% for department stores. Customer empowerment was found to significantly influence trust in all the datasets ($\beta = 0.636\text{-}0.782$, $p < .001$), with more than 40% of explanatory power (i.e., R^2 ranging from 0.405 to 0.611). Similarly, the relationships between customer empowerment and satisfaction ($\beta = 0.109\text{-}0.182$, $p < .05$) and trust and satisfaction ($\beta = 0.337\text{-}0.714$, $p < .001$) were significant for all the datasets. The combined effects of empowerment and trust accounted for over 60% of the variance in satisfaction for both the department store and hypermarket datasets ($R^2 = 0.633 - 0.635$), and 45.7% of the variance for the general dataset ($R^2 = 0.457$). However, these constructs only contributed to 21.8% of the variance in satisfaction in the high-end specialty store dataset ($R^2 = 0.218$).

Trust exhibited a significant positive influence on patronage intention for the general, high-end specialty store, and department store datasets ($\beta = 0.181\text{-}0.337$, $p < .001$), but not for the hypermarket dataset ($\beta = -0.010$, $p > .05$). Lastly, satisfaction was revealed to be positively related to patronage intention for all the datasets ($\beta = 0.482\text{-} 0.852$, $p < .001$), with an explanatory power of more than 59% (R^2 ranging from 0.591 to 0.713).

In the final step, the blindfolding procedure was used to evaluate the model's predictive relevance (Q^2) (Geisser, 1975; Stone, 1974). The Q^2 values for the four datasets were greater than zero for the endogenous constructs (customer empowerment, trust, satisfaction, and patronage intention), signifying that the models had predictive relevance.

[Insert Table 1 here]

[Insert Figure 3 here]

5.5 PLSpredict

Based on the predictive accuracy assessment results derived from PLSpredict (Shmueli et al., 2019), this study found little to no predictive power for all the variables in the general dataset (see Appendix G). That is, the items for customer empowerment reported small predictive accuracy in the general dataset (the majority of $Q^2_{predict}$ [PLS – LM] results were less than zero), while the items for satisfaction, trust, and patronage intention illustrated a lack of predictive power ($Q^2_{predict} < 0$). The reason is that a well-fitting model with heterogeneity issues (e.g., subgroups) may perform poorly in out-of-sample predictions (Becker et al., 2013). Therefore, the three retail types (i.e. high-end specialty store, department store, and hypermarket) were examined separately to assess predictive relevance and accuracy.

The high-end specialty store's sample produced low predictive power for all the factors (i.e., customer empowerment, trust, satisfaction, and patronage intention). Interestingly, we found that the department store dataset demonstrated high predictive power for the customer relationship management factors (i.e., customer empowerment, trust, satisfaction), but only medium predictive power for patronage intention. On the other hand, the hypermarket dataset reported high predictive power for satisfaction and patronage intention, medium predictive power for customer empowerment, and low predictive power for trust. Overall, the results verify that the department store dataset exhibited the greatest predictive power towards the omni-channel retailing approach.

5.6 Multi-Group Analysis

The Omnibus Test of Group[2] differences proposed by Sarstedt et al. (2018) was used to estimate significant differences across the three retail types (i.e. high-end specialty stores, department stores, and hypermarkets). The analysis showed that six path coefficients were not the same across the groups; thus, the null hypothesis was rejected. In particular, the analysis produced variance ratio (FR) values of 119,915.95 (CPCI → customer empowerment), 21,448.39 (customer empowerment → trust), 1,676.71 (customer empowerment → satisfaction), 45,768.91 (trust → satisfaction), 36,192.32 (trust → patronage intention), and 54,109.71 (satisfaction → patronage intention), indicating that all differences were significant ($p \leq$ .01).

Based on the permutation test for multi-group comparisons (Sarstedt et al., 2018), Table 2 shows the path coefficient estimates' differences for the three comparison pairs (high-end specialty store vs. department store, high-end specialty store vs. hypermarket, and department store vs. hypermarket).

[Insert Table 2 here]

Hypothesis 1 was supported, since CPCI had a significantly greater positive influence on customer empowerment in both department stores (|diff| = -0.312, $p < .001$) and hypermarkets (|diff| = -0.302, $p < .001$) compared to high-end specialty stores. Hypothesis 4 was supported as well, whereby the influence of trust on satisfaction was significantly greater for department stores than high-end specialty stores (|diff| = -0.311, $p < .001$). Likewise, the influence of trust on satisfaction was significant stronger in hypermarkets than high-end specialty stores (|diff| = -0.377; $p < .001$). Also, Hypothesis 5 was supported as the influence of trust on patronage intention was significantly better in department stores than hypermarkets (|diff| = 0.347; $p = .002$). Similarly, Hypothesis 6 was supported as the three retail types were significantly distinct in the relationship between satisfaction and patronage intention. The path coefficients were found to be stronger for hypermarkets, followed by high-end specialty stores and

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[2] The Omnibus Test of Group combines the procedures of bootstrapping with permutation testing to simulate an overall F test result. This method preserves the Type I error level as defined by the researcher (i.e., the familywise error rate) and offers an appropriate level of statistical power without relying on distributional assumptions (see Sarstedt et al., 2011; Ting et al., 2019).

department stores. Finally, although customer empowerment significantly influenced both trust and satisfaction, there were no significant differences between three retail datasets. As such, Hypothesis 2 and Hypothesis 3 were rejected.

[Insert Table 3 here]

6   Discussion

The omnibus test group findings supported most of the hypotheses that outlined consumers' perceptions towards omni-channel retailing based on retail type (Shi et al., 2018). Although the effect of CPCI on customer empowerment was significant and positive for all three retail types, its impact was shown to be lower for high-end specialty stores compared to department stores and hypermarkets. This denotes that department store and hypermarket consumers have a higher expectation of the service purveyed to them, including consistent and reliable product and price information, sales promotion, flexible payment, and an efficient distribution system across channels (Hübner et al., 2016). Managing these integrations under the single roof of the omni-channel system can be an effective and efficient approach for both department store and hypermarket retailers to expedite purchasing decisions anytime, anywhere (Bogomolova et al., 2017; McNeill, 2013) and consequently, empower consumers and enhance business relationships (Hu & Tadikamalla, 2020). In contrast, it appears that high-end specialty store consumers are less concerned about integrated omni-channel systems, possibly because they prefer personalised product information and customer service as well as the ability to touch, feel, and try high-end products or services before purchasing them. Thus, these results expand upon the multi-channel retail guidelines provided by Bloch and Kamran-Disfani (2018) by proving that omni-channel strategies are subject to the type of retail outlet.

The positive influences of customer empowerment on trust and satisfaction were not significantly different across the three retail types, corroborating earlier research that empowerment improves trust and satisfaction regardless of the retail setting (Van Dyke et al., 2007; Zhang et al., 2018). Empowered consumers have greater perceived control in the purchasing process, which reinforces their perception of trust and satisfaction as they can conveniently gather details, reduce information asymmetry, and decrease uncertainty (Cao & Li, 2015). Moreover, trust was found to have a greater influence on satisfaction for both department store and hypermarket consumers. This implies that when stimulating

satisfaction among omni-channel consumers, trust is a major concern for those who buy from department stores and hypermarkets, but not for those who patronise high-end specialty stores.

Our findings also highlight the key roles of trust and satisfaction in stimulating patronage intention in high-end specialty stores and department stores, whereas satisfaction is the only predictor of patronage intention in hypermarkets. These findings parallel the suggestion of Adams (2014) that online retailers in general should pay attention to relational marketing strategies and increase transparency to gain consumers' confidence. Undoubtedly, building close relationships with consumers through reliable and trustworthy omni-channel retail systems is pivotal to capture the interest of both affluent and smart shoppers (Pandey et al., 2020).

7. Implications of the Study

7.1 Theoretical Implications

From a theoretical perspective, the present study contributes to the extant knowledge on consumer behaviour in omni-channel retailing, supported by the S-O-R model. Due to the dynamism of the business landscape and the complexity of today's marketplace, consumers' heterogenous behaviour continues to be a topic of interest. Compared to most omni-channel retailing studies that have primarily dwelt on organisational aspects by investigating channel integration (e.g., Adivar et al., 2019), supply chain structure (e.g., Liu et al., 2020), and inventory and logistics (e.g., Xu & Cao, 2019), this study provides new insights to this research domain by exploring how consumers of different retail stores distinctly react to CPCI, consumer relationship management factors, and patronage intention.

First, this study offers evidence that channel integration serves as an important factor to strengthen the relationship between omni-channel retailers and their consumers. As broadly stated in the literature, the salient features of channel integration rely on several aspects including consumer services, information access, order fulfilment, product and price, promotion, and transaction information (Bendoly et al., 2005; Jiang et al., 2015; Zhang et al., 2018). When contemporary retailers initiate an omni-channel strategy to empower their consumers, a well-integrated channel can yield better results to achieve this goal. This effect is stronger among consumers of hypermarkets and department stores compared to

those of high-end specialty stores. Thus, future research is strongly suggested to incorporate CPCI as a context-specific variable when examining consumer behaviour in the omni-channel retail setting.

Second, this study articulates the relevance of customer empowerment in understanding the magnitude of relationship management throughout the transaction or purchase process. When consumers are empowered to make evaluations based on their perceptions and assume an active role at every touchpoint, they will likely respond favourably. This finding thus reveals an additional and renewed understanding of organisms in the S-O-R framework. Instead of being a mere emotional response to stimulus, the internal state of consumers (which is often labelled a black box) is an evaluative process that requires (pro)active efforts at every touchpoint. As reflected in the MGA results, there are no significant differences in the impacts of customer empowerment on trust and satisfaction across the three different retail types. Despite a significant difference in the effect of trust on satisfaction by retail type, especially for high-end specialty stores compared to department stores and hypermarkets, a positive relationship was found for all the datasets. As such, our study again enriches the literature by providing a stronger justification of the important role of "relationship management" in fostering consumer behaviour.

Last but not least, the findings herein reveal that the effects of trust and satisfaction on patronage intention vary across different retail types. To encourage consumers of high-end specialty stores and department stores to repurchase or recommend these retail stores to others, it is important for retailers to first gain their trust and satisfy their needs. On the other hand, in the hypermarket selling platform, consumers' patronage intention is mainly influenced by their degree of satisfaction. This indicates the necessity for the omni-channel literature to embed consumer behaviour in a heterogeneous manner if it is to propose a framework underscoring the factors that influence patronage intention.

7.2 Practical Implications

From the practical perspective, our study's outcomes provide actionable insights to omni-channel retailers who operate in high-end specialty stores, department stores, and hypermarkets. To coordinate the omni-channel, it is important for different retail stores to implement diverse strategies when interacting with their target consumers. In particular, high-end specialty store retailers should focus on maintaining high-quality service and

support. They can build a strong rapport with individual consumers by developing a consistent and personalised information service that is accessible across all channels. Moreover, to remain competitive and stay relevant in the current business environment, retailers from high-end specialty stores should go the extra mile beyond delivering superior service quality to deliver experience quality as well (Tyrväinen et al., 2020). When a transaction can be performed on online platforms or via integrated channels, good in-store service may not suffice. The entire purchasing process is important; any touchpoint that fails to deliver (and thereby impairs) consumer experience will result in low patronage intention and even withdrawal or cancellation of the purchase. This is particularly crucial for consumers who shop in high-end specialty stores, as most of their purchases are considered high-involvement items which are relatively costly.

Department stores and hypermarkets do not only vary from high-specialty stores but also from each other. While consumers expect good customer service, easily accessible and credible information, flexible payment and fulfilment options (e.g., pick up or delivery), and product and price information consistency from department stores, they expect products with affordable prices, appealing promotions, and simple integrated information access from hypermarkets (Shen et al., 2018; Shi et al., 2020). As far as department stores are concerned, to avoid consumers' confusion and frustration, product and marketing information is expected to be streamlined across multiple channels. As such, staff should be familiar with the information available on each channel so as to disseminate accurate information in a professional and consistent manner when responding to customer enquiries. With regard to hypermarkets, promotions (e.g., seasonal promotion, cash rebates, coupons, and free gifts) and effective communication across different channels are essential to facilitate bulk purchasing and ensure that customers gravitate towards the retail store continuously. This will establish repeated visits and more sales opportunities.

Whether consumers are shopping in high-end specialty stores, department stores, or hypermarkets, it is clear that digital technologies continue to have a profound impact on business operations. Consumers' intentions to repurchase or recommend are increasingly influenced by their perceptions, internal states, and evaluative processes. While both trust and satisfaction are pivotal to heighten patronage intention in omni-channel retailing, customer empowerment is arguably the indispensable precursor to sustaining a long-term relationship with consumers even if something goes wrong in the purchasing process. As more and more consumers today are comfortable with online shopping and are willing to use multiple

channels to make the right purchase, the effective implementation of omni-channel retail strategies based on retail type as well as the operative navigation of consumer experience at every touchpoint do not only address consumers' desire to purchase effectively but also empower them to make decisions in a prudent manner.

8. Conclusion and Future Studies

Drawing from the S-O-R model, this study responded to calls for more omni-channel research by demonstrating that consumer perceptions towards omni-channel retailing diverges across retail types (i.e., high-end specialty store, department store, and hypermarket). Despite its contributions, this research has several limitations. First, it focuses only on the retail sector. To acquire deeper theoretical and practical insights, it would be interesting for future studies to extend the model to other sectors such as banking or hospitality and tourism. Additionally, cross-cultural implications with respect to the acceptance and use of channel integration in the consumer journey would be worthwhile to examine, since consumers in Asia generally display stronger uncertainty avoidance behaviour than those in western regions (Huang & Chang, 2019). Moreover, given that channel integration is a gradual and continuous process that unfolds over time, a longitudinal research design may be more effective in determining the impact of channel integration on consumer responses (Neslin et al., 2006; Zhao et al., 2010). Finally, this study utilised a non-probability sampling technique (i.e., purposive sampling), thus limiting the generalisability of the present findings. Therefore, future researchers are suggested to work closely with potential retailers and obtain their consent to use their database (i.e., to extract the complete sampling frame for data collection) to validate the comparison of the findings and to acquire more generalised results.

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Figures
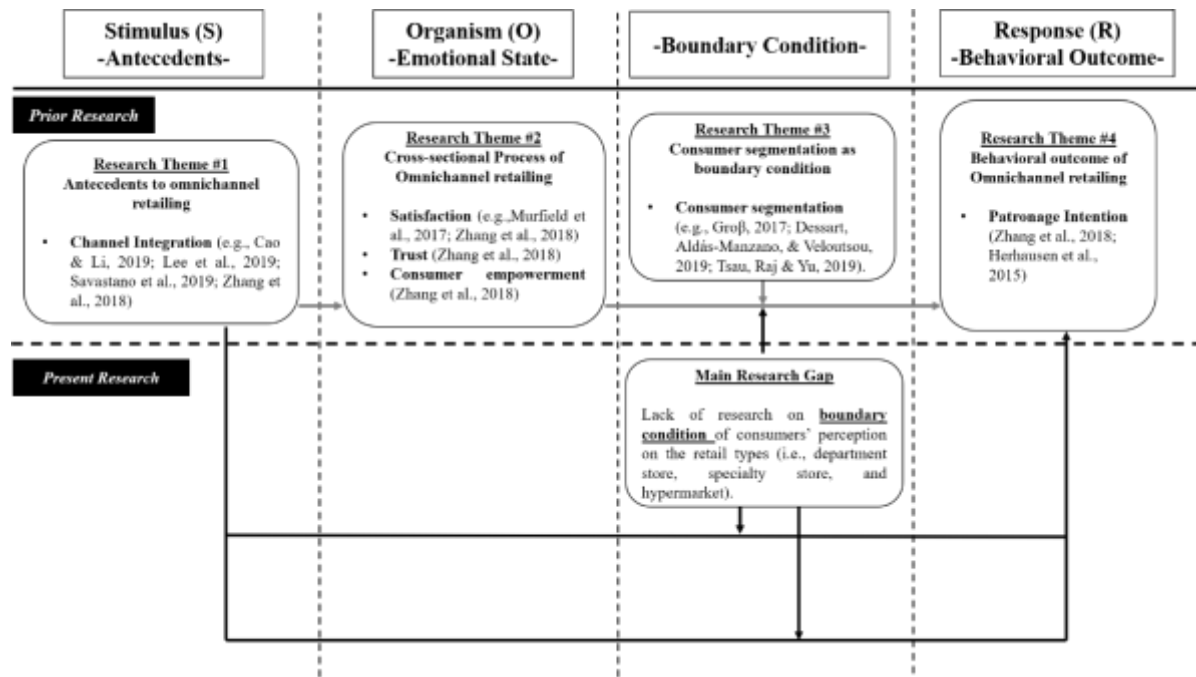
Figure 1: Literature review summary of omni-channel retailing.

Note: The top panel reviews themes in prior research. The lower panel identifies the foci of this research – research gap 1 and 2a, 2b
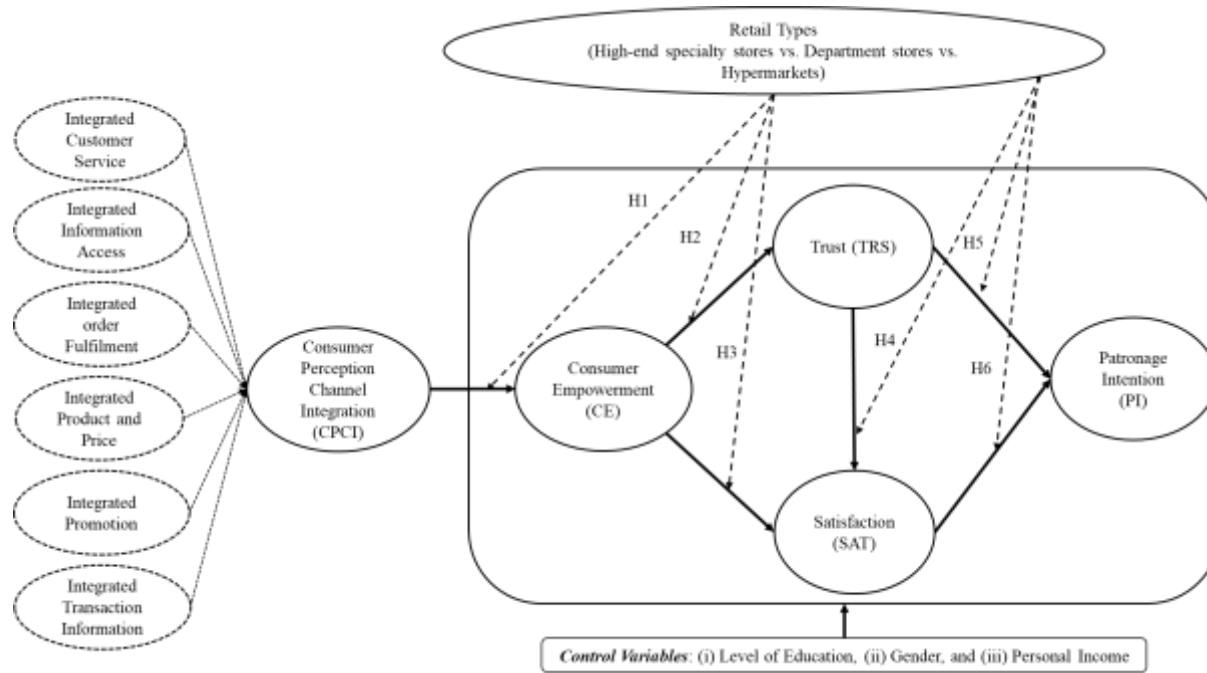
Figure 2: Research Model

Note: CPCI is a second-order (multidimensional) construct that is formed by six first-order (dimensions) constructs: integrated consumer service, integrated information access, integrated order fulfilment, integrated product and price, integrated promotion, and integrated transaction information.

(i) Panel A: General - All Consumers (n =736)

(ii) Panel B: High-end specialty store (n =272)

(iii) Panel C: Department store (n = 230)

(iv) Panel D: Hypermarket (n = 234)

Remark:
→ Supported Relationship
- - -→ Non-Supported Relationship
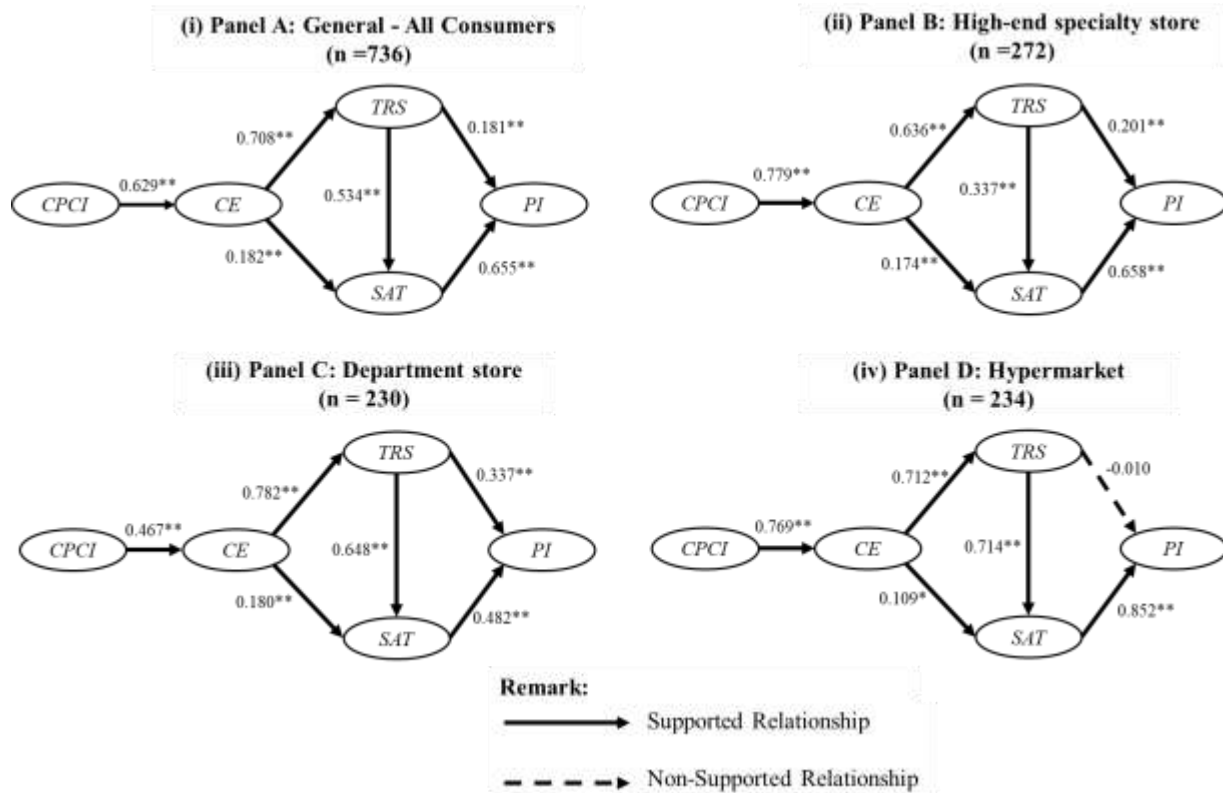
Figure 3: Path Model Results

Note(s):

i.   *p-value < 0.05; ** p-value < 0.01
ii.   All the control variables (i.e. level of education, gender, and personal income) effect were insignificant (see Table 1)

Tables

Table 1: Assessment of Structural Model

Dataset	Relationship	β	SE	t-value	95% BCa CI LB	UB	VIF	f^2	R^2	Q^2
General (all consumers)	CPCI -> CE	0.629	0.024	26.184**	0.582	0.663	1.000	NA	0.395	0.289
n=736	CE -> TRS	0.708	0.021	34.388**	0.672	0.740	1.000	NA	0.502	0.373
	CE -> SAT	0.182	0.039	4.664**	0.119	0.247	2.008	0.030	0.457	0.369
	TRS -> SAT	0.534	0.043	12.400**	0.458	0.602	2.008	0.262		
	TRS -> PI	0.181	0.035	5.239**	0.125	0.238	1.787	0.048	0.619	0.528
	SAT -> PI	0.655	0.030	21.934**	0.605	0.704	1.787	0.632		
	Control Variables									
	Level of Education -> CE	0.092	0.068	1.352	-0.003	0.208				
	Level of Education -> PI	-0.042	0.030	1.400	-0.079	-0.003				
	Level of Education -> Sat	-0.018	0.023	0.809	-0.066	0.025				
	Level of Education -> TRS	0.021	0.026	0.836	-0.030	0.072				
	Gender -> CE	-0.007	0.029	0.230	-0.065	0.050				
	Gender -> PI	0.014	0.022	0.649	-0.031	0.057				
	Gender -> SAT	-0.024	0.027	0.894	-0.076	0.028				
	Gender -> TRS	-0.030	0.025	1.163	-0.081	0.019				
	Personal Income -> CE	-0.009	0.043	0.220	-0.090	0.076				
	Personal Income-> PI	0.007	0.057	0.131	-0.108	0.118				
	Personal Income -> SAT	0.092	0.060	1.533	-0.003	0.208				
	Personal Income -> TRS	0.015	0.039	0.387	-0.059	0.093				
High-end specialty store	CPCI -> CE	0.779	0.029	26.815**	0.721	0.818	1.000	NA	0.218	0.136
n=272	CE -> TRS	0.636	0.038	16.820**	0.569	0.694	1.000	NA	0.405	0.289
	CE -> SAT	0.174	0.061	2.825**	0.075	0.277	1.679	0.023	0.218	0.158
	TRS -> SAT	0.337	0.069	4.902**	0.220	0.447	1.679	0.086		
	TRS -> PI	0.201	0.050	4.045**	0.118	0.282	1.250	0.079	0.591	0.500

	SAT -> PI	0.658	0.041	15.950**	0.586	0.723	1.250	0.846		
	Control Variables									
	Level of Education -> CE	-0.062	0.053	1.167	-0.166	0.043				
	Level of Education -> PI	-0.051	0.040	1.266	-0.134	0.025				
	Level of Education -> Sat	-0.056	0.046	1.224	-0.148	0.030				
	Level of Education -> TRS	-0.009	0.043	0.220	-0.090	0.076				
	Gender -> CE	0.007	0.057	0.131	-0.108	0.118				
	Gender -> PI	0.072	0.048	1.500	-0.003	0.208				
	Gender -> SAT	-0.062	0.053	1.167	-0.166	0.043				
	Gender -> TRS	0.008	0.047	0.174	-0.082	0.104				
	Personal Income -> CE	0.070	0.052	1.400	-0.010	0.153				
	Personal Income-> PI	0.010	0.029	0.350	-0.045	0.070				
	Personal Income -> SAT	-0.075	0.052	1.442	-0.158	0.009				
	Personal Income -> TRS	0.015	0.047	0.328	-0.076	0.105				
Department Store	CPCI -> CE	0.467	0.046	10.14**	0.362	0.522	1.000	NA	0.607	0.473
n=230	CE -> TRS	0.782	0.027	28.552**	0.731	0.822	1.000	NA	0.611	0.472
	CE -> SAT	0.180	0.072	2.500**	0.063	0.298	2.573	0.035	0.635	0.513
	TRS -> SAT	0.648	0.070	9.222**	0.526	0.756	2.573	0.447		
	TRS -> PI	0.337	0.079	4.253**	0.208	0.471	2.648	0.108	0.603	0.488
	SAT -> PI	0.482	0.073	6.626**	0.351	0.591	2.648	0.221		
	Control Variables									
	Level of Education -> CE	0.015	0.039	0.387	-0.059	0.093				
	Level of Education -> PI	-0.030	0.033	0.918	-0.096	0.033				
	Level of Education -> Sat	-0.025	0.039	0.628	-0.104	0.050				
	Level of Education -> TRS	-0.062	0.053	1.167	-0.166	0.043				
	Gender -> CE	0.056	0.042	1.350	-0.023	0.141				
	Gender -> PI	-0.011	0.041	0.273	-0.092	0.069				
	Gender -> SAT	-0.015	0.041	0.363	-0.097	0.063				
	Gender -> TRS	-0.067	0.040	1.468	-0.146	0.012				
	Personal Income -> CE	0.021	0.026	0.836	-0.030	0.072				
	Personal Income-> PI	0.014	0.022	0.649	-0.031	0.057				

	Personal Income -> SAT	0.007	0.057	0.131	-0.108	0.118				
	Personal Income -> TRS	0.010	0.029	0.350	-0.045	0.070				
Hypermarket n=234	CPCI -> CE	0.769	0.026	29.762**	0.713	0.803	1.000	NA	0.591	0.442
	CE -> TRS	0.712	0.038	18.563**	0.639	0.767	1.000	NA	0.506	0.375
	CE -> SAT	0.109	0.059	1.843*	0.016	0.208	2.026	0.020	0.633	0.532
	TRS -> SAT	0.714	0.056	12.662**	0.609	0.796	2.026	0.685		
	TRS -> PI	-0.010	0.059	0.165	-0.103	0.091	2.678	0.000	0.713	0.632
	SAT -> PI	0.852	0.047	18.230**	0.767	0.919	2.678	0.944		
	Control Variable									
	Level of Education -> CE	0.015	0.039	0.387	-0.059	0.093				
	Level of Education -> PI	0.010	0.029	0.350	-0.045	0.070				
	Level of Education -> Sat	-0.030	0.033	0.918	-0.096	0.033				
	Level of Education -> TRS	0.015	0.047	0.328	-0.076	0.105				
	Gender -> CE	-0.065	0.042	1.548	-0.158	0.009				
	Gender -> PI	-0.056	0.044	1.273	-0.122	0.013				
	Gender -> SAT	-0.045	0.041	1.088	-0.128	0.032				
	Gender -> TRS	-0.056	0.046	1.224	-0.148	0.030				
	Personal Income -> CE	0.056	0.042	1.350	-0.023	0.141				
	Personal Income-> PI	0.015	0.039	0.387	-0.059	0.093				
	Personal Income -> SAT	0.008	0.047	0.174	-0.082	0.104				
	Personal Income -> TRS	0.015	0.039	0.387	-0.059	0.093				

Note(s):

- NA: Not applicable for single exogenous construct on endogenous construct; CPCI: Consumer Perception of Channel Integration; CE: Customer Empowerment; TRS: Trust; SAT: Satisfaction; PI: Patronage Intention
- One-tailed significance: * = p < .05; ** = p < .001;
- Effect size (f^2) = trivial effect size (0.02 and below) small effect size (0.02 – 0.15), medium effect size (0.15 – 0.35), and large effect size (0.35 and above) (Cohen, 1988)

Table 2: Multi-Group Comparison Test Results

Relationship	Comparison	|diff|	*p*
H1: CPCI → Customer Empowerment	Specialty vs. Department	-0.312	<0.001
	Specialty vs. Hypermarket	-0.302	<0.001
	Department vs. Hypermarket	0.010	0.395
H2: Customer Empowerment → Trust	Specialty vs. Department	-0.146	0.056
	Specialty vs. Hypermarket	-0.076	0.162
	Department vs. Hypermarket	0.070	0.131
H3: Customer Empowerment → Satisfaction	Specialty vs. Department	-0.007	0.950
	Specialty vs. Hypermarket	0.064	0.470
	Department vs. Hypermarket	0.071	0.440
H4: Trust → Satisfaction	Specialty vs. Department	-0.311	<0.001
	Specialty vs. Hypermarket	-0.377	<0.001
	Department vs. Hypermarket	-0.066	0.463
H5: Trust → Patronage Intention	Specialty vs. Department	-0.136	0.086
	Specialty vs. Hypermarket	0.211	<0.001
	Department vs. Hypermarket	0.347	<0.001
H6: Satisfaction → Patronage Intention	Specialty vs. Department	0.175	0.002
	Specialty vs. Hypermarket	-0.195	<0.001
	Department vs. Hypermarket	-0.370	<0.001

Note: Šidák procedure [Formula: $1 - (1 - alpha)^{1/m}$] is used in each comparison to adjust the 5 percent level of probability. As there are three types of retail stores in the study (i.e., 3 pairs of comparisons), a significance level of $1- (1 - 0.05)^{1/3} = 0.016$ is used instead of 0.05. The purpose is to counteract the increase in the familywise error rate when performing multiple comparisons of three types of samples.

Table 3: Summary of Hypotheses

Hypotheses	Supported		
	High-end specialty store vs. Department store	High-end specialty store vs. Hypermarket	Department store vs. Hypermarket
H1: Retail types moderate the relationship between CPCI and customer empowerment.	Yes	Yes	No
H2: Retail types moderate the relationship between customer empowerment and trust.	No	No	No
H3: Retail types moderate the relationship between customer empowerment and satisfaction.	No	No	No
H4: Retail types moderate the relationship between trust and satisfaction.	Yes	Yes	No
H5: Retail types moderate the relationship between trust and patronage intention.	No	Yes	Yes
H6: Retail types moderate the relationship between satisfaction and patronage intention.	No	Yes	Yes

Appendices

Appendix A(i): Samples and Questionnaire Distribution

No	Types of Retailers	Name of Retailer	Questionnaire Distribution	Usable/ Effective Questionnaire	Percentage
1	High-end Specialty Store	Louis Vuitton	150	110	73.33%
2	High-end Specialty Store	Gucci	150	120	80.00%
3	Department Store	IKEA	150	140	93.33%
4	Department Store	Metrojaya	150	140	93.33%
5	Hypermarket	Tesco	150	145	96.67%
6	Hypermarket	Aeon	150	145	96.67%
	Total		900	800	88.89%

Note: Total responses: 230 from high-end specialty store; 280 from department store; and 290 from hypermarket.

Appendix A (ii): Sample Demographics

Characteristic	Item	Frequency	Percent
Types of Retailers	High-end Specialty Store	230	31.2
	Department Store	272	37.0
	Hypermarket	234	31.8
Gender	Male	287	39.0
	Female	449	61.0
Ethnicity	Malay	446	60.6
	Chinese	197	26.8
	Indian	55	7.5
	Others	38	5.2
Level of Education	Bachelor's degree	574	78.0
	Master's degree	117	15.9
	PhD degree	45	6.1
Occupation	Enterprise Employee	274	37.2
	Institution Staff	261	35.5
	Entrepreneur	201	27.3
Personal Income	Below RM2,500	107	14.5
	RM 2,500 to RM 4,500	131	17.8
	RM 4,501 to RM 6,500	232	31.5
	RM 6,501 to RM 8,500	156	21.2
	Above RM8,500	110	15.0

Note: N = 736

Appendix B: Construct Measurement items

Integrated Consumer Service (ICS) - *Bendoly et al. (2005); Jiang et al. (2015); Zhang et al. (2018)*
ICS1   I can return, repair or exchange of products purchased online in the retailer's physical store.
ICS2   I can get post-purchase services support for the products purchased at the retailer's physical stores from its Website.
ICS3   I can access to the service assistant through a real-time chat program through the retailer's Website.

Integrated Information Access (IIA) - *Bendoly et al. (2005); Jiang et al. (2015); Zhang et al. (2018)*
IIA1   I can search for products in the retailer's physical store through its Website.
IIA2   I can check of the retailer's inventory status at the physical store through its Website.
IIA3   I can access the information and functionalities on the retailer's Website through the Internet kiosks in its physical store.
IIA4   I can find answers through the Internet kiosks in the retailer's physical store without making enquiries from in-store service assistants.

Integrated Order Fulfilment (IOF) - *Bendoly et al. (2005); Jiang et al. (2015); Zhang et al. (2018)*
IOF1   I can redeem the retailer's gift coupons or vouchers in its physical store or Website.
IOF2   I can self-collect my online purchases in the retailer's physical store.
IOF3   I can pick up my online purchases in any physical store of the retailer.
IOF4   I can make payment for my online purchases in the retailer's physical store.
IOF5   I can place orders for out-of-stock items in the retailer's physical store through its Internet kiosks.

Integrated Product and Price (IPP) - *Bendoly et al. (2005); Jiang et al. (2015); Zhang et al. (2018)*
IPP1   I can find consistent product descriptions in the retailer's physical store and Website.
IPP2   I can find consistent product category classifications in the retailer's physical store and Website.
IPP3   I can find consistent product price in the retailer's physical store and Website.
IPP4   I can find consistent discounts in the retailer's physical store and Website.

Integrated Promotion (IP) - *Bendoly et al. (2005); Jiang et al. (2015); Zhang et al. (2018)*
IP1   I can find consistent brand name, slogan and logo in the retailer's physical store and Website.
IP2   I can find the promotions that are taking place in the physical store on the retailer's Website.
IP3   I can find the address and contact information of the physical store on the retailer's Website.
IP4   I can find advertisements of the retailer's Website on the pamphlets, receipts, and carrying bags in its physical store.

Integrated Transaction Information (ITI) - *Bendoly et al. (2005); Jiang et al. (2015); Zhang et al. (2018)*
ITI1   I can access both my online and offline purchase history with the retailer.
ITI2   I can access my prior purchase history with the retailer.
ITI3   I can receive future purchase recommendations from the retailer.
ITI4   I can receive a customized Web page.

Customer Empowerment (CE) - *Hunter and Garnefeld (2008); Prentice et al. (2016)*
CE1   In my dealings with this retailer, I feel I am in control.
CE2   The ability to influence the goods and services of this retailer is beneficial to me.
CE3   I feel good because of my ability to influence the choice set offered to me by this retailer.
CE4   During the shopping process, I can select product and service freely.
CE5   My influence over this retailer has increased relative to the past.

Trust - *Doney and Cannon (1997); Jarvenpaa et al. (1999); McKnight et al. (2002)*
TRS1   This retailer is reliable.
TRS2   This retailer is trustworthy.
TRS3   This retailer's products and service are dependable.
TRS4   This retailer offers secure Web transactions.
TRS5   It is unnecessary to be cautious with this retailer.

Satisfaction - *Gustafsson et al. (2005)*
SAT1   Altogether, I'm satisfied with the goods and services of this retailer.
SAT2   I'm totally convinced of this retailer.
SAT3   This retailer totally meets my expectations.
SAT4   I've made especially good experiences with this retailer.
SAT5   This retailer offers me exactly what I need.

Patronage Intention - *Kim et al. (2008)*
PI1   I am likely to purchase the products(s) from this retailer.
PI2   I am likely to recommend this retailer to my friends.
PI3   I am likely to make another purchase from this retailer if I need the products that I will buy.

Appendix C: ANOVA Test of the Main Constructs across Types of Retailers

Construct	Types of Retailers	N = 736	Mean	Std. Deviation	F	Sig.
Customer Empowerment	HESS	230	4.920	0.943	2.254	0.038
	Department store	272	4.260	0.802		
	Hypermarket	234	5.250	0.998		
ICS	HESS	230	4.590	0.932	2.537	0.031
	Department store	272	4.750	0.942		
	Hypermarket	234	4.590	1.048		
IIA	HESS	230	4.810	0.930	25.444	< 0.001
	Department store	272	5.090	0.860		
	Hypermarket	234	4.500	0.973		
IOF	HESS	230	4.680	0.928	5.749	0.003
	Department store	272	4.840	0.868		
	Hypermarket	234	4.560	1.032		
IPP	HESS	230	5.270	0.948	6.279	0.002
	Department store	272	5.470	0.761		
	Hypermarket	234	5.230	0.822		
IP	HESS	230	5.230	0.886	15.554	< 0.001
	Department store	272	5.600	0.727		
	Hypermarket	234	5.270	0.870		
ITI	HESS	230	4.600	1.041	36.481	< 0.001
	Department store	272	5.060	0.945		
	Hypermarket	234	4.320	0.970		
Patronage Intention	HESS	230	5.400	1.079	6.544	0.002
	Department store	272	5.390	0.848		
	Hypermarket	234	5.110	1.056		
Satisfaction	HESS	230	5.100	0.985	8.676	< 0.001
	Department store	272	5.380	0.796		
	Hypermarket	234	5.070	1.014		
Trust	HESS	230	4.850	1.077	2.096	0.044
	Department store	272	4.240	0.916		
	Hypermarket	234	5.100	0.985		

Note: HESS: High-end specialty store

Appendix D(i): Measurement model assessment

Data Set	Construct	Item	Loading	CA	rho_A	CR	AVE
General (all consumers) n = 736	Customer Empowerment	CE1	0.841	0.913	0.916	0.935	0.743
		CE2	0.880				
		CE3	0.885				
		CE4	0.826				
		CE5	0.875				
	Integrated Consumer Service	ICS1	0.890	0.854	0.856	0.912	0.775
		ICS2	0.887				
		ICS3	0.863				
	Integrated Information Access	IIA1	0.787	0.844	0.850	0.894	0.679
		IIA2	0.830				
		IIA3	0.844				
		IIA4	0.834				
	Integrated Order Fulfilment	IOF1	0.712	0.876	0.880	0.911	0.672
		IOF2	0.884				
		IOF3	0.860				
		IOF4	0.828				
		IOF5	0.804				
	Integrated Promotion	IP1	0.726	0.700	0.701	0.828	0.617
		IP2	Deleted				
		IP3	0.805				
		IP4	0.822				
	Integrated Product & Price	IPP1	0.845	0.864	0.865	0.907	0.710
		IPP2	0.864				
		IPP3	0.850				
		IPP4	0.812				
	Integrated Transaction Information	ITI1	0.853	0.870	0.877	0.911	0.719
		ITI2	0.900				
		ITI3	0.814				
		ITI4	0.822				
	Patronage Intention	PI1	0.940	0.919	0.923	0.949	0.860
		PI2	0.934				
		PI3	0.907				
	Satisfaction	SAT1	0.880	0.943	0.943	0.956	0.814
		SAT2	0.898				
		SAT3	0.926				
		SAT4	0.915				
		SAT5	0.890				
	Trust	TRS1	0.865	0.916	0.916	0.937	0.750
		TRS2	0.916				
		TRS3	0.892				
		TRS4	0.852				
		TRS5	0.801				
High-end specialty store n = 272	Customer Empowerment	CE1	0.754	0.882	0.889	0.914	0.680
		CE2	0.875				
		CE3	0.850				

	Construct	Item					
		CE4	0.790				
		CE5	0.848				
	Integrated Consumer Service	ICS1	0.892	0.852	0.85	0.910	0.772
		ICS2	0.870				
		ICS3	0.873				
	Integrated Information Access	IIA1	0.818	0.843	0.892	0.890	0.669
		IIA2	0.828				
		IIA3	0.795				
		IIA4	0.830				
	Integrated Order Fulfilment	IOF1	0.550	0.834	0.858	0.885	0.611
		IOF2	0.855				
		IOF3	0.854				
		IOF4	0.776				
		IOF5	0.830				
	Integrated Promotion	IP1	0.562	0.700	0.818	0.794	0.572
		IP2	Deleted				
		IP3	0.903				
		IP4	0.763				
	Integrated Product & Price	IPP1	0.853	0.810	0.869	0.870	0.629
		IPP2	0.843				
		IPP3	0.806				
		IPP4	0.654				
	Integrated Transaction Information	ITI1	0.789	0.873	0.893	0.905	0.705
		ITI2	0.857				
		ITI3	0.821				
		ITI4	0.889				
	Patronage Intention	PI1	0.914	0.915	0.915	0.946	0.854
		PI2	0.928				
		PI3	0.931				
	Satisfaction	SAT1	0.840	0.921	0.926	0.941	0.760
		SAT2	0.887				
		SAT3	0.869				
		SAT4	0.898				
		SAT5	0.865				
	Trust	TRS1	0.840	0.909	0.911	0.933	0.736
		TRS2	0.912				
		TRS3	0.877				
		TRS4	0.882				
		TRS5	0.771				
Department store n = 230	Customer Empowerment	CE1	0.892	0.935	0.937	0.951	0.795
		CE2	0.902				
		CE3	0.904				
		CE4	0.851				
		CE5	0.907				
	Integrated Consumer Service	ICS1	0.883	0.858	0.859	0.914	0.780
		ICS2	0.905				
		ICS3	0.860				
		IIA1	0.785	0.834	0.834	0.890	0.668

	Integrated Information Access	IIA2	0.808				
		IIA3	0.854				
		IIA4	0.822				
	Integrated Order Fulfilment	IOF1	0.806	0.903	0.907	0.928	0.721
		IOF2	0.876				
		IOF3	0.891				
		IOF4	0.849				
		IOF5	0.820				
	Integrated Promotion	IP1	0.747	0.709	0.717	0.837	0.632
		IP2	Deleted				
		IP3	0.843				
		IP4	0.792				
	Integrated Product & Price	IPP1	0.896	0.903	0.912	0.932	0.774
		IPP2	0.884				
		IPP3	0.906				
		IPP4	0.832				
	Integrated Transaction Information	ITI1	0.877	0.893	0.897	0.926	0.758
		ITI2	0.918				
		ITI3	0.843				
		ITI4	0.842				
	Patronage Intention	PI1	0.950	0.895	0.927	0.935	0.827
		PI2	0.947				
		PI3	0.826				
	Satisfaction	SAT1	0.870	0.943	0.946	0.957	0.816
		SAT2	0.872				
		SAT3	0.952				
		SAT4	0.922				
		SAT5	0.896				
	Trust	TRS1	0.859	0.929	0.930	0.946	0.780
		TRS2	0.898				
		TRS3	0.900				
		TRS4	0.899				
		TRS5	0.857				
Hypermarket n =234	Customer Empowerment	CE1	0.889	0.922	0.924	0.941	0.762
		CE2	0.872				
		CE3	0.897				
		CE4	0.840				
		CE5	0.866				
	Integrated Consumer Service	ICS1	0.895	0.858	0.861	0.912	0.775
		ICS2	0.885				
		ICS3	0.860				
	Integrated Information Access	IIA1	0.767	0.827	0.843	0.883	0.654
		IIA2	0.816				
		IIA3	0.839				
		IIA4	0.811				
	Integrated Order Fulfilment	IOF1	0.743	0.889	0.897	0.919	0.696
		IOF2	0.908				
		IOF3	0.841				

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Construct	Item	Loading				
	IOF4	0.878				
	IOF5	0.791				
Integrated Promotion	IP1	0.716	0.700	0.701	0.816	0.597
	IP2	Deleted				
	IP3	0.761				
	IP4	0.837				
Integrated Product & Price	IPP1	0.844	0.865	0.885	0.907	0.710
	IPP2	0.861				
	IPP3	0.810				
	IPP4	0.856				
Integrated Transaction Information	ITI1	0.813	0.801	0.837	0.866	0.619
	ITI2	0.876				
	ITI3	0.729				
	ITI4	0.721				
Patronage Intention	PI1	0.954	0.942	0.947	0.963	0.897
	PI2	0.928				
	PI3	0.959				
Satisfaction	SAT1	0.914	0.955	0.956	0.965	0.848
	SAT2	0.924				
	SAT3	0.938				
	SAT4	0.919				
	SAT5	0.910				
Trust	TRS1	0.906	0.914	0.922	0.936	0.747
	TRS2	0.938				
	TRS3	0.900				
	TRS4	0.769				
	TRS5	0.796				

Note: Deleted = Item deleted due to poor loading; CA means Cronbach's alpha, CR means composite reliability, and AVE means average variance extracted

Appendix D (ii): Discriminant validity assessment (HTMT)

Data Set	Construct	1	2	3	4	5	6	7	8	9	10
General (all consumers) n=736	1. Customer Empowerment										
	2. Integrated Consumer Service	0.648									
	3. Integrated Information Access	0.445	0.566								
	4. Integrated Order Fulfilment	0.550	0.733	0.663							
	5. Integrated Product & Price	0.441	0.442	0.513	0.463						
	6. Integrated Promotion	0.496	0.523	0.624	0.578	0.884					
	7. Integrated Transaction Information	0.340	0.564	0.699	0.623	0.488	0.568				
	8. Patronage Intention (PI)	0.585	0.422	0.336	0.421	0.575	0.565	0.321			
	9. Satisfaction (SAT)	0.601	0.451	0.399	0.479	0.567	0.603	0.354	0.830		
	10. Trust (TRS)	0.774	0.573	0.356	0.465	0.455	0.457	0.276	0.670	0.713	
High-end specialty store n=272	1. Customer Empowerment (CE)										
	2. Integrated Consumer Service	0.479									
	3. Integrated Information Access	0.240	0.434								
	4. Integrated Order Fulfilment	0.212	0.724	0.587							
	5. Integrated Product & Price	0.125	0.302	0.553	0.477						
	6. Integrated Promotion	0.156	0.357	0.625	0.490	0.867					
	7. Integrated Transaction Information	0.101	0.527	0.580	0.567	0.552	0.560				
	8. Patronage Intention (PI)	0.426	0.294	0.293	0.344	0.394	0.419	0.248			
	9. Satisfaction (SAT)	0.418	0.317	0.341	0.400	0.423	0.469	0.318	0.811		
	10. Trust (TRS)	0.703	0.384	0.161	0.210	0.161	0.127	0.125	0.538	0.472	
Department Store n=230	1. Customer Empowerment (CE)										
	2. Integrated Consumer Service	0.755									
	3. Integrated Information Access	0.689	0.604								
	4. Integrated Order Fulfilment	0.657	0.609	0.694							
	5. Integrated Product & Price	0.580	0.554	0.503	0.376						
	6. Integrated Promotion	0.573	0.486	0.635	0.472	0.832					
	7. Integrated Transaction Information	0.547	0.530	0.753	0.691	0.433	0.534				
	8. Patronage Intention (PI)	0.689	0.622	0.413	0.494	0.648	0.597	0.401			
	9. Satisfaction (SAT)	0.728	0.650	0.543	0.576	0.598	0.612	0.423	0.799		
	10. Trust (TRS)	0.838	0.752	0.572	0.597	0.603	0.597	0.484	0.779	0.841	
Hypermarket n=234	1. Customer Empowerment (CE)										
	2. Integrated Consumer Service	0.723									
	3. Integrated Information Access	0.479	0.658								
	4. Integrated Order Fulfilment	0.748	0.832	0.681							
	5. Integrated Product & Price	0.597	0.443	0.456	0.519						

6. Integrated Promotion	0.800	0.683	0.574	0.731	0.858				
7. Integrated Transaction Information	0.457	0.656	0.685	0.604	0.442	0.527			
8. Patronage Intention (PI)	0.633	0.355	0.251	0.398	0.638	0.661	0.262		
9. Satisfaction (SAT)	0.655	0.374	0.266	0.429	0.622	0.646	0.239	0.887	
10. Trust (TRS)	0.773	0.615	0.416	0.605	0.606	0.736	0.329	0.715	0.844

Note: HTMT$_{.90}$ < 0.90

Appendix D (iii): Assessment of the Higher-Order Construct for CPCI

Dataset	Higher-Order Construct	Dimensions	CV	Weights	VIF	t-value	BCa 95% CI
General (all consumers)	CPCI	(i) Integrated Consumer Service	0.734	0.648	1.801	10.499**	(LB: 0.525; UB: 0.765)
n=736		(ii) Integrated Information Access		0.134	1.927	2.026*	(LB: 0.100; UB: 0.270)
		(iii) Integrated Order Fulfillment		0.263	2.094	3.589**	(LB: 0.124; UB: 0.408)
		(iv) Integrated Promotion		0.130	2.095	1.805	(LB: -0.008; UB: 0.271)
		(v) Integrated Product & Price		0.208	1.963	3.049*	(LB: 0.072; UB: 0.339)
		(vi) Integrated Transaction Information		-0.197	1.812	3.089*	(LB: 0.525; UB: 0.765)
High-end Specialty Store	CPCI	(i) Integrated Consumer Service	0.702	0.716	1.705	10.049**	(LB: 0.626; UB: 0.826)
n= 272		(ii) Integrated Information Access		0.387	1.662	2.24*	(LB: 0.081; UB: 0.761)
		(iii) Integrated Order Fulfillment		-0.299	1.938	1.624	(LB: -0.636; UB: 0.080)
		(iv) Integrated Promotion		-0.106	1.828	0.666	(LB: -0.407; UB: 0.205)
		(v) Integrated Product & Price		0.107	1.866	0.663	(LB: -0.212; UB: 0.417)
		(vi) Integrated Transaction Information		-0.374	1.676	2.127*	(LB: -0.703; UB: -0.031)
Department Store	CPCI	(i) Integrated Consumer Service	0.743	0.462	1.726	5.923**	(LB: 0.304; UB: 0.607)
n=230		(ii) Integrated Information Access		0.268	2.218	3.243**	(LB: 0.111; UB: 0.436)
		(iii) Integrated Order Fulfillment		0.296	1.986	4.005**	(LB: 0.159; UB: 0.448)
		(iv) Integrated Promotion		0.043	2.000	0.473	(LB: -0.150; UB: 0.214)
		(v) Integrated Product & Price		0.226	2.051	2.676*	(LB: 0.054; UB: 0.390)
		(vi) Integrated Transaction Information		-0.035	2.089	0.492	(LB: -0.168; UB: 0.116)
Hypermarkets	CPCI	(i) Integrated Consumer Service	0.726	0.358	2.427	3.67	(LB: 0.171; UB: 0.550)
n=234		(ii) Integrated Information Access		-0.079	1.835	1.167	(LB: -0.216; UB: 0.050)
		(iii) Integrated Order Fulfillment		0.439	2.585	4.671	(LB: 0.263; UB: 0.626)
		(iv) Integrated Promotion		0.301	2.643	3.053	(LB: 0.114; UB: 0.500)
		(v) Integrated Product & Price		0.185	2.204	1.901	(LB: -0.002; UB: 0.381)
		(vi) Integrated Transaction Information		-0.044	1.671	0.657	(LB: -0.172; UB: 0.088)

Note: * p<0.05, ** p<0.001; CV (Convergent Validity); VIF (Variance Inflation Factor)

Consumers' Perception of Retailers	Construct	Compositional Invariance			Equal Mean Value			Equal Variance		
		c value (=1)	95% Confidence Interval	Invariance	Delta	95% Confidence Interval	Equal Mean Values	Delta	95% Confidence Interval	Equal Variance Values
High-end Specialty Store vs Department Store	Customer Empowerment (CE)	1.000	[1.000; 1.000]	Yes	-0.061	[-0.173; 0.184]	Yes	-0.321	[-0.389; 0.172]	Yes
	CPCI	1.000	[0.999; 1.000]	Yes	0.179	[-0.172; 0.287]	Yes	-0.068	[-0.236; 0.264]	Yes
	Patronage Intention (PI)	0.999	[0.998; 1.000]	Yes	-0.003	[-0.177; 0.168]	Yes	-0.488	[-0.490; 0.194]	Yes
	Satisfaction (SAT)	1.000	[1.000; 1.000]	Yes	0.310	[-0.166; 0.368]	Yes	-0.428	[-0.439; 0.157]	Yes
	Trust (TRS)	1.000	[1.000; 1.000]	Yes	-0.012	[-0.168; 0.156]	Yes	-0.136	[-0.255; 0.268]	Yes
High-end Specialty Store vs Hypermarket	Customer Empowerment (CE)	1.000	[1.000; 1.000]	Yes	-0.104	[-0.171; 0.187]	Yes	-0.332	[-0.358; 0.153]	Yes
	CPCI	1.000	[0.999; 1.000]	Yes	0.195	[-0.171; 0.197]	Yes	-0.216	[-0.243; 0.268]	Yes
	Patronage Intention (PI)	1.000	[1.000; 1.000]	Yes	0.292	[-0.068; 0.356]	Yes	-0.439	[-0.499; 0.175]	Yes
	Satisfaction (SAT)	1.000	[1.000; 1.000]	Yes	0.337	[-0.068; 0.356]	Yes	-0.483	[-0.486; 0.177]	Yes
	Trust (TRS)	0.999	[0.998; 1.000]	Yes	-0.067	[-0.181; 0.183]	Yes	-0.020	[-0.233; 0.230]	Yes
Department Store vs Hypermarket	Customer Empowerment (CE)	1.000	[1.000; 1.000]	Yes	-0.039	[-0.175; 0.184]	Yes	-0.013	[-0.256; 0.274]	Yes
	CPCI	0.996	[0.994; 1.000]	Yes	0.293	[-0.082; 0.384]	Yes	-0.106	[-0.260; 0.252]	Yes
	Patronage Intention (PI)	1.000	[0.999; 1.000]	Yes	0.267	[-0.167; 0.180]	No	0.044	[-0.269; 0.262]	Yes
	Satisfaction (SAT)	1.000	[1.000; 1.000]	Yes	0.027	[-0.185; 0.183]	Yes	-0.059	[-0.277; 0.270]	Yes
	Trust (TRS)	1.000	[0.999; 1.000]	Yes	-0.054	[-0.181; 0.184]	Yes	0.102	[-0.295; 0.291]	Yes

Appendix G: PLSpredict Assessment

Dataset	Item	PLS RMSE	PLS Q²_predict	LM RMSE	LM Q²_predict	PLS - LM RMSE	PLS - LM Q²_predict	Predictive Power
General (all consumers)	CE1	0.889	0.287	0.885	0.293	0.004	-0.006	Small
	CE2	0.862	0.308	0.859	0.313	0.003	-0.005	
n=736	CE3	0.820	0.348	0.829	0.332	-0.009	0.016	
	CE4	0.915	0.235	0.911	0.241	0.004	-0.006	
	CE5	0.860	0.319	0.862	0.316	-0.002	0.003	
	PI1	0.905	0.297	0.968	0.196	-0.063	0.101	Small
	PI2	0.967	0.200	0.905	0.300	0.062	-0.100	
	PI3	0.979	0.165	0.940	0.230	0.039	-0.065	
	Sat1	0.826	0.308	0.888	0.199	-0.062	0.109	Small
	Sat2	0.924	0.190	0.890	0.248	0.034	-0.058	
	Sat3	0.899	0.277	0.941	0.207	-0.042	0.070	
	Sat4	0.917	0.223	0.876	0.290	0.041	-0.067	
	Sat5	0.965	0.222	0.935	0.269	0.030	-0.047	
	TRS1	0.861	0.321	0.914	0.235	-0.053	0.086	Small
	TRS2	0.897	0.305	0.942	0.233	-0.045	0.072	
	TRS3	0.929	0.200	0.898	0.252	0.031	-0.052	
	TRS4	0.917	0.270	0.893	0.307	0.024	-0.037	
	TRS5	1.054	0.226	1.035	0.254	0.019	-0.028	

High-end specialty store	CE1	0.955	0.119	0.942	0.144	0.013	-0.025	Small
n=272	CE2	0.917	0.146	0.954	0.075	-0.037	0.071	
	CE3	0.826	0.180	0.839	0.153	-0.013	0.027	
	CE4	0.937	0.077	0.911	0.127	0.026	-0.050	
	CE5	0.930	0.102	0.910	0.140	0.020	-0.038	
	PI1	0.802	0.192	0.866	0.057	-0.064	0.135	Small
	PI2	0.901	0.069	0.879	0.114	0.022	-0.045	
	PI3	0.914	0.048	0.867	0.144	0.047	-0.096	
	Sat1	0.881	0.028	0.837	0.122	0.044	-0.094	Small
	Sat2	0.827	0.157	0.881	0.042	-0.054	0.115	
	Sat3	0.890	0.054	0.876	0.082	0.014	-0.028	
	Sat4	0.868	0.068	0.842	0.121	0.026	-0.053	
	Sat5	0.887	0.160	0.927	0.082	-0.040	0.078	
	TRS1	1.057	0.094	1.007	0.178	0.050	-0.084	Small
	TRS2	0.999	0.102	1.025	0.056	-0.026	0.046	
	TRS3	0.978	0.051	0.921	0.158	0.057	-0.107	
	TRS4	0.933	0.119	0.884	0.209	0.049	-0.090	
	TRS5	1.117	0.155	1.151	0.102	-0.034	0.053	
Department store	CE1	0.718	0.488	0.753	0.438	-0.035	0.050	High
n = 230	CE2	0.797	0.450	0.865	0.353	-0.068	0.097	

	CE3	0.797	0.449	0.867	0.348	-0.070	0.101	
	CE4	0.844	0.416	0.920	0.307	-0.076	0.109	
	CE5	0.700	0.547	0.727	0.511	-0.027	0.036	
	PI1	0.985	0.345	0.990	0.339	-0.005	0.006	Medium
	PI2	0.967	0.336	0.954	0.353	0.013	-0.017	
	PI3	1.010	0.228	1.065	0.142	-0.055	0.086	
	Sat1	0.833	0.338	0.862	0.291	-0.029	0.047	High
	Sat2	0.887	0.321	0.939	0.238	-0.052	0.083	
	Sat3	0.880	0.382	0.902	0.350	-0.022	0.032	
	Sat4	0.832	0.415	0.845	0.397	-0.013	0.018	
	Sat5	0.906	0.389	0.936	0.347	-0.030	0.042	
	TRS1	0.817	0.356	0.835	0.327	-0.018	0.029	High
	TRS2	0.852	0.414	0.913	0.326	-0.061	0.088	
	TRS3	0.861	0.365	0.925	0.268	-0.064	0.097	
	TRS4	0.861	0.454	0.873	0.439	-0.012	0.015	
	TRS5	0.885	0.427	0.902	0.404	-0.017	0.023	
Hypermarket	CE1	0.866	0.414	0.824	0.470	0.042	-0.056	Medium

n = 234							
CE2	0.754	0.484	0.788	0.436	-0.034	0.048	
CE3	0.762	0.500	0.777	0.479	-0.015	0.021	
CE4	0.860	0.336	0.829	0.383	0.031	-0.047	
CE5	0.858	0.413	0.922	0.323	-0.064	0.090	
PI1	0.986	0.217	0.918	0.322	0.068	-0.105	High
PI2	0.992	0.215	0.870	0.396	0.122	-0.181	
PI3	0.975	0.245	0.927	0.317	0.048	-0.072	
Sat1	0.886	0.295	0.841	0.366	0.045	-0.071	High
Sat2	0.958	0.219	0.941	0.247	0.017	-0.028	
Sat3	0.979	0.225	0.953	0.265	0.026	-0.040	
Sat4	0.984	0.220	0.972	0.240	0.012	-0.020	
Sat5	1.010	0.231	0.976	0.283	0.034	-0.052	
TRS1	0.774	0.395	0.687	0.523	0.087	-0.128	Medium
TRS2	0.859	0.354	0.775	0.473	0.084	-0.119	
TRS3	0.875	0.302	0.795	0.423	0.080	-0.121	
TRS4	0.893	0.306	0.918	0.267	-0.025	0.039	
TRS5	1.059	0.237	1.067	0.225	-0.008	0.012	

Note: Interpretation of the results followed Shmueli et al.'s (2019) guidelines.