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Advances in National Brand and Private Label Marketing

Sixth International Conference, 2019

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Preface

The past decade has witnessed the evolution of the manufacturer–retailer relationship, becoming more collaborative and allowing companies to provide consumers with a shopper-centric approach and improved shopping experiences. Creating unity among the multiple channels, by managing them in a holistic fashion, provides a more integrated, seamless experience for consumers. Accordingly, today's consumers can search for a product on their mobile devices, order it on their computer using the company's website, and pick it up in the physical store.

In addition to this changing channel landscape, brands have witnessed a shift in the locus of control over the brand image and message. Historically, brands maintained tight control over their messaging. In today's socially connected environment, consumers often look for feedback from other shoppers to form brand assessments, whether through product blogs, product reviews, or product ratings. Because they perceive information garnered from these sources as less biased than a company's communication, it serves as an important cue of product quality.

As the retail landscape continues these rapid evolutions, new considerations come to the fore for brands that seek to create personalized connections with consumers. Brands must capture consumers' attention and be perceived as relevant. Providing relevant content, at an appropriate time, reflecting the established relationship the consumer has with a brand, can help foster both engagement and trust. It creates an intimacy between the brand and the consumer that injects their relationship with authenticity and relevance. To maintain authenticity, the brand story then must be consistent and strategic throughout every interaction between the customer and the brand.

Furthermore, brands need to leverage technology and data to create new business models centered on consumers' personal experiences. The days of requiring a retail storefront to sell products are gone. Instead, the smartphone and Instagram provide the virtual storefront windows for many brands. E-commerce giants even are pushing into private label brand offerings. To create personalized, tailored connections to consumers in real time, brands need comprehensive customer information that is both accessible and actionable. Such information can be

gathered from multiple avenues, including company-specific databases or social listening. However, companies must be cognizant of the trade-offs inherent to creating a personalized customer experience while protecting customers' privacy.

Creating targeted information for individuals at a specific point in time also is increasingly possible through artificial intelligence tools that can reveal consumer behavior and predict consumer engagement across multiple touchpoints. The contextually relevant marketing that results allows brands to connect with individual consumers at the moment, with personalized, curated content. In addition, augmented reality and additive manufacturing technologies make it possible for consumers to design and produce products. Real-time interaction management technologies can be used to listen and respond to customers in real time.

As companies continue building their brands—whether national brands, established mega-brands, private labels, or newly launched niche brands—they must remain tech-savvy and agile.

Looking at those aspects underlying this new marketing context offers exciting opportunities for researchers. It is with this goal in mind that this Sixth International Conference on Research on National Brand & Private Label Marketing (NB&PL 2019) has been launched and organized. After the success of the five previous editions, this sixth edition is still believed to be a unique international forum to present and discuss original, rigorous, and significant contributions on topics related to any retailing, private label, or national brand issues.

Each paper submitted to NB&PL 2019 has gone through a stringent peer review process by members of the Program Committee, comprising 46 internationally renowned researchers from 14 countries.

A total of 25 papers have been accepted, and they address diverse areas of application such as innovation, retail market structure, social media, consumer decision-making, store loyalty, assortment size, digital transformation, ethical aspects, cultural dimensions, private label pricing, among others. A wide variety of theoretical and methodological approaches have been used in these areas.

We believe that this sixth edition has continued with the same goals as the five previous editions: promote, stimulate, and publish high-quality contributions on national brands and private labels, and other retailing-related topics, which could help retailers and manufacturers deal with diversity of issues.

Finally, we wish to acknowledge the support of the sponsors *Open University of Catalonia, Information Resources Inc. (IRI)*, *Manufacturers-and-Retailers Spanish Multisectoral Association (AECOC), EAE Business School, and IMD Business School*. We would also like to thank all the contributing authors, members of the Program Committee, and the rest of the Organizing Committee for their highly valuable work in enabling the success of this sixth edition of NB&PL. Thanks for your generous contribution—IC-NB&PL 2019 would not have been possible without you all.

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Contents

Strategic Issues and Theoretical Research

The Impact of Age on the Relationship Between Assortment Size and Perceived Value

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Abstract. The rapid growth of digital marketplaces such as Amazon, iTunes, and Google Play has increased the need for insights on how consumers react to large assortments. Many of these platforms aggregate large assortments under the assumption that customers assign more value to products chosen from a large assortment. Yet, academic literature on the topic remains controversial. Although some moderating factors have been examined in previous research, knowledge about the influence of individual differences remains limited. This study offers further insights into the moderating role of age that leads to diverse assortment size preferences. Particularly, we conduct an online experiment in online donations where participants make actual donations to charities that they choose from either large or small assortments. Our study affirms that older customers assign more value on options chosen from platforms with relatively larger assortments. Hence, this study contributes to the choice overload literature regarding perceived value by considering age. Managers of digital platforms can use the presented findings to match assortment with customer age.

Keywords: Assortment size · Age · Perceived value · Choice overload

1 Introduction

Today, customers confront an abundance of options in a variety of situations, such as when booking flights, buying grocery products, or selecting charities. This trend has further accelerated due to the rise of popular online marketplaces such as Amazon, Airbnb, and Netflix. The rise of these platforms demonstrates the importance of product assortment size in online retailing. Many of these platforms aggregate large assortments under the assumption that customers assign more value to products chosen from a large assortment. Yet, academic literature provides inconsistent guidance for retailers as to how large assortments affect perceived value.

Despite an abundance of work in support of the finding that providing customers with more options can be beneficial to them, individual differences in reactions to large assortments remain understudied. This research offers further insights into the moderating roles of demographic factor such as age that may influence product valuation.

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Particularly, we conducted one online experiment to investigate how age moderates the impact of assortment size on the perceived value of having many options.

This research thus seeks to contribute to the literature on product assortments by investigating for whom assortment size impacts perceived value. With findings from this research, digital platforms can leverage demographic data in a new way, in order to improve product valuation and customer spending on their offers.

2 Research Problem

The impact of product assortments on decision-making has been discussed across various research fields including economics (Lancaster 1990), social psychology (Broniarczyk 2008), and marketing (Gourville and Soman 2005; Kahn et al. 2013; Simonson, 1999). Yet, this literature remains inconclusive as there have been positive and negative effects, as well as meta-analyses that failed to identify any consistent overall effect of assortment size (Chernev et al. 2015; Scheibehenne et al. 2010).

Positive Effects of Large Assortments

Previous literature has identified a number of benefits associated with large assortments. Prior studies have shown that customers are more likely to make a purchase from an assortment when it contains their preferred options rather than when that option is absent (Chernev 2006; Boatwright and Nunes 2001; Broniarczyk et al. 1998). It is more likely to find a preference-matching option when choosing from a larger assortment (Baumol and Ide 1956; Betancourt and Gautschi 1990). In line with this, large assortments can also increase overall purchase probability (Gao and Simonson 2016; Simonson 1999).

A number of research articles thus encourage retailers to increase their product assortment. For example, large assortments help retailers in achieving better differentiation (Kotler 1997, pp. 571–573) because they satisfy a larger range of customer needs (Lancaster 1990), and thereby keep customers from switching to competitors (Klemperer 1995). Providing more options has been found to increase customer's enjoyment of shopping (Babin et al. 1994; Whitley et al. 2018); for example, by allowing customers to explore new product trends (Koelemeijer and Oppewal 1999). This body of literature recommends retailers to increase assortment size in order to enhance assortment evaluation (Oppewal and Koelemeijer 2005), and increase consumption (Kahn and Wansink 2004).

Furthermore, large assortments support customers' variety-seeking behaviour. Psychological studies have demonstrated that choosing from a variety of options can increase intrinsic motivation (Deci 1981; Deci and Ryan 1985), perceived control, and self-determination (Langer and Rodin 1976; Taylor and Brown 1988). By providing a greater variety of options, large assortments satisfy a customers' need for stimulation (Kahn and Lehman 1991; Menon and Kahn 1995).

Moreover, large assortments facilitate customer decision-making processes. Large assortments create a greater efficiency of time of effort needed in the process of making choices because it presents all available alternatives simultaneously (Messinger and Narasimhan 1997). In addition, choosing from a large number of options helps to reduce choice uncertainty because all possible options are provided to customers (Greenleaf and Lehmann 1995). Also, it has been found that an increase in the variability of the options will lead to decreased confusion and higher choice satisfaction. Thus, these studies support the conventional wisdom that large assortments benefit customers.

Negative Effects of Large Assortments

The value of large assortments is not undisputed however. Literature on choice overload argues that too many options might lead to an increase in choice difficulty (Fasolo et al. 2009), causing a reduction in satisfaction (Reutskaja and Hogarth 2009; Schwartz and Ward 2004), and a decrease in the likelihood of making a purchase (Iyengar and Lepper 2000).

A common explanation for the negative effects of large assortments is based on the notion of limited cognitive resources. Making a choice from a larger assortment requires more cognitive effort to process relevant information. Having too many options may challenge information processing (Boyd and Bahn 2009). Therefore, when customers confront an amount of information that exceeds their information processing capabilities, they tend to experience their own decision making as less informed, and thereby feel less satisfied with the final decision (Reutskaja and Hogarth 2009), or even defer making a decision (Lee and Lee 2004; Lurie 2004). In this case, customers are not able to effectively unlock the value of large assortments, which in turn negatively affects their valuation of the chosen option. That is, they experience choice overload.

Need for Further Investigation

It is evident that empirical research has demonstrated both positive and negative effects of large assortments. Further controversy remains at the forefront of the field, as recent meta analyses further perpetuate disputes (Chernev et al. 2015; Scheibehenne et al. 2010). These authors concluded their meta-analytic review on assortment literature by calling for further investigation into potential moderators.

Previous research has investigated limited moderating factors such as customer characteristics and assortment properties that are difficult to operationalize for managers. Less is known about how to leverage more managerially relevant demographic factors to influence customer's value judgements. Prior works have discussed some factors that relate to customer characteristics such as assessment orientation (Mathmann et al. 2017), positive affect (Spassova and Isen 2013), need for stimulation (Boyd and Bahn 2009), customer expectations (Diehl and Poynor 2010), and variety-seeking (Oppewal and Koelemeijer 2005). Yet, digital platforms may struggle to collect data on these variables, while demographic variables such as age are often more accessible.

Additionally, previous studies have identified some moderators such as assortment structure (Kahn and Wansink 2004), assortment type (Gourville and Soman 2005), and product category (Mogilner et al. 2008; Sela et al. 2008). However, the considerable cost of changing these operational variables can prevent retailers from leveraging findings based on these variables in practice.

While a limited number of findings have provided more practical implications for managers (e.g., decision order; Gao and Simonson 2016), it remains poorly understood how fundamental demographic factors may prepare customers to cope with choice overload.

This research seeks to address several challenging research questions. Particularly, how can digital platforms identify which customers assign greater value to products chosen from large assortments? Can managers leverage demographic information and match assortments, so as to enhance customer value perceptions? These questions motivate this research, which provides further evidence that will significantly contribute to the assortment size literature.

The Impact of Age on Decision-Making

Previous literature has mostly considered the impact of age on decision-making associated with aging cognitive changes, which has led to studies examining the influences of aging on decision-making. Older adults are more likely to experience "age-related cognitive decline". Following this logic, when confronting choice complexity, older customers would prefer a simpler and more heuristic decision-making process, so as to reduce cognitive demands or effectively preserving cognitive resources (Jacoby 1984; Malhotra 1984).

However, less is known about how age differences in general affect decision-making for an option that is chosen from a larger (vs. smaller) assortment. To the best of our knowledge, only Reed et al. (2008) investigated the effect of large vs. small assortment across different ages, yet their study at the same time introduced key confounds: Young ivy league students were compared with senior centre residents. This design also only allowed them to treat age as a binary variable (young vs. old) as opposed to a continuum. We argue that, from a cognitive perspective, older customers may invest more effort to choose an option from a larger assortment. Contrary to Reed et al. (2008), we thus predict that older customers would value that selected option more. Additionally, older adults usually have greater life experiences, for instance, in financial or consumption decisions. Thus, older customers would capitalize on their diverse experiences in order to check the downside of declining in cognitive abilities

(Eppinger et al. 2017). Large assortments are associated with providing more opportunities for customers to having more variety of choice experiences (Koelemeijer and Oppewal 1999; Lancaster 1990). Therefore, we hypothesize that:

H1: Older (vs. younger) customers value a product more when they have chosen it from a larger product assortment.

3 Methods

Participants, Design, and Procedure

Participants (N = 218, 116 men, M_{age} = 34.7 years, SD = 11.03) recruited from the general population sample of Amazon's Mechanical Turk participated in the study for US$1.0. Recruiting an MTurk sample allowed for a continuous distribution of age in the sample. Once in the experiment, participants were provided a US$.25 bonus under the pretence that this was a bonus for their early signing up. Participants were asked to choose one preferred charitable organisation from the presented charity assortment. After that, they were asked to decide how much they the selected charity. Finally, participants completed questions on their perceptions of assortment size, their prior knowledge about the chosen charities, and demographics (e.g., age).

Measurements

Manipulation of Assortment Size

Assortment size was manipulated in a continuous fashion by assigning participants to a random number of charitable organizations between 6 as the smallest assortment size and 30 as the largest one. The effectiveness of the assortment size manipulation was measured using an established manipulation check: "This assortment of charities gives me a lot of options (1 = Strongly Disagree to 7 = Strongly Agree; Kahn and Wansink 2004).

Dependent Variables

Perceived value of choice was measured by using a well-established scale (1 = "Strongly Disagree" to 7 = "Strongly Agree"; Sweeney and Soutar 2001) that was adapted and shortened to fit the context (e.g., "The choice of charity would make me feel good", and "This choice would improve the way I am perceived", etc.).

Covariate

Participants' prior knowledge about the chosen charities was considered as a control variable ("How knowledgeable do you think you are about the chosen charitable organization?"; 1 = Not at all to 5 = Extremely; Bettman and Park 1980). Additionally, income and political orientation at the congressional district level (U.S. Census Bureau, 2016) were included as control variables.

4 Results

Manipulation Check

A regression analysis yielded the expected effect of the manipulation of assortment size on perceived assortment size (β = .06, R^2 = .11, $F(1, 216) = 25.56$, $p < .001$). This result indicated a successful manipulation of assortment size.

Age Moderates the Impact of Assortment Size on Perceived Value

The central prediction (H1) about the interaction between age and assortment size was tested by using the PROCESS macro for SPSS (Hayes and Andrew 2013). In the first step, the main effect of age (W) (M = 34.73, SD = 11.03), and assortment size (X) (M = 18.03, SD = 6.84), as well as their interaction (X*W) were estimated (Model 1; Hayes and Andrew 2013). Perceived value was entered as the dependent variable (M = 3.97, SD = .65, Cronbach's α = .75).

In the second step, participants' prior knowledge about the chosen charities was added as a control variable. Next, we also controlled for income and political orientation.

In the first step, the linear regression demonstrated a significant effect of age (β = .14, $p < .05$) and assortment size (β = .13, $p < .05$) on perceived value. More pertinent to the central hypothesis, the predicted two-way interaction between age and assortment size was positive and significant ($\beta = 1.22*10^{-3}$, SE = $5.26*10^{-4}$, t (214) = 2.32, $p < .05$, 95% CI [$1.84*10^{-4}$, $2.26*10^{-3}$]). In the second step, the interaction effect also remained significant ($\beta = 1.00*10^{-3}$, $SE = 4.88*10^{-4}$, $t(211) = 2.06$, $p < .05$, 95% CI [$4.15*10^{-5}$, $1.97*10^{-3}$]) with the presence of control variables. Hence, older customers assign more value to options that are chosen from larger assortments.

The Johnson – Neymar (J–N) technique was applied to illustrate the interaction, using the SPSS script from Hayes and Andrew (2013). The J-N technique identifies the value of the moderator (age) at which the ratio of the moderating effect to its standard error is at the same value with the critical t-score (Hayes and Andrew 2013). This method allows exploring the transition points in a range of age at which the effect of assortment size shifted from being non-significant to significant (Hayes and Andrew 2013). The conditional effect of assortment size on perceived value is significantly positive from the age of 35 year and older (β = .01, $SE = 5.89*10^{-3}$, t (211) = 2.04, $p < .05$; 95% CI [$4.22*10^{-4}$, $2.36*10^{-2}$]). These findings support our hypothesis. Therefore, as predicted, older customers value options chosen from larger assortments. Figure 1 displays the result.

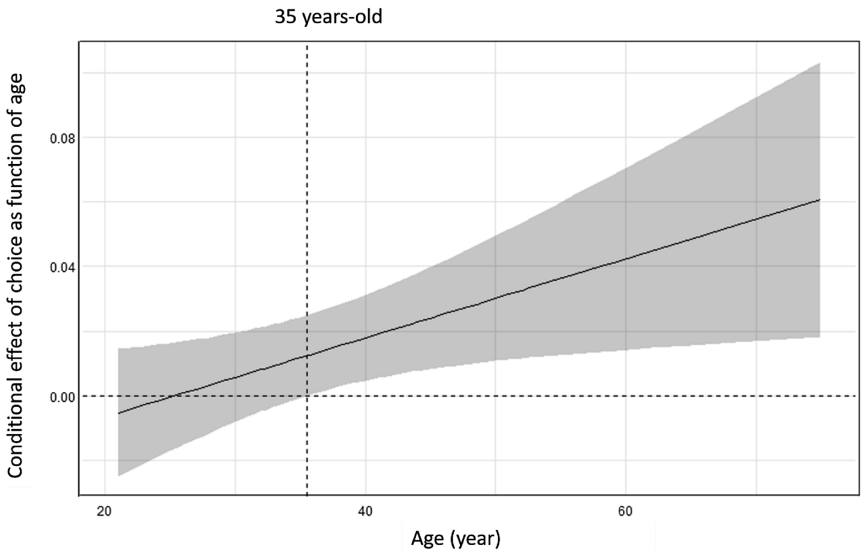

Fig. 1. The interaction effect of age and assortment size on perceived value

5 Discussion

Previous literature on the effect of large versus small product assortments has highlighted both positive and negative effects of large assortments on customers' purchase decisions. Yet, insights regarding whether, when, and for whom large assortments affect perceived value remain inconclusive. Meta-analyses did not resolve these conflicts sufficiently (Chernev et al. 2015; Scheibehenne et al. 2010) and the impact of individual differences such as age remains unclear. This research contributes to the body of literature on assortment size by showing the moderating role of age on perceived value on options chosen from larger versus smaller assortments.

The research takes a novel approach by looking at the effect of age on the perceived value on products chosen from larger assortments. The experiment provides significant evidence for this effect. More explicitly, the finding confirms that older customers would assign more value to options chosen from larger assortments.

Implications for Managers

Older customers perceived more value on options chosen from larger assortments. One implication of this is that customers' age information should not only be used to present options that are relevant to customers given their age, but also to tailor the size of the assortment to retailers' customer base.

With findings from this study, managers of digital platforms can leverage customer demographics data in a new way to identify customers who would assign more value to products chosen from a larger assortment. Digital platforms such as Netflix, Uber Eats or Airbnb can thus adjust the number of offerings following consumer preferences of assortment size in order to improve actual spending.

Similarly, charitable organisations can identify potential donors who are more likely to make an actual donation to charities chosen from a larger assortment. Online platforms such as Charity Watch or Charity Navigator may adjust the number of charities or donation courses in accordance with customers' age data in order to enhance perceived value for the selected organizations.

Limitation and Further Research

One limitation of this research is that the theoretical mechanisms that might explain the influence of age on perceived value are not empirically tested. Further research should also explore other psychological or physiological factors that would mediate the interaction effect of age and assortment size on customer spending.

Conclusion

This research extends previous literature on assortment size by considering the moderating effect of age on customer perceived value. Age is an essential demographic factor, yet interestingly provides further insight into how individual differences affect product valuation. Notably, the findings show how charitable organisations can identify potential donors, who assign more value on charities chosen from a more extensive number of options.

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Impact of Category-Specific Demand Environment on Store Brand Quality Positioning: Empirical Evidence

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Keywords: Store brands · Positioning · Willingness to pay for quality · Conjoint analysis · Mixture choice model

1 Introduction

Motivated by the growth of store brands and the widespread practice of offering a line of multiple store brands at different quality positions within a product category, Chung and Lee (2017) analyze a game theoretic model and discover the impact of the category-specific demand environment on the retailer's optimal design of store brand product lines. In particular, their analysis shows that the optimal quality positioning of store brands against established national brands is remarkably sensitive to the distribution of consumers' willingness-to-pay for quality. If the category has a sufficiently large proportion of consumers showing low willingness-to-pay for quality, the retailer should, they conclude, leave the top tier national brand at the highest quality alternative in the category, and position one store brand between the national brands, while offering the other store brand at the lowest point in price and quality within the category, following the "NB1 (top tier national brand) > SB1 (top tier store brand) > NB2 (low tier national brand) > SB2 (low tier store brand)" interlaced pattern. For the opposite situation of a large proportion of consumers exhibiting high degrees of quality sensitivity, their analysis recommends a different strategy following the "NB1 > SB1 > SB2 > NB2" pattern. On the other hand, if the distribution has the majority of the consumers concentrated around medium degrees of willingness-to-pay for quality, their analysis prescribes a high-tier store brand to be positioned at the top quality item in the category, resulting in the "SB1 > NB1 > SB2 > NB2" pattern.

In the current study, we seek to provide empirical evidence for the above-mentioned conclusions of Chung and Lee's (2017) mathematical analysis, focusing on three main implications of their findings. First, their findings suggest that there is no "one size fits all" strategy of store brand positioning that is optimal in all market environments. We present a set of observational data to support this conclusion by reporting a wide variety of store brand positioning strategies observed across product categories and across retailers. Second, as stated above, the variations of store brand product line design has a systematic linkage with the relative proportions of

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quality-conscious consumers vs. price-conscious consumers. We examine this linkage by employing multiple methodological approaches and data sources, and provide empirical support for the theoretical finding on the impact of market environment on store brand positioning. Third, their theoretical result indicates that, all else being equal, a retailer has a greater incentive to carry a line of multiple store brands (as opposed to only one store brand) in the product category characterized by a large proportion of price sensitive consumers. We also provide empirical support to this result.

2 Observational Data

We collected extensive observation data for a wide range of CPG product categories from multiple retailers in the Northeastern U.S., which included a large number of cases with a line of multiple store brands within a category. By using the price rank ordering as a proxy for perceived quality rank ordering for those categories, we find a great diversity of store brand positions relative to national brand quality positions. In addition, our observation data confirms the theoretical prediction of Chung and Lee (2017) by showing that the "NB1 > SB1 > NB2 > SB2" pattern fits the vast majority of the product categories with multiple store brands. Our usage of price rank ordering as a proxy for perceived quality rank ordering is based on the logic that utility-maximizing consumers will not be willing to pay a higher price for an a choice alternative that is lower in perceived quality. Nevertheless, we acknowledge the imperfection of this proxy due to consumer heterogeneity in quality perception and other factors that might enable retailers to set prices in imperfect alignment with perceived quality rank orders.

To ensure that our observational data do not represent an isolated special case specific to the place and time of data collection, we also analyzed the Dominick's data, provided by University of Chicago. In this database, lines of multiple SBs were found in three categories: toothbrush, bathroom tissue, and orange juice. The patterns of store brand product line design in these categories completely matched the patterns found with our observational data. Furthermore, the patterns in our observational data are also consistent with Kumar and Steenkamp's (2006) observation of Tesco's store brand pricing strategy.

Despite the prevalence of the "NB1 > SB1 > NB2 > SB2" pattern in these data sets, orange juice emerged as one unique product category that does not follow this popular pattern in any of the above data sources. Instead, both in our observational data and the Dominick's data, the category consistently exhibited the "NB1 > SB1 > SB2 > NB2" pattern across multiple retail stores. This exceptional pattern of store brand positioning of orange juice private labels was also recognized by Kumar and Steenkamp (2006), and offers a great opportunity to investigate whether it is due to a distinctive distribution of consumers' willingness-to-pay for quality as suggested by Chung and Lee (2017). We implement this investigation in two different ways, as discussed below.

3 Conjoint Analysis

First, we employ a standard conjoint analysis. A sample of 205 respondents composed of undergraduate and MBA students and employees of a university in the northeastern U.S. rated multiple profiles for eight different product categories such as orange juice, liquid soap, slice cheese, potato chips, plastic wrap, disposable razors, toothbrushes, and bathroom tissue. Based on pretest results, four product attributes were selected for each category, including brand name, price, and two category specific quality indicators (e.g., "from concentrate" vs. "not from concentrate" for orange juice and "straight plastic handle" vs. "ergonomic soft-grip handle" for toothbrushes). For each attribute, two or three levels were selected to reflect the typical values observed in the market. This led to an orthogonal design including 8 or 11 hypothetical profiles in each category, which were presented in randomized orders.

From the partworth estimates obtained from these conjoint analyses, we calculated attribute importance measures following the method used in the literature (Wittink et al. 1982; Verlegh et al. 2002) by taking the difference between the largest and smallest partworths for each attribute. A comparison of the eight product categories in these importance measures shows that the relative importance of price is lower for orange juice than for all the other categories. This finding indicates that orange juice, which is found to follow the "NB1 > SB1 > SB2 > NB2" pattern, is characterized by a relatively large proportion of quality conscious consumers than the other product categories, which are found to conform to the typical "NB1 > SB1 > NB2 > SB2" pattern.

In addition, we applied the approach of Jedidi and Zhang (2002) to our conjoint analysis data, and calculated the price the individual consumer is willing to pay for premium quality. Our examination of the distribution of this measure of quality consciousness shows a strong positive skewness for all the product categories except the orange juice category, which exhibits a significantly larger fraction of highly quality conscious consumers.

4 Scanner Panel Data Analysis

Next, we followed the lead of Kamakura and Russell (1989) to use a mixture choice model to analyze a separate data set to make an inference about the shape of the distribution of consumers' willingness to pay for quality. This approach allowed us to uncover latent consumer segments in a scanner panel dataset, and to make inferences about the underlying distribution of consumer product preferences and price sensitivities within each segment. We applied this approach to household level scanner panel data provided by a major retail grocery chain, collected over 104 weeks from 1000 households shopping at one of the nine stores in one metropolitan area in the northeast U.S. The data included three product categories of bathroom tissue, orange juice, and toothbrushes. The number of consumer segments was determined based on the entropy statistic and the Bayesian Information Criterion (BIC). Once the number of segment

was decided for each product category, the maximum likelihood estimates of the parameters for three categories were obtained using the E-M algorithm with several sets of starting values. Finally, the purchase probability for each price-tier product was calculated by plugging the estimated parameters and a mean purchase price into the multinomial logit choice model.

Consistent with Kamakura and Russell (1989), this approach allowed us to find a distinct subset of preferred alternatives for each segment. Using the estimated choice probability for each preferred alternative within each segment, we then inferred the likely brand switching behavior when the most preferred alternative were not available. Finally, the examination of the price points of the most preferred brand and the likely alternatives for brand switching revealed the shape of the distribution of consumers' willingness to pay for quality.

When applied to the bathroom tissue category, this analysis indicated a positively skewed distribution of willingness to pay for quality among consumers in all segments, suggesting a large proportion of consumers with low quality consciousness, consistent with the "NB1 > SB1 > NB2 > SB2" pattern observed for the product category in multiple data sources. The exactly opposite pattern was observed for the orange juice category, for which the most preferred brand in each segment was priced the highest among the preferred brands, and downward switching patterns indicated a negatively skewed distribution. This indicated a high concentration of quality conscious consumers in each segment, consistent with the "NB1 > SB1 > SB2 > NB2" pattern frequently observed for the category. The results for the toothbrush category were mixed, indicating that a non-monotonic density function of consumer willingness to pay for quality.

5 Summary

Overall, our study provides empirical evidence in support of Chung and Lee's (2017) theoretical finding that the optimal positioning of multiple store brands within a product category should reflect the distribution of consumers' willingness to pay for quality. Our observational data and analyses of primary and secondary data jointly indicate that the presence of a large number of price sensitive consumers leads to positioning a low tier store brand at the lowest price and quality point in many categories. However, when the category is characterized by a large proportion of consumers exhibiting high degrees of quality consciousness, as observed in the orange juice category from various data sources, retailers have an incentive to position the top tier store brand below the top tier national brand while positioning the low tier store brand above the price and quality position of the low tier national brand. Thus, understanding the category specific demand environment is critical for optimal positioning of store brands, and our study presents some practical ways to measure such a critical factor for optimal store brand product line design.

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The Interplay Between Manufacturer Brands and Private Labels: Radical Innovation in Consumer Packaged Goods in Spain

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Abstract. As manufacturers face a decreasing channel power, radical innovation in Consumer Packaged Goods represents for them both a risky activity and a necessity. At the same time, retailers keep investing in developing Private Label products. This paper aims to understand the role played by manufacturers and retailers in radical innovations in the CPG industry. Two datasets by Kantar Worldpanel are analysed, including all radical innovations launched in Spain between 2012 and 2016 across the 31 most innovative categories. Results indicate that Manufacturer Brands play a leading role in radical innovation, despite the difficulties they face in achieving distribution and the challenge of Private Label "me-toos". Furthermore, in most categories with a high number of innovations the growth of PL market share slows down. The paper suggests that manufacturers need to keep innovating in order to hinder the development of private labels and to preserve their position in the channel.

Keywords: Radical innovation · Consumer Packaged Goods · Private Label · New products

1 Introduction

Scholars agree that developing radical innovation helps satisfying always-changing consumer needs, considering in particular radical innovation as a source of improved solutions to human´s needs as well as an engine of economic growth (Chandy and Tellis 2000). Nevertheless, innovation is a risky activity for manufacturers as the rate of failure is impressively high across product categories and geographies. According to Gielens and Steenkamp (2007), many new products do not even reach their first birthday. In the FMCG industry, most of the investment and outcome in terms of innovation come from Manufacturer Brands (MBs), with retailers playing catch-up with 'me-too' Private Label (PL) products (Steenkamp et al. 2010).

In the last decades, channel power has undoubtedly shifted from manufacturers to retailers (Beckeman et al. 2013; Lovreta et al. 2015), with retailers acting as gatekeepers for the new products to reach final consumers. At the same time, they also

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manage marketing tools in the store, which, according to research, represent the place where a high percentage of purchase decisions are made (Dobson and Chakraborty 2015). Furthermore, Weiss and Wittkopp (2005) argues that this power shift in the channels of distribution has a negative effect on product innovation, affecting consumers' welfare.

Research on radical innovation primarily focuses on and refers to technological industries, despite existing and being very important in the Consumer Packaged Goods (CPG) industry too (Sorescu and Spanjol 2008). This paper aims to understand the role played by manufacturers and retailers in radical innovations in the CPG industry. By doing so, it contributes to the literature exploring the interplay between MBs and PLs in the development of radical innovation, which is under researched.

2 Overview of the Literature and Background

2.1 Conceptualization of Innovation

Beckeman et al. (2013) argues, based on a research among retailers in Sweden, that the word innovation tends to be applied to practically everything claimed to be new. Nonetheless, the literature on innovation offers an ample and interesting debate on how to define and classify innovations on basis of the degree of innovativeness they bring into the market. Terms as radical, disruptive, really-new, incremental and discontinuous are often used ambiguously to identify innovations (Garcia 2002). For instance, Tidd (2001) classifies innovations based on their contribution to a firm's competitiveness, distinguishing between continuous incremental (simple improvements to existing products), from radical or disruptive innovation ("new to the world").

Radical product innovation is defined by Chandy and Tellis (2000) as a new product that provides much higher customer benefits compared to existing products in the industry. A more recent paper specifically considering CPGs, similarly to the context of this study, defines breakthrough innovations as "*new products that are the first to bring novel and significant consumer benefits to the market*" (Sorescu and Spanjol 2008, 115).

Although only a small percentage of the new products launched to the market are radical, as observed by Costa and Jongen (2006), research in disruptive innovation is key: it is an engine of economic growth and a source of improved solutions to humans needs.

2.2 Consumer Packaged Goods

The Fast Moving Consumer Goods industry (FMCGs), also called Consumer Packaged Goods (CPG), is considered a very relevant industry across the world; within the European Union only, IRI (2018b) estimates revenues of €432bn. In a context of increased globalized competition, the retail concentration in the EU shows a growing trend. In particular, in Spain, the top three retailers hold over 40% market share, with

Mercadona leading with 24% of total market, followed by the Carrefour Group with 8.7% and Dia% Group with 8.2%. The top six retailers account for 54.2% (Kantar 2018).

2.3 Private Labels in EU

Private Label products (PLs) - also referred to as own labels or store brands (Dobson and Chakraborty 2015) - represent a key element in the retailing industry (Cuneo et al. 2012), having achieved high penetration rates in all markets (Boyle and Scott Lathrop 2013). Retailers around the world invest in PLs aiming to increase store loyalty and uniqueness (Ailawadi et al. 2007) and their bargaining power over manufacturers has increased significantly.

According to industry reports, the market share of PLs has experienced a relevant and steady growth in particular in the last few decades in most countries (IRI 2018a; Dawes and Nenycz-Thiel 2013). In the EU, private label sales, although with great variations among countries, represent 40% of sales by value (IRI 2016; Dawes and Nenycz-Thiel 2013). The UK and Spain hold the highest value share in the EU (52,5%, 42,6% respectively) while Italy (18%) and Greece (16,3%) hold the lowest (IRI 2016). In particular, in Spain, PLs more than doubled their share in less than 20 years, being only 15,5% in year 2000 (Nielsen 2017). PL share varies significantly depending on the retailer´s strategic approach. For instance, according to Kantar (2018), PL share in 2017 ranges from 81.2% in Lidl, 57.3% in Mercadona, 50.5% in Dia% and 23% in Carrefour.

A growing body of academic research has been acknowledging the role played by PLs in consumer choices, not only because of the abovementioned growth in terms of market share, but also because the gap in terms of quality and perception between PL and MB is decreasing (e.g. Rossi et al. 2015) and therefore more consumers tend to buy a mix of PL and MB (e.g. Cuneo et al. 2019). Steenkamp et al. (2010) clearly point out that MB lead on product innovation, with PLs playing catch-up, and that gives them competitive edge in terms of maintaining the perception of a quality gap and consumers' willingness to pay a premium price.

2.4 Interaction Between PL and Innovation

Extant research focuses on the impact of PLs on MB innovation (e.g. Anselmsson and Johansson 2009) as well as on how innovation affects the market share of PLs (e.g. Martos-Partal 2012). Moreover, a number of papers identify innovation as an effective strategy for MB to fight against PLs (Kumar and Steenkamp 2007). Braak and Deleersnyder (2018) highlights that retailers lack the capacity and skills to develop innovation in the wide range of categories they sell and they often copy innovations developed by MBs, a strategy that requires much lower investment. Dobson and Chakraborty (2015) point out that MB have often created whole new categories through innovation, benefiting consumers with more choice, but PLs potential plagiarism makes them fear that they will not be able to have return on such a risky investment. Furthermore, Glimvall (2015) identifies the development of copycat private label products as a key barrier to manufacturers' innovation.

3 Aim

Literature is scanty in investigating the interplay between MBs and PLs in innovation in the CPGs industry. The goal of this paper is to understand the role played by manufacturers and retailers in radical innovations in CPGs. To shed light on this aspect, the context of the study is Spain for two key reasons: Spain ranks second in PL market share in EU and retailers' concentration has speeded up in the past few years.

4 Methodology

In order to fulfil the aim of this study, we conducted a quantitative analysis of two Kantar Worldpanel (household panel) datasets: first, a longitudinal data set of 561 innovations in CPG, including all the radical innovations launched in Spain in the period 2012–2016. Second, another Kantar dataset including the level of weighed distribution achieved twelve months after launch by each radical innovation introduced in Spain in 2015 and 2016. Innovations in those selected categories sum up 72% of all the radical CPG innovations launched in Spain during that period and, as such, they are representative of innovations in the CPG industry. The datasets comprise of five sectors (Food, Beverages, Baby Food, Household and Body Care), including all the radical innovations in the 31 most innovative product categories launched in the period considered. In line with the literature (e.g. Sorescu and Spanjol 2008), an innovative Stock Keeping Unit (SKU) according to the Kantar datasets is one that brings into the category a new feature. Incremental innovations and me-toos were purposely excluded.

Both datasets included a very rich set of data. For example, for each innovative SKU launched between 2012–2016, several data related to the product category to which the SKU belongs are provided: value and volume sales, PL % market share in the category and the average price in the category for MBs and for PLs. For each SKU, the cumulative sales at 31st December is provided for the launch year, both in volume and value.

5 Findings and Discussion

5.1 MBs Leading Innovation Reduces PL Market Share Growth

Results demonstrate that MBs lead on launching radical innovation in CPGs in Spain: 88% of the innovations in the sample come from MBs (491), while just 12% are PL products (70). Moreover, data show that PL innovation is concentrated, as only two retailers account for 94% of the launches. These retailers are Lidl, with 34 innovations and Mercadona with 32. Carrefour and Eroski account for two innovations each between 2012 and 2016. This is consistent with Lamey et al. (2012), who concludes that retailers seldom develop innovations as PL leave too small margins to recover new product development costs.

That said, innovation pays off: an intensive activity in radical innovation in a category can be related to lower PL market share growth rates in the category. With the only exception of yogurts, PL share growth in the 13 most innovative categories is lower than the average in the industry, which in Spain is +0.9% in the analysed period (Kantar 2017). Moreover, in the studied period, MBs gain market share against PL in 6 out of the 13 most innovative product categories, holding off the global trend of PL continuous growth.

5.2 Limited Availability of Innovation to Consumers

There seems to be a barrier to the introduction and distribution of innovative products developed by manufacturers. Data for MBs radical innovations launched in 2015 and 2016 show that the average weighted distribution achieved 12 months after the introduction is 31.5%. However, there are relevant differences when considering the retail format: the distribution rate achieved in hypermarkets is close to 50%, while in supermarkets is only 27.6%. This is probably due to the fact that two key players in the Spanish retail market – Mercadona and Lidl – often do not introduce manufacturers' innovation in their stores, as their assortment is short and mostly based on PL products.

5.3 Features of the Most Innovative Categories

5.3.1 Type of product

Findings show that among the five sectors considered, food is the most innovative in Spain, accounting for 68% of all innovations, with its weigh in the CPG market being 56,1% in volume, according to Kantar (2018). Next comes beverages with 15%. The contribution of personal care (9%), household (7%) and baby food (1%) is lower. Further analysing data, it can be observed that innovation is highly concentrated in just a handful of product categories: 14 product categories count for 76% of the radical innovations between 2012 and 2016.

5.3.2 Innovation and PL Market Share

As shown in Table 1, the most innovative categories are those in which PL market share is average: between 30 and 50%. Although there are quite a few exceptions (i.e. soft drinks, ice cream or fruit juices), findings show that when PL share is either very high or very low, fewer innovations appear. The lowest innovation activity is observed in those categories in which PL is over 50% market share, such as milk products and vegetable or fish preserves. Similarly, categories with PL share below 30% also account for a small number of innovations, as it is the case of bottled water, baby food or beauty creams.

Findings are consistent with the literature: Kumar argues that PLs are more successful in categories with low innovation activity and Martos-Partal (2012) posits that the effect of MB innovation on PLs depends on PL market share in the category (what she defines as retailer power).

Table 1. Data analysis of radical innovations according to PL value in the category

PL value market share in the category	Number of categories with innovation 2012–2016	Category examples	Number of innovations 2012–2016	Average number of innovations per category
Below 20%	8	Baby Food, Bottled water, Beauty creams	90	11.3
Over 20%	3	Beer, Coffee, Body milks	43	14.3
Over 30%	6	Chocolates, Biscuits, Detergents, Potato chips,	146	24.3
Over 40%	8	Cereals, Sauces, Yogurt, Ready meals	207	25.9
Over 50%	6	Oil, Milk, Bread, Veg/Fruit preserves	75	12.5
Total	31		561	18

5.3.3 Innovation and Brand Value

Furthermore, results for both food and beverages point out that the product categories with most innovations are those in which the price gap between MBs and PLs is the highest. This relationship is almost inexistent in household items and does not occur for body care products.

6 Conclusions and Managerial Implications

This study makes a contribution in taking forward the understanding of the interplay existing between manufacturers and retailers in developing radical innovation in the CPG industry and the different role that each plays in this context.

Findings show that radical innovation is mainly led by MBs and that retailers act as a barrier to innovation availability to the consumer. Moreover, innovation is concentrated in few categories, where often PL market share is neither very low nor very high. Finally, it was observed that radical innovation slows down PL market share growth.

Results point out that radical innovation is likely to reach only one third of the potential weighted distribution. Although this may discourage manufacturers from investing in the development of radical innovation, they need to bear in mind that innovation represents a key competitive tool to hinder the development of PLs.

7 Limitations and Future Research

The databases analyzed include data on the CPGs industry Spain, it would be therefore interesting for future studies to consider other countries with a similar evolution in terms of PL growth. In addition to that, qualitative interviews with managers could help explore to which extent retailers, acting as gatekeepers for new products launches, are putting off MBs from developing radical innovations.

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Assortment and Retailing: A Trendy Couple

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Abstract. Assortment is a relevant issue in retail management which has gained prominence in the last few years in many retail sectors. The purpose of this research is to show the state of the art on this subject by means of a bibliometric analysis carried out using the Web of Science online database. Our findings show the most influential countries, annual evolution, the most influential journals and authors, citations, the main areas of knowledge in which the articles are framed, and the most relevant entities supporting research on these topics. By using a fractional counting method to analyze co-occurrence of the author's keywords, this paper identifies ten clusters and the most frequent terms. This work represents a contribution by identifying the main trends in assortment in retailing research, and proposes future research, such as: grocery retailing, omni-channel, retail internationalization, market power, competitiveness, consumer search, or stochastic demand.

Keywords: Retailer · Assortment · Bibliometrics · Grocery · Trends

1 Introduction

Assortment is a key element for retailers (Levy and Weitz 2008), since it differentiates a retailer from its competitors and has a strong influence on sales (Fox et al. 2004). Providing a variety of products and services is one of the basic functions of the retailer (Levy and Weitz 2008). The selection of the assortment is one of the most important decisions that retailers must make (Kahn and Lehmann 1991). Assortment constitutes one of the most determining aspects for the positioning and store image, reflecting a strategic positioning of the store (McGoldrick 2002) and differentiating commercial formats (Peng 2008), by identifying the offer that it proposes at the point of sale. Assortment is the third most important element, after quality and prices, to determine the retailer's position and image (Ailawadi and Keller 2004; Mantrala et al. 2009), and it is a key component of the marketing mix facilitating customer loyalty through strategic positioning (Grewal et al. 1999; Koelemeijer and Oppewal 1999). In addition, to attract consumers to the store, the composition of the assortment can influence both the current and future choices of the product by helping to shape consumer preferences (Simonson 1989).

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The "perfect" assortment combination remains unclear to most retailers (Bauer et al. 2012), both in terms of size and composition (with the emerging topic of private labels). One stream of literature focuses on the impact of assortment reductions on purchase behavior and category sales (e.g., Broniarczyk et al. 1998; Boatwright and Nunes 2001; Sloot et al. 2006). Other works offer methods to find the assortment that optimizes category profits such as marketing literature, and operations management literature (Rooderkerk et al. 2013). Therefore, assortment planning represents an opportunity for academics to help improve the retail practice and more research is needed to provide solutions to assortment problems (Kök et al. 2009).

In this context, it is important to answer questions such as: What are the most discussed issues on assortment and retailing in the scientific literature? What are the most promising future fields of research, those with a higher potential? The purpose of this research is to understand, from a bibliometric perspective, the state of art of assortment in retailing, the evolution of publications, authors and the main areas of research in which these investigations are framed. Bibliometric analysis evaluates developments in knowledge on a specific subject and assesses the scientific influence of research and sources (Bouyssou and Marchant 2011). Thus, this work represents a contribution by identifying the main trends in retailing research and assortment and, from there, propose future research initiatives. The main results obtained are presented and analyzed, with relation to matters such as relevant countries, annual evolution of publications, the most influential journals and authors, as well as the main areas of knowledge in which the publications are framed. Finally, conclusions and future potential research lines are presented.

2 Methodology

In order to analyze the evolution of assortment and retailing in scientific publications, a bibliometric analysis was carried out. This research is based on a systematic bibliographic analysis of the literature related to the aforementioned topics, following a sequence of steps (Brereton et al. 2007): (1) definition of the search criteria, keywords and time periods, (2) selection of scientific datasets, (3) adjustment and refinement of research criteria, (4) full export of results, (5) analysis of the information and discussion of the results.

Regarding the keywords, since we were interested not only in the central terms, assortment and retailing, but also in other words with a common root and equivalent meaning (e.g., "retail" or "retailer"), we selected the terms *assortment* and *retail** to gain further insights. Thus, we searched for publications containing these terms in the title, abstract, or keywords. The following step was identifying publications from robust and reliable databases. Garfield (1955) first described a citation index for science. Therefore, the research was developed based on the Web of Science Thomson Reuters (WoS) online database, which is one of the most widespread databases on different scientific fields, frequently used for searching the literature (Guz and Rushchitsky 2009; Ruiz-Real et al. 2018). WoS is a multidisciplinary database which mainly records scientific articles, reviews, and books, and it is the most commonly used database. The search was redefined to only include the WoS Core Collection and, after debugging the database, the query of

these terms in the titles, abstracts and keywords resulted in 597 documents (499 articles, 97 proceeding papers, 25 book chapters, 11 reviews, 4 editorial materials, and 3 book reviews). Once we obtained the final data, the results were exported with all available information in ".txt" format, which we later used for the bibliometric analysis. Bibliometric analyses are mainly based on two criteria: the scientific publication, as an indicator of research output (Moed 2005), and citations received by them as a proxy of their scientific impact (Merton 1977). Thus, different bibliometric indicators were also used in this research to characterize the scientific output.

3 Results and Discussion

This research is focused on scientific publications connecting assortment and retailing, in order to understand the current state, the evolution, and the main future trends. The most relevant results are presented and analyzed, including the most influential countries, annual evolution, the most influential journals and authors, citations, the main areas of knowledge, and the most relevant entities supporting research on these topics.

Most Influential Countries. The U.S. not only leads in terms of the number of articles published about assortment and retailing (285), but also in the number of citations (8,860), total citations per article (31.09), and the h-index (51). Other relevant countries are Germany (48), The Netherlands (45), China (34), Spain (32), and the United Kingdom (31).

Evolution of the Number of Publications Per Year. The first publication collected by WoS on assortment and retailing is from 1956. During the first years there were only a few publications, and it was not until 2007 (23 publications) when this subject acquired special prominence and began to take-off. After a few years of stagnation, from 2012 onwards, it becomes a relevant topic and, during the last years, the annual volume of publications is around 60.

Most Influential Journals. Publications can be found in a wide range of journals, which is proof of the importance of the topics discussed in this paper. In addition, there is not a high concentration of publications in a single journal, but rather, a wide range of journals publish on the subject. The ten most prolific journals are led by Journal of Retailing (52 articles), followed by Marketing Science (31), European Journal of Operational Research (25), Management Science (22), Production and Operation Management (22), Operation Research (18), Journal of Marketing Research (14), Int. Series in Operations Research Management Science (13), Journal of Retailing and Consumer Services (13), and Journal of Business Research (10). With reference to the number of citations, we can highlight Journal of Retailing (2,549), Marketing Science (1,882), Management Science (988), Operation Research (835), and Journal of Marketing Research (654).

Most Relevant Authors and Cited References. The impact of an article can be measured by considering the number of citations (i.e., other papers which refer to it). Thus, this research differentiates between two bibliometric indicators to analyze the most relevant authors: number of articles and author citations. The most prolific scholars are

Professor Gijbrechts (10 publications) and Campo (10), followed by Kahn (8) and Smith (8). In terms of the number of citations, the most influential authors are Kahn (University of Pennsylvania, U.S.; 616 citations), Smith (Santa Clara University, U.S; 364), Gijbrechts (Tilburg University, Netherlands, 345), and Campo (University Antwerp, Belgium, 261). Finally, Professor Smith has the highest average of citations per article (45.5), followed by Gijbrechts (34.5). The five papers with the highest number of citations are: "Understanding retail branding: conceptual insights and research priorities" (Ailawadi and Keller 2004) (399 citations); "Variety for sale: Mass customization or mass confusion?" (Huffman and Kahn 1998) (351 citations); "Consumer surplus in the digital economy: Estimating the value of increased product variety at Online booksellers" (Brynjolfsson et al. 2003) (326 citations); "Consumers' perceptions of the assortment offered in a grocery category: The impact of item reduction" (Broniarczyk et al. 1998) (252 citations); and "Why store brand penetration varies by retailer" (Dhar and Hoch 1997) (236 citations).

Main Areas of Knowledge. Due to the transversal nature of the topics considered, and the great diversity of sectors in which retailers operate, a wide range of areas of knowledge deal with these topics. Although many publications are framed in more than one area of knowledge, it can be argued that the most prominent field is *Business*, with 264 publications, i.e. 44.2% of total publications on this subject. *Operation Research Management Science* is also a relevant area (193 publications), followed by *Management* (172), and *Economics* (62). Other areas of interest are: different engineering specialties, computer science, and food science technology. According to the h-index, the most relevant fields are: *Business* (46), *Operation Research Management Science* (31), and *Management* (30).

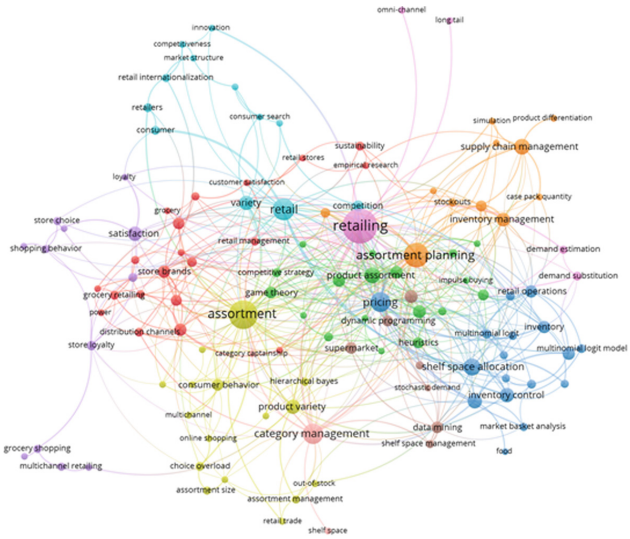

Fig. 1. Map based on co-occurrence of the authors' keywords

Figure 1 shows a map based on WoS data on co-occurrence of the authors' keywords, using a fractional counting method. The minimum of occurrences of a keyword was established as three from the 1,415 keywords found. This map shows the main interactions between the most frequent terms and the existing clusters and it is used to understand trends in research.

Ten clusters were identified with the following being the most important terms: Cluster 1 (red): store brands; distribution channels; grocery and grocery retailing; consumer behavior, perceptions and satisfaction; private label; national brands; retail formats, management, marketing and stores; store image; micromarketing; empirical research; merchandising. Cluster 2 (green): product assortment; game theory; heuristics; impulsive buying; competitive strategy; perceived variety; consumer choice; optimization; supply chain; channel; promotion. Cluster 3 (blue): pricing; shelf space allocation; inventory control; retail operations; multinomial logit model; choice models; market basket analysis; food; assortment selection; marketing; demand forecasting. Cluster 4 (mustard): assortment (management and size); product variety; consumer behavior; hierarchical Bayes; choice overload; out-of-stock; multichannel; online shopping; brand equity. Cluster 5 (purple): satisfaction; store loyalty; customer loyalty; store choice; shopping behavior; grocery shopping; multichannel retailing; e- commerce. Cluster 6 (turquoise): retail, variety; competition; consumer; retailers; retail internationalization; innovation; market structure and power. Cluster 7 (orange): assortment planning; supply chain management; inventory management; simulation; stock-outs; product differentiation; case pack quantity; field experiment. Cluster 8 (brown): data mining; supermarket; dynamic programming; shelf space management; stochastic demand. Cluster 9 (rose): retailing; omni-channel; long tail; demand estimation. Cluster 10 (pale pink): category management; category captainship; shelf space.

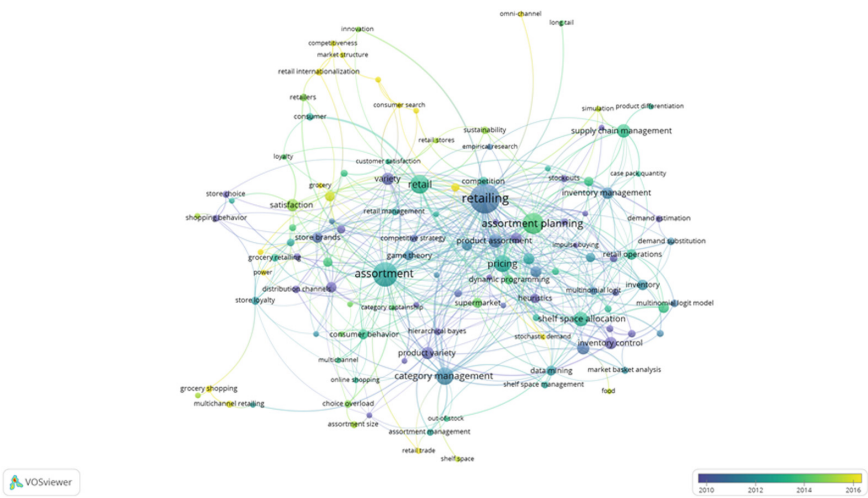

Fig. 2. Map based on co-occurrence and evolution in recent years

Finally, in order to analyze the evolution of the most frequent terms used by the authors in research on assortment and retailing, a trend map is made, using a fractional counting method, with reference to the WoS database and based on bibliographic data on the co-occurrence of the authors' keywords (Fig. 2). This map is based on the average number of publications per year and uses different colors to highlight the most utilized author keywords from 2010. The most recent keywords are marked in yellow, in order that the most important trends may be identified. Current research on this subject focuses on topics such as grocery, grocery retailing, or grocery shopping. Other relevant and emergent subjects are: omni-channel and multichannel; retail internationalization and retail trade; market power and structure; competitiveness; consumer search; and stochastic demand (e.g., inventories model with stochastic demand).

Most Influential Institutions and Funding Agencies. Several public and private entities have promoted or supported research on assortment and retailing in recent years, helping to promote investigation and disseminate knowledge. Of all these, the following six can be highlighted: *National Science Foundation* (U.S.), with 17 articles; *National Science Foundation of China* (9 articles); *European Union* (7); *Fundación Ramón Areces* (5); *Netherlands Organization for Scientific Research* (NWO) (3); and *Spanish Ministry of Economics and Competitiveness* (3).

4 Conclusions and Managerial Implications

One of the biggest challenges in retailing is identifying the best assortment at the store. A good estimation of the right amount of stock is essential for retailers since it will affect consumer demand, but may also have a significant influence on retailers' margins. In addition, decisions about assortment planning not only affect retailers, but also the manufacturers supplying them. Therefore, choices on assortment influence many areas of retail management and affect different issues and activities, such as negotiation with suppliers, store organization, distribution channels, and even competitiveness.

According to our results, the U.S. leads in terms of the number of articles published about assortment and retailing, the number of citations, and the h-index. From 2012 onwards, these topics become relevant and the annual volume of publications increases, a trend also apparent in the broad range of journals. The most prolific journals are Journal of Retailing, Marketing Science, and European Journal of Operational Research. The most prolific scholars are Professors Gijbrechts and Campo, with Kahn and Smith being the most influential academics in terms of citations. The topics considered are quite transversal in nature. The great diversity of retail sectors also signifies that a wide range of research fields will be interested in them. The most relevant areas are Business, Operation Research Management Science, Management, and Economics. Other important areas are engineering specialties, computer science, and food science technology. This paper identifies ten clusters and the most frequent terms used. The most relevant topics are classified in categories related to different subjects, such as the range of product and store management (e.g., store brands, management and size assortment, assortment planning, product variety, category management, shelf allocation, inventory control), retailers strategies and capacities (e.g., competition, innovation, demand estimation, long tail),

consumers and loyalty (e.g., consumer behavior, shopping behavior, customer loyalty, store choice, store loyalty, satisfaction), distribution (e.g., distribution channels, supply chain management, omni-channel, supermarket, grocery), or research tools (e.g., simulation, data mining, dynamic programming). Different public and private organizations promote and support research on assortment and retailing. Some of them are highlighted: The National Science Foundation (U.S.), the National Science Foundation of China, the European Union, the Fundación Ramón Areces, the Netherlands Organization for Scientific Research (NWO), and the Spanish Ministry of Economics and Competitiveness.

One of the main contributions of the present work is to suggest some future lines of research that may be of interest to both scholars and retailers. In this sense, some relevant and emergent subjects are identified. Current research on this subject focuses on topics such as grocery retailing or grocery shopping. Omni-channel and multi-channel are also emergent trends. Others important fields are those related to retail internationalization and retail trade; market power and structure; competitiveness; consumer search; or stochastic demand (e.g., inventories model with stochastic demand).

This research is not exempt from certain limitations, some of which could be the basis for future research. Some limitations are directly derived from the characteristics of the bibliometric analysis, which is a method mainly focused on quantitative issues. Some authors publish only a few articles but may be very influential in their area of knowledge, even having a significant impact on a specific field. Thus, in addition to using WoS for a bibliometric analysis, we also measure qualitative features and standardized metrics, such as the number of citations. In the future, this methodology could be expanded to include other quantitative or qualitative tools (e.g., Scopus, Google Scholar or meta-analysis).

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Measuring the Experiential Marketing Orientation Management of Shopping Centres

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Abstract. The purpose of this article is to provide a robust and consistent measurement of experiential marketing orientation management. Drawing on existing studies on market orientation, customer experience management and experiential marketing, our work extends the literature by validating a pioneer scale that measures experiential marketing orientation in a holistic manner. Survey data were collected from 171 managers of Spanish shopping centres and retailers. Structural equation modelling confirms the influence of this scale on performance. Our model helps to improve retailers' competitive advantage and its ability to achieve results that meet or exceed its goals.

Keywords: Experiential marketing · Shopping centres · Retailers · Market orientation · Customer experience management · Performance

1 Introduction

According to Grewal et al. (2009), survival in today's economic climate and competitive retail environment requires more than just low prices and innovative products. To compete effectively, businesses must focus on the customer experience (CE). To manage CE, retailers must understand what "customer experience" actually means. CE includes every point of contact at which the customer interacts with the business, product, or service. Customer experience management (CEM) represents a business strategy designed to manage CE and thus is the process of strategically managing a customer's entire experience with a product or company (Schmitt 2003). CEM has a strong impact on the levels of both financial performance and satisfaction and perceived value by consumers (Grønholdt et al. 2015).

However, few studies have analysed the consequences of experiential marketing for firm performance, except for those works that consider the CE perspective, such as Grønholdt et al. (2015) and Homburg et al. (2017). None of these studies focuses on the retailing sector. Moreover, there is not yet a scale to measure to what extent a company is oriented towards Experiential Marketing Orientation Management (EMOM). Therefore, the contribution of this study is to propose and validate a pioneering scale to measure it. Thus, in this study, we briefly delimit the concept of strategic orientation towards CEM to establish the basic differences between this concept and other well-established strategic

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orientations such as market orientation (MO) that justify the extension that CEM provides to new business models. Next, we develop a measurement scale. This new measurement scale is based on managers' perceptions of experiential marketing actions developed in shopping malls. The empirical study is based on survey data from 171 managers of retail companies, primarily managers of the largest Spanish shopping centres or retailers located in them. Next, we estimate the impact of CEM on the retailers' performance so that these indicators can become a valid instrument for management.

The remainder of this paper is organized as follows. This study begins with the literature review. Next, we describe the methodology used for the empirical analysis. Finally, we discuss the results. This paper concludes by summarizing the study's main conclusions, the implications of its findings and suggested avenues for further research.

2 Background: Market Orientation, Customer Experience Management and Experiential Marketing

The pioneering studies on MO conducted by Kohli and Jaworski (1990) and Narver and Slater (1990) led to numerous works that verified the relationship between MO and business performance (Avlonitis and Gounaris 1997). In recent years, scholars have shown increasing interest in determining whether this relationship persists in different geographical and sectoral contexts (Campo et al. 2014) and verifying that companies with more consumer-centric business models obtain better market, economic and financial results (Boles et al. 2001). Homburg et al. (2017) propose extending the strategic directions of CEM since the concept is largely silent on the market-facing attributes of marketing management. These authors propose that the concept of MO does not integrate cultural mind-sets, strategic directions and firm capabilities. According to them, this concept is also biased towards an exploitative, firm-centric focus on market performance and profit maximization, which explains why the experiential response orientation extends MO's customer orientation. Firms with the most dominant experiential response orientation might act as the "nodal entity" in potential market networks. Following this, Table 1 compares MO and CEM. We have added some issues related to strategic directions and long-term orientation in MO that Homburg et al. (2017) did not take into account.

Experiential marketing, which has a broader conceptual scope than sensory marketing, aims to make the act of purchasing an experience for consumers (Same and Larimo 2012) so that they can enjoy all aspects (sensorial or not) of the product, the service, and the establishment and are fully involved in the process. Experiential marketing is a means of creating experiences that engage the client in a personal way (Gilmore and Pine 2002). This type of marketing involves the audience by creating a personalized connection through the use of emotions and direct involvement, which generates credible and memorable experiences (Khan et al. 2015). Schmitt (1999) popularized this concept with his seminal work on the foundations of experiential marketing, which has been the basis of the most significant academic contributions in the last twenty years.

Table 1. Comparison of MO and CEM.

	MO	CEM
Cultural mindsets	Customer orientation, cross-functional coordination and competitor orientation	Experiential response, touchpoint journey and alliance orientation
Strategic directions	Market competitive intelligence and organizational processes (recruiting, training, and compensation) oriented towards personal attitudes and human talent management	Thematic cohesion, consistency, context-sensitivity, and connectivity of touchpoint journeys
Firm capabilities	Effective use of market data by generating, interpreting, and disseminating relevant data within the organization	Effective use of market data through the continual design, prioritization, monitoring and proactive adaptation of CEs
Primary goals	Customer satisfaction and long-term performance	Customer loyalty and long-term growth

Source: adapted from (Homburg et al. 2017; Kohli and Jaworski 1990; Narver and Slater 1990; Ruekert 1992, p. 395).

Nevertheless, the origin of this concept, which is not without controversy, can be attributed to the pioneering work of Holbrook and Hirschman (1982), which has more recently been extended to the "four E's" of "experience, entertainment, exhibitionism, and evangelization" (Holbrook 2000). This literature stream proposes that the concept of CE should be the main focus of current marketing strategies (Carù and Cova 2003; Same and Larimo 2012). To illustrate this point, Verhoef et al. (2009, p. 31) state that retailers worldwide have taken ownership of the concept of CE, incorporating it as one of the pillars of their business mission. CEM has received substantial attention from practitioners and academics over the last few decades. Practitioners have taken the lead, appraising CEM as one of the most promising marketing approaches for consumer industries. In research, however, the notion of CEM is not well-understood, is fragmented across a variety of contexts, and is insufficiently demarcated from other marketing management concepts (Homburg et al. 2017).

In the retail context, the use of sensory and experiential marketing variables to create a commercial atmosphere contributes positively to customer satisfaction (Gómez-Suárez and García-Gumiel 2010). Thus, CE and the physical environment (atmosphere) are antecedents of the business result derived from the value obtained by the client. Specifically, in the area of shopping centres, De Nisco and Napolitano (2006) state at a conceptual level the need for an approach focused on the customer's leisure experience, which is reflected in three areas: (i) a strategic position that clearly differentiates the centre from other competitors, (ii) an understanding of consumers' needs regarding leisure experiences and (iii) collaboration among the most important establishments in the shopping centre. In addition, these scholars identify this focus as the main antecedent of improved commercial results.

However, despite this conceptual work, no empirical studies have developed a scale for the degree to which experiential marketing has been adopted in the management of business in general, much less for retailers and/or shopping centres. Furthermore, prior studies have not empirically validated the existence of a positive and direct effect of experiential marketing management on commercial results (Dupuis and Savreux 2004). Therefore, based on the theoretical principles of CEM and its relationship with marketing results, we propose the development of a scale to measure the degree to which shopping centres are oriented towards experiential marketing and the improvement of clients' shopping and consumption experience. To do so, we first define EMOM as a company culture in which the principles of experiential marketing are spread throughout the organization, coordinating various strategies and actions that aim to obtain a satisfactory level of performance for the company, while providing value to customers.

3 Methodology

To measure the degree of EMOM, we followed a procedure for structured scale development (as suggested by Anderson and Gerbing 1988; Churchill 1979) that has been used in many scale development studies (Khan et al. 2015). To this end, the initial item generation from a review of the academic literature on MO and CEM produced 21 measurement items for EMOM and 9 for PFM. Before moving on to the validation stage, we conducted a second phase of the item reduction process according to the opinions of 16 experts to evaluate the measurement items for both EMOM and PFM (8 scholars and 8 professionals specialized in marketing management and consumer behaviour). The scale items that were unclear, not representative of the domain, or open to misinterpretation were eliminated or reworded. In addition, redundant or unnecessary items were eliminated. Following the previous procedure, the reduced scale contained 7 items for EMOM, including consumer experience orientation (3 items), internal coordination aimed at experiential marketing (2 items) and response to experiential marketing actions (2 items). The scale for PFM contained 4 items, including marketing (2 items), economics (1 item) and financial results (1 item), all of which were used in the next validation phase. Next, a survey was distributed to the managers of shopping centres and the retailers located in them, specifically managers of (a) owner companies (i.e., owners of one or more shopping centres); (b) management companies that operate shopping centres owned by third parties; (c) owners and managers (i.e., companies that both own and manage their assets); (d) retailers (i.e., retail distribution stores); and (e) consultants (i.e., companies that advise either owners or retailers). The field work was carried out in Malaga during the celebration of the XIVth Congress of Centres and Commercial Parks of Spain. Shopping centres represent one of the main sectors of retail activity in Spain. According to data obtained from the AECC (2018), there were 555 shopping centres and malls in 2017, representing 17.9% of market share, with sales of 43,590 million euros and 1,900 million visits. These centres represent 15,800,000 m^2 of gross leasable area (GLA) and 33,744 merchants (ARAL 2018).

4 Results

One hundred and seventy-one valid surveys were obtained from 895 attendees at the above mentioned event (Congress of Commercial Centres and Parks), corresponding to a response rate of 19%. The respondents were asked to evaluate EMOM in their company using a 10-point Likert-type scale (1 = "strongly disagree" and 10 = "strongly agree"). Table 2 shows the average values and standard deviations of each of the 7 items used to generate the EMOM scale for companies related to the shopping centres, with an average of 6.5 points on a scale from 1 to 10. The standard deviation was high, exceeding a value of 2.5 for all items. Table 2 also shows the perception of the results of experiential marketing actions. All items had average values that were higher than seven points on a scale of ten, which indicates that positive results were perceived in terms of the quality of services and customer satisfaction, in contrast to market share and profitability.

Table 2. The importance of EMOM and the impact of applying experiential marketing actions on performance.

Item	Mean	Standard deviation
My company incorporates experiential marketing actions for its clients (EMOM1)	6.42	2.72
Management establishes experiential marketing policies (EMOM2)	6.46	2.62
Internal meetings are held to study customers' desired experiences (EMOM3)	6.51	2.73
Internal meetings are held to study the clients' sensory preferences (EMOM4)	6.27	2.71
Studies are conducted among clients to launch experiential marketing actions (EMOM5)	6.43	2.80
The strategies of the company incorporate experiential marketing actions (EMOM6)	6.59	2.63
The company is concerned with measuring the effects of experiential marketing actions (EMOM7)	6.79	2.78
Increase the quality of the services provided (PFM1)	7.83	2.12
Increase customer satisfaction (PFM2)	7.78	2.00
Increase long-term market share (PFM3)	7.30	2.17
Increase business profitability (PFM4)	7.22	2.20

Regarding the validation of the scale, the results of the CFA provided by AMOS graphics 22.0 confirmed that the structure of the EMOM scale is one-dimensional, validates the seven items of the exploratory analysis and meets all required psychometric properties. The measurement model reached a satisfactory adjustment ($\chi 2/df = 1{,}607$; $p = 0.011$; GFI = 0.945; AGFI = 0.902; RMSEA = 0.06). These results provide additional support for the unidimensional structure of EMOM, which has a significantly ($\Delta\chi 2 = 12.513$, df = 1) better fit than the three-dimensional model.

The inter-construct square correlation is lower than the root of the average variance extracted (AVE) for each construct (Fornell and Larcker 1981), demonstrating the discriminant validity of the measurement model, which relates orientation to experiential marketing and performance. In addition, the criteria for convergent validity and reliability are met (details of these criteria will be provided to the reader upon request). The results of this analysis strongly suggest that the measures of the EMOM and PFM scale are reliable and have good convergent and discriminant validity.

To examine the predictive power of the empirical model, the two scales—EMOM and PFM—were considered first-order reflective constructs. The internal consistencies of the constructs were found to be satisfactory (Cronbach's alpha was 0.957 for EMOM and 0.950 for PFM). The results suggested that all constructs were reliable and valid, and the model fit the data reasonably well ($\chi 2/df = 1.707$; GFI = .947; CFI = .988; RMSEA = .064). The path coefficient in the model was significant ($p < 0.01$). Thus, EMOM was found to have a significant positive influence on performance ($\beta = 0.679$) at the 1% level, explaining 46% of the total variance of the results. Thus, in the context of shopping centres, management's approach to experiential marketing exerts a positive, direct and significant perceived effect (magnitude 0.679) on performance. Each improvement in the average mean of the experiential management orientation will increase by almost 0.7 points the perception of improvement in the business results, as measured by quality of service, satisfaction, market share and profitability.

5 Conclusions, Limitations and Future Research

This study aims to inform managers of companies linked to shopping centres of the importance of adopting a marketing approach aimed at highlighting rewarding sensations and experiences, both of which have a direct effect on customer satisfaction and corporate performance.

The results indicate that retailers that are more oriented towards experiential marketing management will not only better understand what type of experiences their clients prefer but also better coordinate their actions, decisions and control criteria, which will positively and directly affect the degree of client satisfaction, the level of quality offered, market share and profitability. Although many companies in the retail distribution sector seem to know and apply experiential marketing concepts, many have not yet developed tools for their implementation and/or adequate measurement. However, when EMOM is measured in the retail context, the measurement of the elements that are involved in this orientation is important. It is not enough to consider the needs and wishes of current clients regarding experiential marketing; the managers of shopping centres and stores must ensure that their teams understand the importance of continuity. They must also ensure that their teams understand that customer satisfaction is of utmost importance and can be improved through experiential actions, even if those actions have a higher cost.

The current research has limitations. Although the results are based on a representative sample of the group analysed, there could be a bias in the responses due to self-selection and the fact that managers could judge their business performance better. In addition, the sample size could be increased. New models should test moderators of

the relationship, such as size and type of company or gender, age and studies of the respondents. Future research could validate the scale and its impact on performance through a comparative cross-country study or in different sectors (tourism, sports or mass consumption) and different countries. Moreover, this study is based on the perspective of retailers. It would be interesting for future studies to integrate the perspective of customers. In short, more research is needed on experiential marketing and its relation to the outcomes of both consumers and companies.

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Phase Transitions in Retailing: Modeling Retail Fashion Tipping Points as Complex Systems

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Abstract. Tipping points occur in many natural and socio-economic systems, and may have serious implications when they occur. Changes in retail market structure and the development of new markets, we argue, can also be studied from the perspective of complex systems using insights from biology and physics. In this review, we discuss the theory of tipping points, or more accurately, phase transitions and how they may be identified and predicted both mathematically and by pattern recognition.

Keywords: Tipping points · Phase transitions · Retail

1 Introduction

Retailing in the 21st century faces enormous challenges as noted by Paul et al. (2016) and Rana and Paul (2017). As food preferences tip towards organics, retailers must adapt their marketing mix. These transitions where a market or a nascent nation tip over from one condition to another - from non-organic to organic and from a colony to a republic, are critical to understanding changes in retailing. In this paper, we propose a theoretical and conceptual framework for studying tipping points in retailing, using tools from statistical physics and complex systems. Statistical physics (a branch of physics that uses methods of probability theory, statistics and mathematical tools for dealing with aggregate properties of large populations), gives us a fundamental understanding of phase transitions. A phase transition occurs where a system changes from one state of order to another and consists of two elements: (1) Social Influence – how a British subject of North Boston is influenced by his neighbor (Paul Revere) to become a revolutionary; and (2) External Factors – how the outbreak of Mad Cow disease in Britain tipped consumer preferences towards food safety and certification, such as organic standards.

Technology combined with big data, offers unprecedented opportunities for personalized marketing, customer relationship management, and more importantly, predicting future tipping points that change the retail landscape. These changes do not occur independently, and may interact in a manner in which unexpected emergent phenomena appear that can radically alter the nature of markets and the means by

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which transactions occur in these markets. New metrics for predicting when tipping points will occur is an active area of research. Complex systems abound in studies of critical systems, and a range of metrics exist for recognizing tipping points.

These conceptual tools have been around for a long time, but the last decade has seen considerable innovation in the prediction of tipping points. This would not go much beyond the conceptual and framework level were it not for the advent of big data. Following Anderson et al.'s (2013) call for transformation in service research, we apply the concept of phase transition to retailing as a purported predictor of tipping points, applying a systems perspective to enhance our understanding of marketing channels.

2 Tipping Points

Today's retailing environment can be considered a dynamic complex system, and as such, is hard to predict by analytical means, meaning that computer simulation has to play an increasing role. Examples of complex systems include the diffusion of innovations (Akgün et al. 2014; Habel and Goodman 2008), adoption of organic food (Rana and Paul 2017), studies of international market structure (Akaka et al. 2013), effects of marketing strategies (Gilbert et al. 2007; Lei and Slocum Jr 2009) and word of mouth effects (Goldenberg et al. 2001). The existence of small versus large stores in shopping malls (Paul et al. 2016), is another example whereby specific factors lead to change in systemic structures.

One of their main characteristics is a tipping points, where exogenous or endogenous factors precipitate sudden, massive, and usually irreversible, change (Dubé et al. 2010). An example of tipping points in marketing is a particular product accelerating away from the market in its sales and market dominance (Dubé et al. 2010).

Phase transitions usually occur between an ordered and disordered state, such as when ice, an ordered crystal, melts to water, a less ordered liquid. Much interest centers on the prediction of phase transitions. Scheffer et al. (2012) provide an excellent review including a discussion of critical slowing down, and increasing variability and autocorrelation. Another index is *flickering,* where the system flicks from one state to another, However, in all of these metrics, there is a change in something before the transition, but the timing of when the transition will occur is imprecise. For example, it was clear that digital photography was going to replace film in the late 1970s. It took at least ten years longer than expected for it to become mainstream.

However, information theory for some systems at least gives us more precise timing of tipping points. The basic idea is that the *information flow (Global Transfer Entropy) rises to a peak and comes down, while the shared information (Global Mutual Information) continues to rise and peaks at the transition itself* (Barnett et al. 2013). A loose example of this would be a transition within a social context: much communication (information flow) will precede the event as people decide what to do.

We can illustrate a phase transition with the debate of the color (yellow versus green) tennis balls. There has been a recent online debate that tennis balls should be green, with a recent Twitter poll of 30,000 people stating 52% of them green, 42%

yellow and 6% white (Koren 2018). This is important because consumer perceptions and preferences drive demand.

An example of a phase transition, predicted by changes in information flow is shown by recent research on tipping points in the stock market crash of 1987 by Bossomaier et al. (2018). The share market crash was preceded by a rise in Global Transfer Entropy (GTE), followed by a fall then rise in Global Mutual information or GMI. What this means in retailing, is that preceding major shifts in markets there is considerable uncertainty, and the pattern of information sharing of this, falls initially and then rises, as communications about expected changes spread through a market. This results in a new state or equilibrium for a time, in the stock market example a lower or bear market. It is possible though, that markets, such as those in retailing may change for changes to revert back or become permanent.

While the mathematics explaining this to many of us is complex, a simple case study in retailing can also be used to illustrate how markets enter a phase transition or tipping point.

3 Jeans in Fashion in Australia and the United States. A Case Study of an Equilibrium Transition

An example of an equilibrium, phase transition is the fashion for jeans. As what is fashionable or not, represents dynamic changes in a complex social system, but one where the system may revert to what was fashionable before it became not. This is explained well by the rise and fall of the popularity of Levi 501s in Australia.

The 501® has been in continuous production since its launch on the market more than 140 years ago. With a history of producing cutting-edge advertising that drew on and enhanced the retro-rebellion Levi brand image, sales of Levi generally, and the 501 notably, increased dramatically during the 1980s and 1990s. So dominant became the 501® original jean as a fashion item, that it was named the Best Fashion item of the twentieth century by *Time Magazine,* beating out the miniskirt and Chanel's little black dress.

The Australian market for Levi differs from the American market in that the *Levi 501®* jean in Australia has always been treated as a high-end fashion product (Munk 1994; Scott 2009), rather than work-wear and actually forms the basis upon which Levi categorises its customer outlets, which range from premium 501 accounts to Red Tab accounts, down to Orange Tab accounts. In Australia, Levi uses this categorization to limit access to their premium product the 501 jean, by making it available to only a few premium retailers. This exclusivity was designed to protect the 501 brand. However, while the delineation between the premium 501 product and Levi's other styles was clear to the company and its preferred retailers, it was not necessarily as clear to everyday consumers. During the late 1990s, the dominance of the Levi brand in the Australian market led to some aggressive retailers discounting the brand at a loss to attract custom. In doing so, these discount retailers made the 501 jean available to a lower socio-economic customer who could not previously afford to access the brand in Australia. By the end of the 1990s, the Levi denim brand became so ubiquitous that

they were likened to wallpaper (Kane 2015), and in the early 2000s, Levi's Australian sales suddenly fell and have never returned to the same level of market dominance. This trend was reflected in global sales which peaked at 7.1 billion dollars in 1996 and then declined to 4.4 billion dollars by 2007 (Smith 2008).

In fashion, familiarity often breeds contempt, and the consumer need for uniqueness is a personality trait long recognized in the marketing literature (Bertrandias and Goldsmith 2006). It is a truism that fashion leaders do not want to look like everyone else and when a product reaches a certain level of saturation, such that it is described as ubiquitous and wallpaper in the market, there is a tipping point where fashion leaders wishing to look different seek another product to differentiate themselves (Holt 2014). Market saturation such as that achieved in Australia and globally by Levi can lead to a phase transition, where fashion leaders desert the brand and move onto a different product in a bid to stay ahead of the chasing pack and maintain the fashion uniqueness, which is an important part of their social identity. Such a phase transition can be catastrophic for a firm operating in a market such as fashion, which is inherently unstable and prone to rapid changes in popularity.

4 Implementation Processes

We can use the large volumes of data collected on consumer activity to make real-world tipping point predictions, but specific examples are beyond the scope of this paper. However, we can see how the process works for the jeans example. If we divide sales into two categories, flared or straight legged, denoted by 1 and 0 respectively, across a large number of stores, preferably 100 or more, say the J*ust Jeans* franchise, where we assume that we can pool the sales data. There are other numerous ways of organizing the data, so the method we propose here would be fine-tuned in practice.

We divide the day up into blocks, such as morning and afternoon, and record a 0 or 1 for each store as to which type of jean (flared versus straight legged) it sold the most. Then if we look at an extended period, such as three months or 50 trading days, this should give us enough data. So each store now has a string of 100 zeros or ones. If everybody is buying flares, this series will be mostly ones and vice versa for straight jeans.

In a buoyant market (disordered phase), there will be no correlation between these series. In the static market, the ordered phase, (flares have disappeared) the series are highly correlated (almost all ones or zeros), but the mutual information is low because the entropy is low. It is straightforward to calculate the entropies and information metrics from these time series.

The transitional phase is important from a retailing point of view, to avoid being left with stock nobody wants. In the transitional phase, the sales in each shop look random. However, when we calculate the mutual information between shops, we find it has risen to a much higher level. If the underlying dynamics are those of a second order transition, then we would find that the global transfer entropy had hit a maximum value before the transitional phase set in—just what we want.

5 Discussion

The challenge for many marketers in studying tipping points is that data analytic techniques rely on historical data, even if it uses up to the second or click by click data, which may capture tipping points and phase transitions in markets and the explanations for them, only after the fact. It is our contention though that it is possible to model and, to a certain extent, explain how markets change as complex systems without always looking backward in time. To do so requires a greater understanding of complexity and phase transitions when states change, such as the widespread adoption of industry standards (Nickerson and zur Muehlen 2006), or the decline in one technology for another (Baum et al. 1995).

This paper has presented to retailing scholars new paradigms for the study of markets as complex systems, rather than aggregations of consumer and organizational behavior. While there has been significant progress in marketing in the understanding of markets of complex systems (Dubé et al. 2010; Goldenberg et al. 2010; Hohnisch et al. 2008; Jager 2007; Leskovec et al. 2007; Schenk et al. 2007; Webster and Morrison 2004; Zhang and Zhang 2007), we argue that this research has focused more on why innovations are accepted, or new markets develop than how markets change. One issue for marketing scholars is that the decline and failure of markets is rarely studied, nor does there seem to be a coherent body of theory which explains unstable markets as systems. We argue that the advent of information technology makes the stability of markets more uncertain, but paradoxically allows us a methodology in which to study this phenomenon, that of simulations.

If marketing is to be the study of markets, then it is also essential to consider markets in this globalized, interconnected world as complex systems. Importantly, marketing has much to learn from the fields of mathematics, physics, and ecology, which have been studying complex systems for some time and provide the discipline with some useful theoretical and methodological tools to understand complexity. It has been the purpose of our paper to illustrate some of these approaches, and we trust that closer relationships between marketing scholars and those from outside disciplines interested in complex systems, will lead to a better understanding of as much as why markets succeed or fail. An important issue also raised in this paper is for managers and researchers to be skeptical of transitions. This is because phase transitions exhibit critical slowing down prior to critical or tipping points, so we may confuse transitory phases for a new market equilibrium. The paper also suggests that critical states are very sensitive, so that a correctly directed small effort at the right moment, can have a large permanent effect. It is also important to understand that systems, and hence markets, can change due to globalized and local effects. While research and simulations in marketing have studied in detail the effects of local effects and transfer entropy, there is much research required as to what and when globalized effects have a major impact on phase transitions and tipping points.

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Changing of the Retail Landscape: Who Supports Your Customers Matters

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Keywords: Customer-to-customer support · Service robot · Role congruity · Third-party customers

1 Introduction

The increasing trend of replacing front-line employees with self-service kiosks or automated systems has undoubtedly altered the nature of retail landscape. In these settings, the limited presence of front-line employees has increased customers' opportunity to interact with fellow customers during retail encounters. This research focuses on a form of customer-to-customer (C2C) interaction, namely C2C support (Parker and Ward 2000; Rosenbaum and Massiah 2007). Existing research largely examines C2C support under the scope of customer citizenship behavior and customer voluntary performance. These behaviors are generally defined as voluntary acts that are not required for the successful delivery of the service but help the firm overall, such as recommendation of firm, customer participation, and loyalty behavior (Groth 2005; Rosenbaum and Massiah 2007). In fact, research in this area has reported positive outcomes of C2C support, such as (1) increased retail enjoyment (Parker and Ward 2000), (2) enhanced customer satisfaction (Zhu et al. 2016), and (3) reinforcement of cooperative behaviours (Rosenbaum and Massiah 2007). Thus, it is not surprising that customers engaged in such C2C support behaviours are portrayed as partial employees and they are largely perceived as valuable resources to firms. However, the extent to which customers can act as partial employees whose behaviors can benefit both the firm and fellow customers, remains under-investigated.

This research aims to examine C2C support in a context where firms fail to deliver their promises to their customers. We ask the question whether the positive nature of C2C support holds in this situation by comparing third-party customer's support with that of firms. With the introduction of robotic technologies, firms are starting to implement service robots in their delivery process; we therefore differentiate two forms of provider as the representative of firms: employees and service robots. Drawing on the role theory, we performed two experimental studies to test the effect of support source (employee vs. service robot vs. third-party customer) on customers' evaluations towards their negative retail experiences, taking into account the indirect effect via perceived role congruity.

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2 Theoretical Background

Role theory posits that the quality of an interaction between individuals depends on their perceptions of role congruity – that is, fit or misfit between individual's (I_1) understanding of individual's (I_2) roles and the extent to which I_2 enacts his/her roles (Solomon et al. 1985). Role congruity is achieved when I_1's understanding of I_2's roles is consistent with I_2's enactment of these roles. Conversely, if I_1's understanding of I_2's roles is inconsistent with I_2's behaviors, role discrepancy occurs, the interaction between them is likely to be less satisfying. Similarly, in the context of this research, the quality of firm vs. customer interaction will depend on the degree to which both providers (i.e. employees or service robots) and customers enact their respective roles. Specifically, in the event of firms fail to deliver quality service as promised, support from the providers will create a consistency between transgressed customers' understanding of providers' roles and the providers' actions. Thus, transgressed customers are likely to evaluate their experience more positively because of the high level of role congruity. On the other hand, third-party customers engage in role expansion behavior when they decided to support transgressed customers (Broderick 1998). Such behavior may alleviate transgressed customers' problems, but it also emphasises providers' failure in fulfilling their roles. Consequently, there exists inconsistency between transgressed customers' understanding of providers' roles and the providers' behavior, resulting in a low level of role congruity and less favorable evaluation of the experience. Therefore, we propose:

H1: Following negative encounters, transgressed customers evaluate their experiences more positively when they receive support from the firm than from a third-party customer.
H2: Transgressed customers' perception of the firm's role congruity mediate the relationship between support source and evaluation of their experience.

3 Methods

We performed two scenario-based experiments to test the hypotheses. Participants for both studies were recruited from M-Turk. Study 1 (N = 180) examines the differential effect of support source (employee vs. service robot vs. third-party customer) on transgressed customers' experience evaluation. Participants were first asked to read a scenario describing a self-service technology (SST) failure. They were then randomly assigned to one of the support source conditions where they were told that either an employee or a service robot or a third-party customer offers support in using the SST. Finally, they were asked to rate their experience using a 5-star (☆☆☆☆☆) scale. Study 2 (N = 200) tests the mediating effect of perceived role congruity. The procedure was the same as in Study 1 with the addition of four items measuring perceived role congruity (Broderick 1998; Sarbin and Vernon 1968).

4 Results

Study 1 confirms that customers who received support from an employee reported similar experience rating as those who received support from a service robot ($M_{employee} = 3.65$, $M_{robot} = 3.21$, $p = 0.17$); whereas support from a third-party customer results in significantly lower experience rating ($M_{customer} = 2.56$) compared to the employee's ($p < 0.001$) and the service robot's condition ($p = 0.01$). H1 is thus supported. Study 2 reveals that customers who received support from an employee ($M_{employee} = 5.60$) or a service robot ($M_{robot} = 5.27$) experienced significantly stronger perceptions of role congruity than those who received the third-party customer's support ($M_{customer} = 2.69$, $p < 0.001$). More importantly, in line with H2, we found a significant relative indirect effect of support source on experience rating between the employee's and third-party customer's support condition ($b = -1.26$, $SE = 0.21$, 95% CI [−1.71, −0.89]), and between the service robot's and third-party customer's support condition ($b = -1.12$, $SE = 0.18$, 95% CI [−1.49, −0.80]). The relative indirect effect between the employee and service robot condition however, was not significant ($b = -0.14$, $SE = 0.11$, 95% CI [−0.38, 0.06]).

5 Discussion

This research advances understanding of C2C support in the context of negative retail encounters. In particular, we challenge the positive phenomenon of partial employees and suggest that C2C support in the negative encounter context could harm transgressed customers' evaluations of their experience. In addition, the inclusion of service robot as a new form of provider offers insight into an emerging area in retail research. This research therefore, not only brings the latest application of service robots to the context of encounter failure but also compares support by service robots against effort by employees. Finding suggests that service robots are considered as equivalent to human employees, acting as company representatives who offer quality service to transgressed customers.

Managers should be cognizant of these findings and aim to increase employees' understanding of their key responsibilities through training workshops, increasing their attentiveness to retail environment and initiative to support customers, particularly when the firms have increased the implementation of SSTs and automated technologies. Finally, firms that implement robotic technologies for most of their service delivery must be aware of the situational dependable nature, strengths and shortcomings of those technologies. If there are potential problems that the service robots cannot solve in an effective and efficient way, firms should make human service employees available in the retail landscape to assist transgressed customers. In other words, providers should not rely completely on technologies but rather improvise and adapt to the situation should problems arise at any stage of delivery process.

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Shopping Online Experience: A Theoretical Model Proposal

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Abstract. Empirical studies that focus on the drivers that affect consumer behaviour in online shopping can be found, but a real opportunity still exists to explore the factors that impact on the online shopping experience from a holistic perspective. This global approach considers how individuals process stimuli when exposed to complex and multidimensional environments; this will help improve the understanding of this phenomenon. The objectives of this paper are to propose a new theoretical model of shopping online experience which aims to explain consumer behaviour in the e-commerce context and to identify its main antecedents, mediators and potential consequences, in line with the SOR model (Stimuli-Organism-Response).

Keywords: Theoretical · Model · e-commerce · Customer · Experience

1 Introduction

The e-commerce shopping experience has been widely studied in the marketing literature. However, the works are usually based on key variables that influence the online shopping experience, or, as in the case of the presentation of an integral model, such as by Rose et al. (2011), are limited with respect to behavioural outcomes, generally examining only satisfaction and intention to repurchase. Based on the previous works of Constantinides et al. (2010), Rose et al. (2011), Rose et al. (2012), Klaus (2013), we propose a holistic model of the online shopping experience that is applicable to any e-commerce environment.

2 Antecedents

Most previous studies into the impact on consumers' responses to the atmosphere of an establishment (both offline and online), and studies, still scarce, that focus on the broader concept of "consumer experience", base their propositions on the SOR (Stimulus-Organism-Response) model, a conceptual approach designed by Mehrabian and Russell (1974) that originates from environmental psychology.

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Experience is a holistic and subjective concept; the consumer forms his/her general perception of an experience by evaluating at an aggregate level all the stimuli to which (s)he is exposed in his/her interactions with a company and its products. Thus, the individual does not carry out a rational and detailed evaluation of the experience by analysing it attribute by attribute, but forms an overall impression of the experience through the combination and interaction of all the attributes (Gentile et al. 2007). While few empirical studies measure online purchase experiences holistically, there are some very interesting works at both the conceptual and empirical level (Constantinides et al. 2010; Rose et al. 2011; Rose et al. 2012; Klaus 2013; MacInnis 2011).

Rose et al. (2011) proposed an integrated conceptual model that aimed to identify the possible antecedents, components and consequences of the online shopping experience at a holistic level, based on the SOR model (Stimuli-Organism-Response). In addition, we have identified others works that focus on measuring the isolated influence of certain experiential factors of online shopping on consumer responses (Huang et al. 2013; MacInnis 2011; Pappas et al. 2014; Visinescu et al. 2015). Based on the above, we present below the hypothetical structure on which our proposed model is based.

3 Hypotheses

3.1 Hypotheses Related to the Stimuli-Antecedents Variables

Many empirical studies identify the general aesthetics of a website as one of the key determinants of its perceived quality. Similarly, other studies have found conclusive evidence of their influence on the overall perception of an experience formed by the individual after an interaction (Kim 2011; Rose et al. 2012; Shobeiri et al. 2014). Based on these findings we establish

HB1: An aesthetically pleasing e-commerce website design will have a positive effect on the level of its users' affective involvement.

The existing empirical evidence highlights the importance of the quality of the content and information offered by websites in positively affecting the states and responses of its users (Huang et al. 2013). Based on the previous literature we propose

HB2: The quality of the content of an e-commerce website will have a positive effect on the level of affective involvement of its users.

It should be noted that it is very difficult to explore online the product and evaluate the quality of its materials, as it is not possible to physically examine it before purchase (Lee et al. 2010). Many empirical studies have examined how product demonstrations enhance users' ested the impact of different options of demonstrability on the user's willingness to purchase them (Algharabat 2014; Visinescu et al. 2015). Based on these works, we posit

HB3: A better product demonstration on an e-commerce website will have a positive effect on the degree of affective involvement level.

Some empirical studies identify customer service as a key determinant of website quality of the consumer shopping experience, thus we argue that differential customer service will have a positive effect on the cognitive responses of users. Thus, we propose

HB4: Good customer service on an e-commerce website will have a positive effect on the degree of control perceived by users.

The ease of use of e-commerce websites has been extensively addressed in previous studies into online shopping, given its direct and positive influence on the willingness of users to want to explore and navigate through the site. Similarly, it has been corroborated that an easy to use website will stimulate an effect of immediate attraction and control in its users (Im and Ha 2011). Thus, we posit

HB5: The perceived ease of use of an e-commerce website will have a positive effect on the degree of control perceived by users.

The customisation of website content is a concept that has received little attention in empirical studies, so it is certainly novel in the analysis of online consumer experience (Kim 2011). However, it has been proved that customized e-commerce website content improves the perception of the shopping experience by increasing satisfaction levels (Pappas et al. 2014). Thus, we propose

HB6: The ability to customised content on an e-commerce website will have a positive effect on the degree of control perceived by users.

While we note that socialization is a relatively new concept (Kim 2011), we have identified some empirical studies that have shown that this factor significantly affects the user's degree of enjoyment and perceived entertainment (Huang 2003), positively correlating with the sensation of escapism, enjoyment and entertainment perceived during the process (Kim 2011). Similarly, it has been found that the possibility of socializing with others impacts on users emotionally, in both the short and long term, improving their shopping experiences (Klaus 2013), while at the same time favourably affecting degree of perceived control (Rose et al. 2012). Thus, we posit

HB7: The possibility of socializing with other users on e-commerce websites will have a positive effect on the state of flow experienced during the purchase process.

3.2 Hypotheses Related to the Organism-Mediating Variables

Rose et al. (2012) found, in the context of online shopping experiences, that the perceived control variable exerted the most significant positive effect when stimulating the affective or emotional state of users. It is established that an increase in the sensation of user control results in a more pleasant overall shopping experience, which may also result in the user experiencing a state of flow. In conclusion, we set

HB8: A greater degree of perceived control in an e-commerce website will have a positive effect on the level of affective involvement of users.

We also know that a greater sense of control over the interactions in an e-commerce website makes users more secure and confident, as they feel they are the "owners" of their navigation during the purchasing process. This perception of greater security impacts on the user's level of trust during his/her visit to a website when carrying out a specific transaction (Huang 2003). In this sense, we suggest that, where the user feels a greater level of perceived control, this will increase his/her degree of trust, not only with the purchase process itself, but also, by extension, to the website and its products; this has been observed empirically in previous studies (Algharabat 2014). Thus, we posit the following two hypotheses:

HB9: Greater degrees of perceived control in an e-commerce website will have a positive effect on the state of flow that users may experience during the purchase process; and,

HB10: A greater degree of perceived control in an e-commerce website will have a positive effect on the degree of user trust in the website.

The crucial role played by emotions (level of affective involvement) in the consumer experience has been extensively highlighted (Schmitt 2003). It has been corroborated that the incorporation of certain aspects or stimuli into a website can help evoke positive emotions in its users during certain purchase processes (Rose et al. 2011), and, given that in the online shopping environment there is no physical contact, the website's interface is the only communication vehicle through which to evoke positive emotional states in the consumer. Thus, we hypothesise

HB11: A higher level of affective involvement induced by an e-commerce website will have a positive effect on the state of flow that users may experience during the purchase process.

On the other hand, Manganari et al. (2011) determined that the positive emotional states of pleasure and enthusiasm that arise during an online purchase might result in the development of a greater degree of user trust in the website. In line with these findings, we establish

HB12: A higher level of affective involvement induced by an e-commerce website will have a positive effect on degree of user trust in that website.

3.3 Hypotheses Related to the Response-Consequences Variables

User satisfaction is one of the crucial responses that online stores must pursue to create effective long-term loyalty (Myers and Mintu-Wimsatt 2012). Following these authors and Rose et al. (2012), we hypothesize

HB13: A higher level of affective involvement induced by an e-commerce website will have a positive effect on the user's level of satisfaction with the shopping experience.

As previously stated, there is sufficient empirical evidence to conclude that the experience of a flow state during an online purchase process increases the degree of user satisfaction with the company or the website (Cheon 2013); this leads us to formulate

HB14: The state of flow experienced by consumers when using an e-commerce website will have a positive effect on their level of satisfaction with the shopping experience.

Consistent with previous studies, the level of affective involvement, as a mediator, can trigger three possible behavioural responses of high interest to companies: intention to revisit, intention to repurchase and intention to recommend (Pappas et al. 2014; Rose et al. 2012). It has been observed that intention to revisit may increase as a consequence: of a higher level of involvement, both cognitive and affective (Koufaris 2002); of the hedonic value (related to the emotions of pleasure) that the user gives to the

online shopping experience (Demangeot and Broderick 2007); and, finally, of high emotional enthusiasm for the online purchase process (Jayawardhena and Wright 2009). Thus, we propose

HB15: A high level of affective user involvement induced by an e-commerce website will have a positive effect on intention to revisit the website.

It has also been found in empirical studies that intention to repurchase is positively influenced by positive internal states of the user (both cognitive and emotional) caused by characteristics of the website interface (Pappas et al. 2014). In addition, some studies confirm that affective state is, in fact, the most important predictor of this behavioural response (Rose et al. 2012). In accordance with these results we posit

HB16: A higher level of users' affective involvement induced by an e-commerce website will have a positive effect on intention to repurchase on the website.

Some empirical studies confirm the clear influence of the positive emotions of pleasure and enthusiasm, that might arise from the consumer's experience during an online purchase, on intention to recommend the website (Jayawardhena and Wright 2009). Based on the previous literature we posit

HB17: A higher level of affective involvement of users induced by an e-commerce website will have a positive effect on their intention to recommend the website.

Trust felt by website users leads to a reduction in perceived transaction risk and generates favourable attitudes and responses to companies (Gefen 2004), and thus promotes the adoption of e-commerce by consumers as an alternative to physical stores (Algharabat 2014). It has been confirmed that trust in a website stimulates greater user intention to revisit (Palou 2004). In accordance with these previous empirical studies, we propose

HB18: A greater degree of user trust in an e-commerce website will have a positive effect on intention to revisit the website.

On the other hand, there is also empirical evidence that corroborates that user trust in an e-commerce website contributes to increased intention to repurchase, on the basis that a positive and very significant relationship between both variables is verified (Lim 2013). Based on these findings we posit

HB19: A greater degree of user trust in an e-commerce website will have a positive effect on intention to repurchase on the website.

Finally, with regard to intention to recommend, previous empirical studies have verified the existence of a positive relationship between this behavioural response and previous level of trust felt towards a website (Kim and Park 2013) and obtained similar results (Cheng et al. (2011)). Therefore, given the empirical evidence, we establish

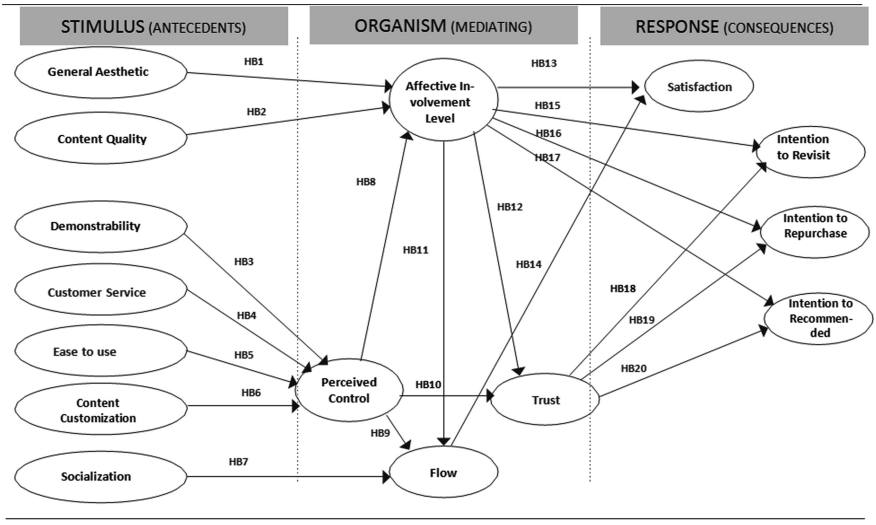
HB20: A greater degree of user trust in an e-commerce website will have a positive effect on intention to recommend the website.

4 Conclusions

The model proposed in the appendix will be examined using structural equations modelling with the software AMOS. In academic terms, the proposed model will extend the literature dealing with shopping online experience. Moreover, prior research has been found that is in line with the SOR model (Stimuli-Organism-Response) but

our proposal model identifies additional antecedents, mediators and consequences. Besides, as far as we know for first time in marketing literature it will be studied such a complex model in the context of shopping online experience. Regarding managerial implications, this research will provide useful insights for practitioners so they can improve the website design and user experience. This research will be limited by several factors. The study will not examine important related concepts such as cognitive involvement, interactivity, accessibility and other relationships such as the linkage between socialization and affective involvement, or satisfaction and other behavioural outcomes (i.e. intention to repurchase, revisit or recommend). Thus, scholars are prompted to analyse these issues in future studies conducted in online contexts. Therefore, academic are encouraged to enhance this research line.

Appendix: Proposed Model



Source: Own elaboration

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Investigating Private Labels' Success Against National Brands in the Men's Razor Category

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Abstract. This paper will focus on the private labels and national brands that make up the men's razor category within the shaving industry. Factors that affect both the success of private label brands and create roadblocks for them will be assessed and applied to CVS's private label brand Blade by incorporating Hoch and Banerji's study on private label brands' success with Varadarajan, DeFanti and Busch's research regarding the strength of brand portfolios. Blade will be compared to national razor brands that it competes against in CVS stores, with a specific compare and contrast to Schick, its direct competitor. This analysis has a particular focus on the United States razor market due to the dearth of drug-store chains in Europe that offer private label brands. This paper investigates how a private label brand in a large category can gain greater market share and effectively compete with the popular national brands.

Keywords: Private label · National brands · Shaving · Grooming

1 Introduction

The male grooming industry is one that has seen much growth over the past few years. Due to the increased introduction of a variety of male grooming products, the size of the global male grooming market was valued at about $58 billion in 2017. The market size is expected to continuously increase, reaching over $78.6 billion USD by 2023 (BusinessWire 2018). Although it is not as big as the female grooming industry, the upward growing size of the male grooming market is due to recent trends supporting that men believe it is very important to spend time on their personal appearance. One survey revealed that 73% of men felt that it is 'important' or 'very important' for them to spend time on their personal appearance, compared to 72% of females who also felt this way (Datamonitor 2015). This one percent difference goes to show that men care just as much, if not more, as females about their self-image. Men use products to change their appearance in order to adapt to the various roles in their lives (Aaker 1999). Men's concern toward self-image creates a positive correlation between male's feeling about personal appearance and their consumption of grooming products (Cheng et al. 2010).

Although the men's grooming market is so large, men's razors only make up a portion of the market. As of 2017, the global market for men's razors and blades was valued at $15 billion, making up about 26% of the entire male grooming market. In 2016, sales growth of razors in the United States was only 2.4%, and sales are expected

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to decline until at least 2020 due to the trend of males growing beards, which, as a result, is slowing down razor sales (Whipp 2017). However, the men's shaving category is one that is still considered to be new and has a lot of potential for growth. The men's razor industry is dominated by a handful of national brands, as well as private labels. The brand that has long dominated the razor industry is Gillette. It has notoriously followed a simple business strategy of adding new features to its products and, in turn, raising prices. However, brands that have more recently emerged in popularity, like Dollar Shave Club, are offering men's razors at much lower costs. In response, Gillette plans to cut prices by as much as 20%. Rather than viewing this as a good move on Gillette's part to compete with lower priced brands, analysts are declaring it an act of desperation for the brand (Terlep 2017). While Gillette still holds a big portion of the market share, Procter and Gamble, owners of Gillette, have hardly seen market share growth since 2011. It's market share dropped from 71% to 58.5% over five years (Livsey 2017). While Gillette's market share is not increasing, private-label razor brands are doubling their share. In 2017, the leading razor brands in the United States based on sales were the private labels, with $44.4 million in sales. In second was the Gillette Mach3 razor with $36.1 million in sales. The following two razors were both Gillette razors, as well. The Schick Hydro 5 razor was the fifth leading razor in 2017 with $27.3 million in sales and the sixth razor was the Schick Xtreme3 generating sales of $20.8 million. This clearly shows the overwhelming impact of private label brands in the razor market, as well as national brands having a strong presence. Across multiple categories, store brand market share is at an all-time high in the United States. This is due to the fact that many big name brands are increasing their prices after making unremarkable changes to their products (Steenkamp 2018). Price increases are acceptable when brands are making drastic, innovative changes, but when prices are increasing without noticeable change in the products, there is a strong incentive for the consumer to choose the lower-priced private label product over the national brand.

2 Determinants of Private Label Success

Hoch and Banerji' model of the major determinants of private label success helps to explain the reasoning behind the high sales of private label brands in the men's razor category. Overall, private labels see success in categories where there is opportunity for high quality yet low variability. They do better in large product categories where retailers see high gross margins. Private labels tend to not do well when they are competing against national manufacturers that invest a lot of money in advertising (Hoch and Banerji 1993). This model will be applied to Blade, CVS's private label razor brand. Currently, Blade Men's 5 Blade Disposable Razor with 3 cartridges is offered at CVS retailers for $8.79. This makes the value of one of the razors equal to $2.93 a piece. On the packaging of this razor it says to "compare to Schick Hydro 5" indicating that this razor is comparable to that of Schick's and stands as a strong competitive product. The Schick Hydro 5 Men's Disposable Razor with 3 cartridges is offered at CVS for $13.49, which costs $4.70 more than Blade. Each of the Schick razors in this package would be valued at $4.50, which is $1.57 more than Blade's razors.

Hock and Banerji' (1993) model addresses six major factors that either contribute or hinder private label brands' market share as compared to national brands. The six determinants are broken into three broader categories of consumer driven factors, retailer driven factors, and national manufacturer driven. The consumer driven determinants of success relate to what the customer is looking for in a product and if the private label's product quality lives up to that of the national brand. The retailer driven determinants relate to market share of the retail brand and the sales the private label brings in. The national manufacturer driven determinants are centered around the number of national brand competitors there are to the private label and how much influence they have over the private label in regards to advertising. These are all important factors to consider when comparing a private label brand against a national brand and will be used to see Blade's success as compared to Schick in the men's razor category.

3 Application of the Model to Blade and Schick

The Hoch and Banerji model of private label success determinants is applied to Blade and Schick to see how the private label competes against a national brand.

3.1 Consumer Driven Determinants

Product Quality (+): Blade certainly competes with Schick on product quality. Many of the qualities that make up Schick Hydro 5 have been duplicated for the Blade razor. Blade advertises its razor for a comfortable shave and less irritation. The Blade 5 Disposable Razors are double coated, creating optimal comfort for a smooth shave. This is comparable to the Schick Hydro 5's skin guard feature, which is made to reduce friction between the skin and the cartridge for a more comfortable shave. The Schick razor also uses hydrating gel reservoir to hydrate the skin throughout each shave. Blade has a comparable feature which is a lubricating strip with aloe and vitamin E to help soothe the skin when shaving. Private label brands manufacturing is increasingly getting better in general. Blade's manufacturer, Personna American Safety Razor (ASR), won Quality Magazine's Plant of the Year Award in 2009 as the manufacturer puts a heavy emphasis on quality processes, continuous improvement of their blades, and the importance of inspecting and testing the products. ASR also makes razor blades for the private label brands at Walgreens, Kroger, Walmart and Target (McFadden 2009). ASR's prominence in the private label sector makes brands like Schick and Gillette its major competitors and motivates them to stress the quality features of the blades. The praise ASR has gotten for its high quality blades is an advantage for their private label brands and therefore, gives Blade a more reputable status as a high quality razor. The high product quality of Blade razors is positively correlated with higher market share for private label brands (Hoch and Banerji 1993).

Quality Consistency (+): Both Blade and Schick have many products within their brand portfolios, ranging from different types of razors, to razor blade refills and more. The CVS website offers search functions that make it easy to compare Schick's quality consistency to that of Blade's. The website offers 37 Schick products and 57 Blade

products, but only 49 of the Blade products have reviews and ratings on the website. The factor that displays to consumers the consistency of quality among the various products is the ratings. The products on the CVS website can be rated on a 5 star scale. Ratings and reviews are determined by the consumers themselves rather than CVS employees who may have bias when rating the private label brand. The ratings for both Schick and Blade products are fairly dispersed with the majority of ratings being around 3 stars. Out of the 37 Schick products listed on the CVS site, only 5 have a perfect 5 star rating, or 13.5% of products. For Blade, 9 products are rated 5 stars, or 18.4% of the 49 rated products. This shows that a slightly higher percentage of the private label brand's products are rated higher than the national brand. For Schick, 23 products were given 4 star ratings, and 9 were given 3 star ratings. None were given ratings of 2 stars or 1 star. For Blade, 11 products were rated 4 stars, 18 were given 3 stars, 6 have 2 stars, and 5 products have 1 star, and 8 products do not have any ratings for a total of 49 rated Blade products. While some of Blade's products have poorer 1 or 2 star ratings as compared to Schick's products which do not have any low ratings, Blade has 38 out of 49 products that are rated 3 stars or above, or 77.5% of products. This is the vast majority of Blade products being rated average or above average. Blade also has a slightly significantly higher percentage of top rated products than Schick. Therefore, there is a high quality consistency among both Blade and Schick's products. The positive quality consistency for Blade gives them potential for a greater share of the market compared to its national brand competitor since private labels are likely to have greater market share in categories where the private label has high relative quality (Hoch and Banerji 1993).

3.2 Retailer Driven Determinants

Category Retail Sales (+): With the men's razor category generating $246 million in sales in 2018 in the United States alone and the size of the global male grooming market reaching over USD $58 billion, it is clear that this industry generates a lot of sales and has much growth potential (Statista 2018). While many national razor brands produced a large amount of razor sales, private label brands created the largest amount of sales in 2018 for this category in the United States, with over $39.6 million in sales (Statista 2018). Private labels clearly have an advantage in the market. This could be used to create change at CVS because in 2017, CVS retail stores saw declining sales all year due to increased competition from retail giants such as Amazon and Walmart. CVS's variety of private label brands make up 20% of its product assortment and often times, sell better than the national brand competitors (Thau 2017). CVS is determined to use these high performing private label brands to differentiate themselves from the fierce competition of big retailers because these private labels can only be found at CVS and offer the same quality products as the national brands but without the premium prices. CVS's private label brands are 20% to 30% less expensive than their national brand counterparts (Thau 2017). Blade razors are the national brand equivalent to Schick razors and for consumers looking to save money, this private label brand could see great success at CVS. Also being a part of a category with high dollar sales will allow Blade to see higher market share (Hoch and Banerji 1993).

Category Gross Margin (+): It is believed that private label brands will perform better in categories where there is high gross profit margin (Hoch and Banerji 1993). The men's razor category sees a high gross margin due to its high sales volume and low cost of goods sold. National male razor brands like Dollar Shave Club keep their costs low by purchasing their product materials inexpensively from suppliers overseas in China or South Korea (TradeGecko 2018). This allows for revenues to be greater since the products are not costing as much to be made. This presents opportunities for private labels like Blade to make larger profits because the high category margins allow for retailers like CVS to make the greatest return on their investment of a private label brand.

3.3 National Manufacturer Driven Determinants

Number of National Manufacturers (-): Many different brands compete in the men's razor category. The most notable brands would be Gillette, Schick, Bic, Dorco, West Coast Shaving, and newer start-up razor brands like Harry's and Dollar Shave Club. With so many brands, it can be hard for new products, new private labels, or new national brands to gain market share (Hoch and Banerji 1993). The high variety in this category creates a lower market share for private labels.

National Advertising per Manufacturer (-): National brand's advertising budgets pose a threat to private labels in the men's razor category. Not only do the larger, most well-known brands have large marketing budgets, but the newer shaving brands like Dollar Shave Club have placed a strong emphasis on their advertising efforts, using comedic advertisements and a strong social media presence, to accumulate a $140 million marketing budget in just five years (Cubatica 2018). Dollar Shave Club also sees Schick as a major competitor and claimed in 2015 that it surpassed Schick as the number 2 razor cartridge by volume (Neff 2015). This could be the result of compelling marketing campaigns using sizable advertising budgets that private labels do not tend to have. Hoch and Banerji (1993) believe that the greater the level of spending by national manufacturers on advertising is, then the lower the market share will be for private label brands. This would give Schick an advantage over Blade.

4 Managing Brand Portfolios

By combining the Hoch and Banerji private label model and the Varadarajan, DeFanti and Busch brand deletion model, new insights can be drawn related to the success of private label brands. Blade proves to be an essential part of CVS's brand portfolio and there are more brand characteristics supporting the private label's place in the portfolio rather than deleting it. Most significantly, Blade has extremely high extendability. This is beneficial to CVS because the higher the potential for a brand name to be extended to other products the less likely that brand will be deleted from the portfolio (Varadarajan et al. 2006). CVS is in control of Blade and can therefore choose to expand it into similar product categories such as shaving cream, aftershave balm, and razor travel bags. Blade can also extend into products in a different category but with a common

attribute of sharpness (Broniarczyk and Alba 1994) such as nose and ear hair trimmers and grooming kits. There are lower costs and greater likelihoods of success when launching a new product using an existing brand name. Blade's numerous brand extensions also show its strong strategic role. By extending Blade into so many categories, it strengthens CVS's negotiating leverage with multiple manufacturers. The strategic role of Blade also serves as a low-priced alternative to national brands offered at CVS. The greater the strategic role of Blade, the less likely CVS would be to get rid of the brand (Varadarajan et al. 2006).

Some implausible brand characteristics of Blade appear to be moderators for brand deletion propensity. For example, the strength of association with the product category is a concern. It is riskier when CVS expands the Blade brand name into less similar categories such as hair styling gel, hair spray, hair brushes, body wash, hand cream, deodorant, and even energy drinks. This lack of association with the product category of shaving would be a reason for CVS to consider deleting Blade from its portfolio (Varadarajan et al. 2006) in those categories. There also appears to be a gap between Blade's brand image and CVS's intended corporate image surrounding health and wellness with the Blade energy drink. This product does not reinforce CVS's overall image and would therefore be a moderator for brand deletion (Varadarajan et al. 2006). However, this product has since been discontinued, helping to lessen the gap and strengthen the portfolio. Although the products mentioned are not associated with shaving, the many products in the portfolio help decrease redundancy by offering a variety of different goods associated with men's grooming. The low level of redundancy would be a reason to keep Blade as a powerful private label brand at CVS (Varadarajan et al. 2006).

5 Perspective

The biggest drawback for private labels in the men's razor category would be the presence of well-known national brands that also make up this category. These national brands drive brand equity. According to Keller (1993), consumer based brand equity is derived from the marketing effects attributable to the brand, for example, when certain outcomes result from the marketing of a product or service because of its brand name that would not occur if the same product or service did not have that name (Keller 1993). Brand equity insinuates that a consumer would be willing to pay a premium price for a product that has a strong brand name because of the perceived quality that is directly associated with that brand name. This could be harmful to private labels that deliver products with equal quality to national brands but lack the strong brand name, such as Blade's strong quality when compared to Schick. To combat this issue of brand equity, the retailer must find ways to entice the consumer to choose the private label over the nation brand razor. Private labels need to know how to differentiate themselves and emphasize their quality features so that consumers who are willing to pay the premium prices will want to purchase the private label brands instead.

While the cheaper prices can be an attention-grabbing element for many consumers, it's the emphasis on quality and certain features that will move consumers from the identification and evaluation of alternatives stage of the consumer decision making

process to the purchase stage. However, Blade's brand image does present authenticity as the brand name of "Blade" is in itself directly associated with the razor category. This helps to foster a relationship between the brand and the customer by portraying a brand story through the brand name. Blade could enhance this brand story and image by leveraging technology. Currently, CVS is lacking the use of technology to enable the marketing of Blade. Without sacrificing its gross margin, CVS should consider implementing an email marketing campaign through its ExtraCare program that would give consumers a promotion on Blade products. CVS could also utilize its Instagram account, which has over 139,000 followers, to easily and effectively market Blade. These efforts would build personalized connections with consumers while remaining technologically savvy in order to compete with the national brands. Due to the fact that private labels are already favored by some consumers in the men's razor category and since Blade already has the quality features to compete with Schick and other national brands, the implementation of stronger marketing efforts, such as utilizing technology, would likely allow Blade to grasp a larger hold of the market share and see increasing sales within this market.

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Consumer Behaviour

Do We Build Store Loyalty Through Store Brands or Store Brands Through Store Loyalty?

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Abstract. Store Brands (SBs) are increasingly present in Western retail stores. They are used to define the positioning, loyalty and trust strategies. The retail literature has essentially developed models showing the effect of trust in a store and its impact on behavioral loyalty to SBs. In contrast, few studies have conceptualized the effect of SBs loyalty and its impact on trust in a store. The purpose of this research is to develop a conceptual model that considers, on one hand, behavioral loyalty to the SBs as a mediating variable between its antecedents (perceived quality, sensitive price and brand sensitive) and trust towards store, on the other hand, SB's strategy as a moderating variable between loyalty to SBs and trust in the store.

Keywords: Store brands · Trust in a store · Trust in store brand · Behavioral loyalty to store brands

1 Introduction

53% of the people say that they shop at a store specifically for its private brand (Daymon's Private Brand Intelligence Report 2018). These findings from professionals, allow us to ask the literature about the link between loyalty to store brands and trust in the store to find out if there were theoretical arguments. On one hand, a relatively large number of researches rather privileged the levers (image, satisfaction, confidence) attached to the stores and likely to affect attitude, intention to purchase and the behavioral loyalty of the consumers towards the store brands. On the other hand, we identified only one research (Rubio et al. 2017) that has considered and empirically tested the loyalty to the store brands as an antecedent to trust in the store. Does the

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preponderance of the first line of research over the other, suggest its superiority, or is it a limit of the literature? To try to answer this question we suggest to test two competing models each relating to a line of research. At first, we will test a model grounded in commitment theory that considers trust in the store as an antecedent to loyalty to store brands. In a second step, we adopt the holistic categorization theory to test the second model which integrates the loyalty to the store brands as an antecedent to the trust in the store. Contrasting the two models will allow us to decide whether the preponderance of one current over the other is justified or that it has no foundation. The conduct of this research will follow the following path. A review of the literature that encompasses the research hypotheses, as well as the conceptual model.

2 Literature Review

2.1 Trust

One of the key variables in relationship marketing is trust (Garbarino and Johnson 1999; Moorman et al. 1993; Morgan and Hunt 1994). Trust is viewed as an essential ingredient for a successful relationship (Berry 1995; Dwyer et al. 1987; Moorman et al. 1993, Morgan and Hunt 1994) and is one of the key variables that form the foundation for strategic partnerships and other long-term channel relationships (Dwyer et al. 1987; Mentzer et al. 2000; Morgan and Hunt 1994). Exchange between Buyers and sellers occurs in a long-term context (Berry 1983; Grönroos 1990). We distinguish the perceived trust that creates the possibility of building experienced trust, and when mutual trust exists between the parties, it motivates them to maintain the relationship. That is, perceived trust originates from information, while experienced trust comes from the interaction process. Together, these two processes create the ongoing trust in the relationship (Mandjak et al. 2019). The development of trust is based on the supplier competencies (Mayer and Davis 1999) and his willing to deliver the Product and/or services at the expected quality (Singh and Sirdeshmukh 2000). Competence has a positive impact on trust (Moorman et al. 1993). Trust (with satisfaction and commitment) plays role in the prediction of future intentions for High low and relational with customers (Morgan and Hunt 1994).

2.2 Store Brand

Store brands, also known as private label or retail brands, are enjoying success in the western world (Labeaga et al. 2007). This is due to the combination of different factors, such as the concentration of the retail sector that has led retail chains to develop their own brands, consumers are placing less importance on national brands and a favorable attitude towards store brands, thanks to the improvement of their quality. Many consumers believe that store brands are about as good as national brands and inspire as much confidence as they are cheaper (Steenkamp 1997). The high/acceptable quality of store brands is a means of differentiation, it increases the store loyalty and generate more profitability for stores (Corstjens et al. 2000). Customer loyalty to store brands is only possible if they have a favorable image and it can build brand equity (Erdem et al. 2004).

The consumer keeps purchasing the store brands, and he/she uses loyalty to reduce the risk of making a mistake in the purchase of store brands (Labeaga et al. 2007). The increase in relationships between store brands satisfaction and loyalty influences store loyalty and an improving loyalty to SBs is an unavoidable step that will enable it to build up its direct impact on store loyalty (Binninger 2008). Store brands seem to play a relevant role only on those supermarkets belonging to the medium-cost and premium group. We can conclude that the relationship depends on retailers' market positioning (do Vale et al. 2016).

3 Hypothesis Development

Figure 1 summarizes the conceptual framework. The model includes the antecedents of SB loyalty and store trust with the moderating effects of SB strategy and the good classification (search vs experience).

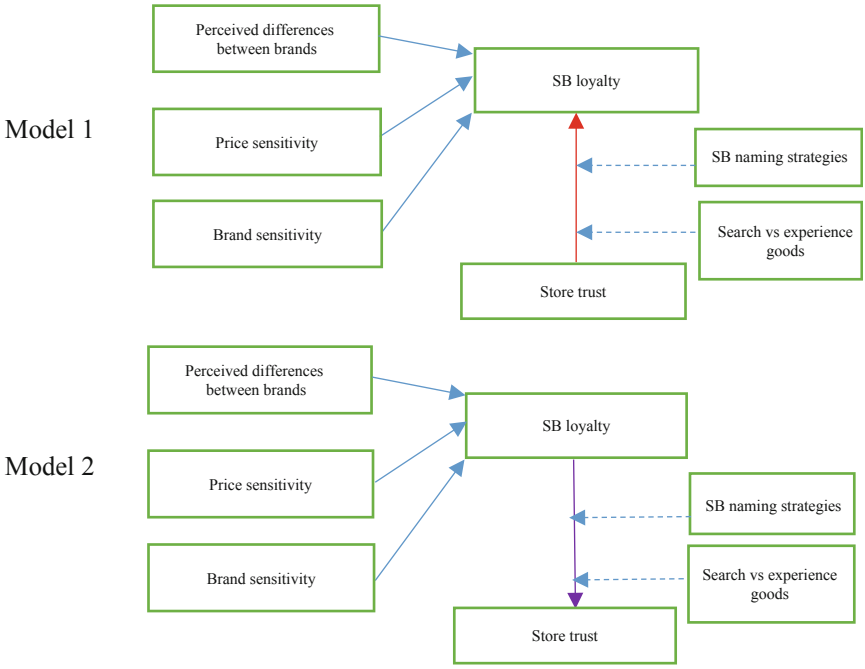

Fig. 1. Competing models (Model 1 & 2)

3.1 Antecedents of SB Loyalty

Previous literature highlights that SB choice is positively associated with familiarity with SB, perceived quality, perceived risk and perceived value for money (González Mieres et al. 2006; Richardson et al. 1996). However, little research focused on personal psychological variables that affect SB decision making (Baltas and Argouslidis

2007). Bellizi et al. (1981) showed that consumers who choose to buy SB are less brand sensitive. Recently, the research on SB attitude demonstrated that when consumers consider the brand information as an important cue, they display a more negative attitude toward SB and prefer national brands (Belaid and Lacoeuilhe 2018; Burton et al. 1998; Binninger 2008). Thus:

H1: Brand sensitivity affects negatively SB loyalty

The price is a key indicator in decision making process, and affects the in-store consumer purchasing (Grewal et al. 1998; Bucklin and Lattin 1991). Retailers have built the competitiveness of their brands on price differentiation by offering products with similar quality to national brands but with lower price positioning.

It is known that brand loyal customers are less price sensitive (Krishnamurthi and Raj 1991). They continue to buy their preferred brands even when prices increase (Sivakumar and Raj 1997). While this association was confirmed for national brands, for SB, researches demonstrated that consumers who purchase frequently SB are price cautious (Baltas 1997). In the same vein, Baltas and Argouslidis (2007) found that price sensitive consumers develop preference for their brands. In their research, Goldsmith et al. (2010) show that consumers who buy private labels are less brand conscious than those who by national brands. Thus:

H2: Price sensitivity affect positively SB loyalty

Retailers are claiming that SB quality is similar to national brands, but a large number of consumers continue to perceive the difference between brands. The link between quality and price could explain this incongruence (Rondán Cataluña et al. 2006). Consumers associate low prices with inferior quality and could interpret the difference of SB prices as a difference in product quality. Goldsmith et al. (2010) found that private brand labels' buyers perceive an equivalent performance between private and national brands while national brand's buyers believe that theirs brands perform highly. Researchers show that SB proneness is greater when consumers perceive a similarity between brands among a category of products (Sprott and Shimp 2004; Olson 2012). Thus:

H3: A high perceived differences between brands (SB and NB) affect negatively SB loyalty

3.2 Competing Effects of SB Loyalty and Store Trust

Considering the theory of commitment in the marketing relationship paradigm (Fournier 1998; Morgan and Hunt 1994), highlighting the key role of trust in building relationships, it's obvious that there is much more prior research in support of the positive impact of consumer trust on loyalty, than there are studies demonstrating the positive role of consumer loyalty on trust. On the issue of SB, there is a need of in depth-analysis to assess the direction of the influence between the store and the brand. Does the store benefit from the SB that they carry or does the SB benefit from the prior positive evaluation of the store?

3.2.1 Store Trust as a Determinant of SB Loyalty

Trust is a central key variable in relational exchanges and a predictor of commitment (Morgan and Hunt 1994). This assumption has been demonstrated in the context of brand relationship showing that brand trust influence positively attitudinal and behavioral loyalty (Chaudhuri and Holbrook 2001). In the retailing context, consumer's knowledge about the store affect its evaluation of the brand and its purchasing behavior (Martenson 2007; Zboja and Voorhees 2006; Desai and Keller 2002). When the store meets the needs of consumers and creates an impression of competence and predictability it enhances the likelihood of purchasing the brands referenced by the store (Porral and Levy-Mangin 2016; Ailawadi and Keller 2004; Brown and Dacin 1997). In this sense, loyalty toward SB could be the result of a halo/spill-over effect (Abelson et al. 1968). In other words, the store trust will be used as a clue of the reliability of brands produced or labelled by the retailer affecting the purchasing behavior of the store brands (Martenson 2007; Zboja and Voorhees 2006; Brown and Dacin 1997). More specifically, Veloutsou et al. (2004) demonstrated that customers' trust in the retailer's chain and in the trademark on the product packaging is positively associated with purchase intention of SB. According to Chaniotakis et al. (2009), "this may happen because consumers tend to relate the total level of customer service offered by the specific retailer to the private-label products and so they think that these products will meet their expectations". In this research we assume that:

H4.1: Store trust affects positively SB loyalty

3.2.2 SB Loyalty as a Determinant of Store Trust

Previous research identified familiarity and prior experience of purchasing as determinants of store trust (Rubio et al. 2017; Sun and Lin 2010). The multiple interactions with store brands allow customers to evaluate their quality and value and to reduce the uncertainty of buying them (González Mieres et al. 2006). When the prior experience with brands is positive it leads to consider them in the evaluation set and encourages loyalty (Rubio et al. 2017; González Mieres et al. 2006; Zinkhan and Braunsberger 2004). Researches focused on the relationship chain by investigating the effect of brand trust on brand or store loyalty but the research on the alternative effect between the two constructs is lacking. The recent research of Rubio et al. (2017) support the proposition that loyalty to store brands is positively associated with store trust. Two theoretical positions could explain this association. First, the trust-building process indicates that trust is an experience attribute that develops over interactions (Donney and Cannon 1997). Loyalty to store brands leads consumers to interact with the store, generating over time feelings and thoughts about the trustworthiness and the predictability of the store (Wasti et al. 2011; Gremler et al. 2001). Prior research showed that previous interactions and familiarity enhance trust (Wasti et al. 2011; Sun and Lin 2010; Gremler et al. 2001). Second, in accordance with the holistic categorization theory (Rosch et Mervis 1975), consumers infer from their brand experiences the perceptions about the store in which they made their purchase (Rondán Cataluña et al. 2006). In this sense, the consumer's perceptions of store brands are positively linked to their perceptions of the store (Guenzi et al. 2009; Collins-Dodd and Lindley 2003). Guenzi et al. (2009) showed that trust on branded store products impact positively the overall

store trust. As consumers use their knowledge about store brands to make inferences about the store, we expect that loyalty to SB should enhance the predictability of seller behavior leading to a positive effect on store trust:

H4.2: SB loyalty has a direct and positive effect on store trust

3.3 The Moderating Effect of SB Strategies and the Type of Goods

3.3.1 The Moderating Effect of SB Naming Strategies

The price, the packaging or the brand name are extrinsic cues that provide consumers with signals about the quality of the product and influence their perceptions and purchasing behavior (Richardson et al. 1994 Sprott and Shimp 2004). Since the SB have come in, retailers have adopted different naming strategies. Prior researchers have demonstrated that the influence of SB attitude can differ among different strategies (Rubio et al. 2017; Binninger 2008; González Mieres et al. 2006).

Serval retailers have imitated the manufactured brands by using the same marketing codes and attracting consumers with a lower price. To achieve this strategy, retailers use "unidentifiable retail brands" (Binninger 2008) by distinguishing the identity of the store brand from the identity of the label name. This called "house of brand" strategy (Muzellec and Lambkin 2009) makes the connection between the store image and the brand image more difficult for consumers. As they have an attractive visual design and a distinct brand name, house of brands looks as national brands. The end of the naming strategy of SB, is the umbrella SB using only the label name of the retailer as a SB. In this context, SB are heavily leveraged by the reputation and the positive perceptions of the retailer (Rubio et al., 2017). An intermediate strategy conciliates the two approaches by using both the label name of the retailer and a distinctive name, it's the sub-brand strategy (Muzellec and Lambkin 2009). It allows to benefit from the image of the store while, at the same time, creating a distinctive identity. Researchers have confirmed that the use of umbrella SB strategy strengthen the halo positive effect of store perceptions on store brand evaluations (Nenycz-Thiel and Romaniuk 2015; Richards et al. 2014). In the same vein, Binninger (2008) showed that the more the SB are "identifiable retail brand" the more they reinforce the association between brand satisfaction and brand loyalty for SB. This result corroborates the study of Rubio et al. (2017) that found that the relationship between brand loyalty and store loyalty is intensified when the retailer uses an umbrella brand. However, they did not support the moderating effect of the naming strategy (umbrella SB vs. "house of brands") on the relationship between brand loyalty and store trust.

As store trust enhance emotional bonds and commitment to the store, we suppose that:

H5.1: The greater the store brand is identifiable (umbrella brand or sub-brand) the greater will be the association between store trust and loyalty to SB.

Drawing on past researches on the positive halo effect between store perceptions and loyalty (Nenycz-Thiel and Romaniuk 2015; Richards et al. 2014), we consider that, a positive attitude and a repetitive purchasing behavior of a particular SB enhance the predictability of the seller behavior, specifically when the SB remind the label name, thus:

H5.2: The greater the store brand is identifiable (umbrella brand or sub-brand) the greater will be the association between SB loyalty and store loyalty

3.3.2 The Moderating Effect of the Type of Good (Search Vs Experience Goods)

In the marketing literature, researchers have recognized the importance of product categories in shaping consumer purchasing decisions (Nelson 1970; Bowen 1990). However, empirical research on the moderating effect of different classes of product in the retailing field and specifically in the context of store brands is very limited. In this study we adopt the product taxonomy framework of Nelson (1970) and consider the search product versus the experience product. Search products refer to those attributes (price/quality/ease of use, etc.) could be evaluated prior to purchase/use. Experience products cannot be evaluated with certainty before purchasing and consumption (Nelson 1970). Along the continuum from search to experience products, there is a decrease of information availability and an increase in purchase complexity, perceived risk and effort to obtain relevant attributes information (Mitra et al. 1999).

On the issue of store brands, Koschate-Fischer et al. (Koschate-Fischer et al. 2014) investigated the effect of two product category characteristics: degree of commoditization and product category involvement on brand share–store loyalty link. They showed that the private label share–store loyalty link is stronger with low commoditized products (when there is more differentiation among products in the category) and high product category involvement.

Research has found that in higher involvement product categories, consumers are more likely to spend more time and effort to collect information about the attributes of the product (Dholakia 1998). This knowledge serves as indicator to make inferences and moderate the buying-decision process (Celsi and Olson 1988). As experience products cost more in information-seeking and are higher involvement products, we expect that consumer will need to reduce this effort by drawing inferences from the attributes of the store to the store brands. Thus:

H6.1: The association between store trust and SB loyalty is stronger for experience products that for search products

The perceived risk and the high switching costs associated with experience products strengthen the weight of the product knowledge on consumer evaluation and attitude and reinforce the association between SB loyalty and store loyalty (Koschate-Fischer et al. 2014). Thus:

H6.2: The association between SB loyalty and store trust is stronger for experience products than for search products

4 Directions for Future Research

This research presents the development of two conceptual models. The first model considers loyalty to the store brands as a mediating variable between its antecedents (perceived quality, sensitive price and brand sensitive) and trust towards the store, when store brand naming strategies and product type (search vs experience) are considered as moderating variables. The second model that considers the effect of trust as an antecedent of Store Brand Loyalty. Extensive empirical research will be clearly needed to test and compare these two competitive models. The survey will be conducted with three different positionning retail chain.

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Silver Shoppers' Attitude Towards Store Brands: *Will-They-Won't-They*?

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Abstract. Silver shoppers represent a growing share in Western populations with many important consequences on welfare as well as on marketing policies. The present work aims at a fresh perspective on the over-65 cohort grocery shopping behavior by examining its drivers of main store choice and its attitude towards Store Brands (SBs). By means of a field survey on 420 Italian shoppers, we found that, unlike millennials, seniors prefer proximity stores with parking facilities and good store staff assistance; they do not appreciate SBs at all, so that their Store Loyalty is only partially influenced by the same. Results carry several implications for both academics and practitioners.

Keywords: Silver shoppers · Generational Cohort Theory · Main store choice drivers · Store Brands · Mixed Methods

1 Introduction

Marketing and retailing scholars' interest in the so-called *"Silver"* segment, that is citizens aged over-65, has been growing significantly in recent years (Myers and Lumbers 2008). This is due to two main factors. The first is that this age group is continually expanding in Western countries, particularly European ones, as a percentage of the whole population (Eurostat 2018). The second is that their consumer and shopping behavior is significantly different from that of subsequent generations (Mumel and Prodnik 2005; Cole et al. 2008; Yin et al. 2013).

The growing weight of the over-65 s is particularly noteworthy in Italy considering that the absolute number of Italian citizens belonging to this age group was as many as 13.6 million at the beginning of January 2018, compared to 11.9 million ten years before, in 2008. These numbers show that the percentage grew from 20.1% in 2008 to 22.6% in 2018[1].

Italy therefore has the largest number of Silvers in Europe. Three more items of data confirm the progressive ageing of Italian society, which is happening much faster than in other countries.

[1] Source: Istat, Italian Institute of Statistics, www.istat.it.

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The first item is *ageing index* calculated as the ratio between over-65 s and under-14 s; in 2018 Italy reached 165.3, the second highest in the world after Japan at 218.8, but the highest in Europe, followed by Germany at 158.7. This parameter shows the marked disproportion between the oldest and youngest age groups in favour of the former. For every 100 Italian under-14 s there are 165.3 over-65 s; this has implications for the Italian economy in terms of physiological contraction of growth potential.

The second item is *dependence index* calculated as the ratio between over-65 s and that of the 15–64 age group. This indicator is normally used to evaluate the weight of retirees, traditionally over-65 s, compared to that of the potentially employable. Here, too, Italy has the highest figure in Europe at 34.8, compared to the European average of 29.9. And it is still growing.

The third item is *life expectancy*. The Italian average is 83.4 years, 85.6 for women and 81 for men, which is the second highest in Europe after Spain at 83.5. Furthermore, to this indicator must be added the median population age, 45.9 in Italy in 2018, the highest in Europe together with Germany, with 4.2 million over-80 s, the highest level ever in the country.

Collective demographic Italian statistics show that the growing weight of *"Olders"* has the most significant impact both on government policy and welfare as well as on manufacturers' and retailers' marketing policies when compared to the rest of Europe.

Within the sphere of Retail Marketing, it may be worth comparing Silver shoppers' attitudes towards various retailing-mix levers with those of other age groups.

Starting from these considerations, the aim of the present work is to apply the framework of the Generational Cohort Theory (GCT) in order to compare shoppers' drivers of main grocery store choice according to age group, distinguishing between the over-65 and the 25–34 cohorts; in this sphere we particularly focalize our attention on the importance assigned to Store Brands (SBs) as predictors of Store Loyalty. In this context, we conducted a field survey on a sample of Italian citizens to compare the two cohorts' attitudes.

The originality of the present work lies on one hand in adopting an anagraphical key of considering paradigms recognized as valid in Retail Management literature and on the other in its decision to focus attention on the Silver segment rather than on the already known so-called *"Millennials"*; all this in a geographical context, namely Italy, which is particularly meaningful in the light of the prevalent position of *"Seniors"*.

The results carry several significant implications for both academics and practitioners.

2 Literature Review and Research Questions

Generational Cohort Theory (GCT). While the increased average age of shoppers and consumers seems widely recognized, scholars largely ignore the societal change, and also that service provision, customer experience and research need to address this structural change. Marketing research explores the behavioral differences between "old" and "young" consumers. Conventionally, this branch of research posits a normative, chronological age-related decline in extrinsic and intrinsic motivation and individuals' behavior (Homburg and Giering 2001; Kohijoki 2011; Kohijoki and

Marjanen 2013; Kooij et al. 2011; Lambert-Pandraud et al. 2005; Mägi 2003). Chronological age has been found to explain several possible changes that occur in people's psychological, social, and societal functioning during their life cycle. Indeed, the general process of ageing consists of many dimensions of which chronological ageing is only one (Carstensen et al. 1999; Cleveland and McFarlane Shore 1992).

Literature has pointed out (Parment 2013) that generational cohorts are characterized by different needs, perceptions, expectations, and shopping/consumption behaviors. In the words of Parment (2013) *"While birth age has been a useful way to create groups, it describes segments but does not help to understand segment motivations"*. This could be marketing myopia in the light of ageing society. At this point, marketing scholars use the Generational Cohort Theory (GCT) to investigate the descriptive surface in order to understand behaviors and motivations associated with age in more depth (Lancaster and Stillman 2002; Parment 2013).

The idea that people differ in the amount and type of effort they put into shopping experience is not new in the field of marketing (Katona and Mueller 1955; Slama and Tashcian 1985): moreover, many studies indicate that customers' spending patterns differ over the course of their life cycle (Bleichrodt and Quiggin 1999).

To the best of our knowledge no studies have previously connected the segmentation of generational cohorts to purchase behavior in groceries, while only a few have done so in the fields of fashion, travel and tourism, wine consumption and fair-trade consumption.

Retailers must thoroughly investigate generations' needs hierarchies but avoid prejudices: there is no room for simplifications and banalizations. Moreover, nowadays the majority of contributions are focused on "millennials" and the latest generations. Furthermore, understanding also other cohorts' customer experience and the customer journey is a critical point in retailers' agendas nowadays (Lemon and Verhoef 2016).

The present study applies Generational Cohort Theory (GCT) as a framework to examine the over-65 in-store shopping experience. The idea of "cohort" assumes that people are influenced by events occurring during their coming-of-age years; many previous studies have proven this phenomenon (Schuman and Scott 1989; Parment 2013; Lemon and Verhoef 2016).

Drivers of Main Grocery Store Choice. Literature has observed that ageing involves social, biological and psychological changes with the elderly people cohort, having different necessities and wants when shopping compared to younger cohorts (Park and Farr 2007; Wilson et al. 2004; Wolfe 2005). For example, elderly people experience a decline in appetite, food consumption and dietary tolerability (Hughes et al. 2004). Moreover, their ability to see, hear, move, learn, remember, taste, smell, chew and handle products decreases (Popper and Kroll 2003). With reference to the overall shopping experience, Meneely et al. (2008) focus their research on product access, price and customer service as crucial areas among Senior shoppers. Yin et al. (2013) pointed out that layout, lighting, product information, shopping facilities, accessibility, location, temperature, service, smell and atmosphere (Woodliffe 2007; Hare et al. 1999; Leighton and Seaman 1997) directly impact the shopping experience for older consumers. The "age-related supermarket design" could reflect six different categories: trolleys and baskets, store layout and aisles, shelves and freezers, product-related issues, customer service and

checkout (Yin et al. 2013). In addition to these physical design elements, older consumers traditionally rely on small local retail stores for their grocery needs and as a means of socialising (Yin et al. 2013).

Considering the above, we propose the following:

RQ1: *What are the principal drivers of Silver shoppers' main grocery store choice?*

SBs Contribution to Store Loyalty. Numerous studies have pointed out that SBs play a determining role among drivers of main grocery store choice, so much so that a positive relationship between SBs and Store Loyalty has been found (Corstjens and Lal 2000; Pappu and Quester 2006). On one hand, the store name guarantees SB products' quality upfront, reducing customers' perceived risk; on the other, higher satisfaction with SBs leads to higher familiarity with the retailer, thus reinforcing shoppers' preference towards the same (González-Benito and Martos-Partal 2012; Girard et al. 2017). This relationship is favoured by a number of conditions: (i) quality of SB products must be comparable to that of National Brands (NBs); (ii) SB names that are the same as the retailer banner guarantee a higher positive "halo" effect on Store Loyalty than fantasy names (Rubio et al. 2017); (iii) when consumers are driven by utilitarian shopping values the direct correlation between SB usage and Store Loyalty gets stronger (Ipek et al. 2016). Starting from these assumptions, we propose the following:

RQ2: *What is SBs' contribution to Store Loyalty for Silver shoppers?*

3 Methodology

To address RQ 1 and 2, an exploratory quantitative study was developed by means of structured questionnaires. To extract the customer highlights a purposive sampling approach was used, which represents an effective method when a specific set of predefined criteria for selecting participants is required (Bryman 2008): in our case, age. Apart from the minimum age requirement, informants had to either do their own shopping or go with someone for their shopping in the last six months. Exploratory data analysis was used to process data, searching for formulating hypotheses that could lead to new data collection and experiments in a second step of our research agenda following a Mixed Methods approach (Creswell and Plano Clark 2018).

Data were collected through a field survey performed at three different supermarket stores located in northern Italy and each representing one of the Top 3 (in terms of market share) retailers operating in the Italian Modern Grocery Distribution (MGD) market. A total of 420 participants (140 per each store, 68.1% women) were randomly interviewed while exiting the stores after having checked out. In accordance with our research aims, age was controlled in order to obtain two age groups (over-65 and 25–34) representing their reciprocal weight within the Italian population per each store; we thus interviewed 283 (67%) *Silvers* and 137 (33%) *Millennials*.

Shoppers of the two age cohorts were asked to express the importance of 17 items as drivers of their main grocery store choice on a 1 to 7-point Likert scale. The 17 scale items pertained to the five pillars of Retail Strategy, namely: *location*, *store design and display*, *pricing*, *customer service*, *assortment* (Levy et al. 2018).

Descriptive analysis was carried out in order to complete this first exploratory step of our research design.

4 Results

The degree of importance of main grocery store choice drivers and contribution of SBs to Store Loyalty were analyzed by means of an inter-generational comparison between over-65 and 25–34 shoppers. Results are summarized in Fig. 1.

Identifying value drivers and dissatisfaction sources provides the opportunity for elements to be changed in order to ensure satisfaction for aged people.

Results for RQ1: As pointed out by previous literature (Hare et al. 1999) there are many dissatisfaction areas in terms of store choice. Moreover, some shoppers seem to feel they do not have the ability to exercise any alternative to overcome their dissatisfaction in terms of 2) proximity to home and 3) parking facilities. What they could do (item 12) is to avoid certain sales personnel or opt for self-service.

Drivers of main grocery store choice	**Scale items (n=17)**	***Silver*s (over-65)**			***Millennials* (25-34)**		
		mean	*var*	*rank*	*mean*	*var*	*rank*
Location	1) Opening hours	4.55	6.119		4.35	6.190	
	2) Proximity to home	5.31	4.770	1°	5.71	4.288	1°
	3) Parking facilities	5.24	5.013	2°	4.89	4.461	5°
Store design & display	4) Order of products on shelves	4.53	4.785		3.86	4.810	
	5) Instore atmosphere	5.19	4.141	3°	4.73	3.087	
	6) Ease of finding products	4.93	3.712		4.71	2.700	
	7) Freedom of movement within aisles	5.01	3.606		4.72	2.680	
Pricing	8) Average overall price levels	5.10	2.955	4°	4.96	3.493	2°
	9) Price promotions	5.06	3.630		4.94	2.714	3°
	10) Stability of prices over time	4.95	3.308		4.45	3.084	
Customer service	11) No out-of-stock	5.03	3.617		4.88	3.169	
	12) Store staff assistance	5.09	3.115	5°	4.08	3.964	
	13) Checkout speed	4.73	4.405		4.35	3.535	
Assortment	14) Comprehensive range of products and brands	4.82	4.245		4.66	3.084	
	15) Presence of main NBs	5.01	3.704		4.72	3.256	
	16) Quality of fresh foods	4.82	4.132		4.80	3.816	
	17) Quality of SBs	4.48	4.312	(17°)	4.90	2.699	4°

Fig. 1. Summary of results for RQ1 and RQ2

Results for RQ2: Item 17) highlights the most interesting result in our research. The element that seems to mark the greatest difference between cohorts is the perception of SBs: while for younger shoppers it is one of the most important drivers for store choice (4th in ranking), for over-65 s it is absolutely irrelevant (the last in ranking). Results of previous literature notes regarding the elderly people/National Brands (NBs) relationship (Cole et al. 2008) might be transferred to seniors/SBs as well.

One way analysis of Variance (ANOVA) has been applied to test Research Questions: a significance level of 5% has been used. As results, there is a significant difference between the groups ($p = .043$).

5 Conclusions and Implications

Results obtained within the sphere of the present work, be they as yet exploratory, seem promising and particularly significant both in terms of contribution to academic research and in terms of managerial implications.

In particular, three main indications emerge from our analysis.

The first is that, as suggested by GCT, the age variable maintains its significant importance as segmentation criterion for shoppers. This is true in as much as there are important differences among the two cohorts in question regarding importance recognized to main grocery store choice drivers.

This leads to the need for stores near areas where there is a dense concentration of over-65 s to adapt their marketing-mix according to the needs of the latter.

The second indication is that for Silver shoppers, determining factors on the choice of primary store are those related to store facilities, namely proximity to home, ease of parking and quality of personnel. As a consequence, convenience stores are the most suitable retail format in satisfying the needs of this target.

The third indication is that SBs are not a very significant driver of main store choice for the elderly; the formers' contribution to Store Loyalty is limited. This is due to two main factors; the first one is represented by a strong bond of brand loyalty that Senior shoppers have in Italy towards Leading National Brands; it is known that trust in brands develops during adolescence (Cole et al. 2008), which means the early Seventies for today's over-65 s, a period in which SBs were not yet so widespread nor particularly high in product quality. The second factor is constituted by the fact that Silver shoppers prefer to mainly shop in proximity stores, which are currently managed by traditional trade operators and/or by national buying groups in Italy. In both cases SBs assortment is not yet adequately structured, premium lines are not yet developed, their instore visibility is limited and the brand name is often a fantasy one. On the whole it may be hypothesized that the high incidence of over-65 s represents one of the causes at the basis of reduced SBs' market share in Italy (19% in 2018) in comparison with that of other main European countries, namely the UK, France, Spain and Germany, where it is on average higher than 30%[2].

[2] Source: IRI, www.iriworldwide.com.

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Consumers' Reactions to Price Imitations by Private Labels with Sub-branding Strategy

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Abstract. The influence of price similarity and dissimilarity between a private label (using a sub-brand strategy) and a national brand on consumers' judgments of the private label's quality and purchase intention is studied using a controlled experiment with a sample of 238 respondents. The results of this study are rather interesting in the sense that price imitation of a national brand by a private label enhances the buyers' perception about the private label's product quality. Inversely, price dissimilarity (higher price differences, wherein the private labels are cheaper than national brands) to a national brand enhances the purchase intention of private labels. The results are significant for two products in the consumer packaged goods category (biscuits and potato chips). Consumers' reactions would help private label retailers arbitrate and adopt optimum price difference between national brands and private labels.

Keywords: Private labels · Sub-branding · Imitation strategies · Price

1 Introduction

Private labels (PLs) are brands owned, controlled, marketed, and sold exclusively by retailers (Beneke et al. 2012). Generally private labels are 15–40% cheaper than to national brands (NBs) and important source of profit for retailers (Baker 2014). Literature has broadly classified PLs into three types: generic, classic and premium. Consumers form expectations regarding a brand's price on the basis of its past prices and also the way in which it is promoted (Yuan and Han 2011). Due to previous experiences, consumers perceive high-priced products to be of better quality than cheaper ones and they judge price as an indicator of product quality (Olbrich and Jansen 2014). These reactions are not irrational because of the forces of supply and demand, which lead to a positive relationship between price and product quality (Beneke et al. 2012). The price-perceived quality relationship is neither particularly universal nor robust (Zeithaml 1988). Despite the unclear boundaries, number of studies have directly or indirectly examined the price-perceived quality relationship and concluded that there seems to be a positive relationship between price and perceived quality for certain products and within certain price ranges (Dawar and Parker 1994; Olbrich and Jansen 2014; Steenkamp 1990;

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Teas and Agarwal 2000; Zeithaml 1988). Additionally, buyers impute quality not only on the basis of price, but also on the basis of other product cues (Dodds et al. 1991; Teas and Agarwal 2000), like brand name, packaging and others. Today, consumers are more price-sensitive as they can access a lot of information about various products (Grewal et al. 1998; Perloff et al. 2012). Price has been considered a key variable for private labels to attract consumers, and finally generate more store traffic (Grewal et al. 1998). In the literature on private labels, price has been studied both independently and with other product/retail cues like brand name, store name, store image and packaging (Teas and Agarwal 2000; Zeithaml 1988).

Several private label retailers prefer to use either an umbrella store name for all their private labels (referred to as the 'branded house' strategy), or use a separate stand-alone brand names for different private labels (referred to as 'house of brands' strategy) or use both the store name and a separate brand name (referred to as 'sub-branding' strategy) to sell their offerings (Kapferer 2012; Sarkar et al. 2016). Extant research has independently examined PL's brand name (Perloff et al. 2012) or store name (store image) (Collins-Dodd and Lindley 2003) in relation to price, but in real-life consumers are exposed to both the brand name and store name, while they are making purchase decisions. Also, research has shown that five Indian retailers out of nine major retail chains use the sub-branding strategy in naming their private labels (Sarkar et al. 2016). Prior studies have not addressed the price-perceived quality and price-purchase intention relationships when both the PL brand names and store names (sub-branding strategy) are available. Moreover, while studying the impact of price imitations on purchase intentions of PLs, it is important to consider taste (an intrinsic cue) that may influence the purchase intent of consumers (Olsen et al. 2011). Hence, in this study, we attempt to understand consumers' responses to private labels with respect to the price-quality relationship and purchase intention, when a store uses a sub-branding strategy for their private labels, keeping taste differences constant.

The following section discusses the conceptual framework followed by methodology, summary of findings and conclusions.

2 Conceptual Framework

Perceived quality indicates consumers' judgments concerning a product's overall excellence (Steenkamp 1990). Consumers seek and process information related to the product and they make an attempt to form precise impressions about it. Products may be viewed as an array of cues comprising of price, product composition, brand names and others (Collins-Dodd and Lindley 2003). Consumer use cues from this array as the basis for making judgments and in evaluating the product. The literature on the relationship of price and product quality has been augmented extensively over a period of time (Olbrich and Jansen 2014). From a consumer's perspective, price is what is given up to obtain a product (Zeithaml 1988; Teas and Agarwal 2000). Consumers do not always remember the actual product prices and they encode prices in ways that are meaningful to them (Mesquita 2012). The belief is that price and quality are positively related and usually consumers use price as an indicator of quality (Dodds et al. 1991; Steenkamp et al. 2010). With other cues held constant, price is indeed a powerful piece

of information and an effective factor in determining perceived quality. Since price is concrete and measurable, consumers view it with much confidence and trust it more than most cues concerned with quality (Miyazaki et al. 2005). High-priced brands are perceived to be of higher quality than the medium-priced brands (Teas and Agarwal 2000) and consumers are likely to pay greater premiums for NBs (Sethuraman and Cole 1999). However, price effects on quality perceptions are product category specific and despite the inconsistency of the statistical significance in many studies, a positive price-perceived quality relationship does exist (Brucks et al. 2000).

Brand name is generally used as an extrinsic cue to infer quality perceptions and can represent an aggregate of information about a product (Richardson et al. 1994). Even if a branded product is available on a discounted price, a strong brand name helps to control the quality perceptions (Della Bitta et al. 1981). The relationship between brand name and perceived quality is statistically significant and is also expected to positively influence consumers' internal reference prices (Grewal et al. 1998). The store's name is an information-rich cue and the reputation associated with the store increases the strength of store image. It's been observed that the effect of store name on perceived quality is small (Collins-Dodd and Lindley 2003), but it does positively influence consumers' willingness to buy (Dodds et al. 1991).

Consumers' purchase intention is strongly related to their perceptions of the quality gap between national brands and private labels (Steenkamp et al. 2010). Moreover, previous research establishes connections between price and purchase intention (Dodds et al. 1991). Private label retailers often use price discounts to enhance sales and store traffic and there is a tendency that they are priced differently for the products of same type and quality across stores (Xia et al. 2004). Adaptation-level theory estimates that the price discount shifts consumers' internal reference prices, which can be considered as the average market price for a product class (Biswas and Blair 1991). Latitude of acceptance exists for price evaluations and a price that is within the latitude of acceptable range is believable for a customer and a price outside the latitude of acceptance is not credible (Grewal et al. 1998). As price increases beyond an acceptable range, purchase intention decreases after increasing first, because the sacrifice demanded becomes too important in the trade-off with perceived quality. Likewise, large price differentiation could adversely affect the perception of quality (Hoch and Lodish 1998) and it is expected that a reduction in the price differences between the national brand and private labels will affect private label perceived quality. Hence, we posit that:

H1: When a PL adopts the sub-branding strategy, the lesser the price difference (price imitation strategy) between a PL and a NB, the higher would be the perceived PL quality.

H2: When a PL adopts the sub-branding strategy, the higher the price difference between a PL and a NB, the higher would be the purchase intention of the PL.

3 Methodology and Data

In India, Grocery and food are the most preferred category in private labels (Sarkar et al. 2016) and most of the earlier studies have been conducted with these products. Biscuits and potato chips product categories were considered due to its continued presence in the PL class for which the target segment was identified as young, affluent, educated and potential purchasers. A NB and two PLs were selected in both the categories. The well-known NBs selected were UNIBIC (biscuits brand) and Lay's (potato chips brand), which are the leading brands in their respective segments (Mukherjee 2015). Two focus group discussions were conducted to select two PLs in each biscuits and potato chips category, which are similar in taste. The respective PL counter-parts chosen were Big Bazaar's Tasty Treat and More's Feasters for biscuits brands. More Feasters and Star Delight were chosen for potato chips brands. Past research on price has taken up-to 40% price difference in the consumer-packaged goods categories (Ashley 1998) and in this study, we examine price differences at two levels: 0% and 35% difference. The prices chosen were INR 20 (biscuits), INR 40 (potato chips) for no price differences between the NBs and PLs and INR 17 (biscuits) and INR 26 (potato chips) for the high price differences between PLs and NBs.

We tested the hypotheses by using a between-subjects factorial design with two price levels [no difference between PL and NB pricing (price imitation strategy) versus high difference between PL and NB pricing].

For both the product categories, we selected respondents who were active shoppers from metropolitan cities in India. The number of respondents for biscuits was 132 (mean age = 23, 79% male) and 106 for potato chips products (mean age = 22, 66% male). If the shopper agreed to participate, s/he was guided to the test table in a random fashion. On the table, along with the NB, a PL brand was displayed. The display boards were designed to mimic the information presented in a retail store consisting of the store and brand name, price and product size for each brand. Respondents had an opportunity to taste both the brands (NB and PL) prior to judging the PL quality. After evaluating the brand pair, subjects completed a questionnaire. The dependent variables were perceived quality and purchase intention, measured on a 7-point Likert scale adopted from previous research (Dodds et al. 1991; Richardson et al. 1994). To control for the effects of possible confounding variables in order to improve the study's internal validity, consumer demographics (age, gender, education, income and no. of family members) and purchase behavior were measured. Manipulation checks were conducted for taste similarity and price differences.

4 Results

The reliability of all scales was measured using Cronbach's alpha. The results for the same are as follows: .76 (biscuits), .91 (potato chips) for perceived quality and .80 (biscuits), .89 (potato chips) for purchase intention. Analysis of the manipulation check mean scores suggested that the manipulations of the independent variable (price) were

perceived as intended for both the product category. A one-way ANOVA was conducted to assess the impact of the two price levels on the price manipulation check (Biscuits: $F(1,130) = 76.470$, $p < .001$, PES = .370; Potato chips: $F(1,104) = 13.473$, $p < .01$, PES = .034).

The ANOVA results (refer Table 1) show that the effect of price difference between PL and NB was significant (Pillai's Trace = .327; Wilks' lambda = .673; Hotelling's Trace and Roy's Largest Root = .485, $F(1,130) = 31.272$, $p < .000$, PES = .327) for biscuits and likewise for potato chips (Pillai's Trace = .142; Wilks' lambda = .858; Hotelling's Trace and Roy's Largest Root = .166, $F(1,104) = 8.557$, $p < .001$, PES = .142).

Table 1. ANOVA table

Effect	Source	Dependent variables	df	Mean sq.	F	Sig.	PES
Biscuits	Price	Perceived quality	1	8.017	5.702	.017	.016
		Purchase intention	1	7.215	3.111	.079*	.009
Potato chips	Price	Perceived quality	1	1.882	1.339	.048	.004
		Purchase intention	1	8.378	3.612	.058*	.010

*$p < .10$

The results, summarized in Table 1, suggest that product quality perception and purchase intention are statistically significant for both the product categories. The results of the main effect of price on buyer's perception of quality were marginally significant (Biscuits: H1, $F(1,130) = 1.114$, $p < .10$; Potato chips: H1, $F(1,104) = .315$, $p < .10$) and on purchase intention (Biscuits: H2, $F(1,130) = 47.637$, $p < .001$; Potato chips: H2, $F(1,104) = 14.213$, $p < .001$) were highly significant. The mean quality perceptions between the higher price difference (Biscuits: M = 4.32; Potato chips: M = 4.57) and no price difference (Biscuits: M = 4.13; Potato chips: M = 4.44) were significantly different. Likewise, the purchase intention for higher price difference (Biscuits: M = 2.52; Potato chips: M = 3.67) and no price difference (Biscuits: M = 4.16; Potato chips: M = 4.69) were found to be different.

This indicates that a high price is perceived as a direct indicator of product quality. However, if the no-price difference is considered, the mean purchase intention ratings were higher than that from the high-prices PLs. Considering the findings from previous studies on price-quality relationships, the significance of the direct effects are particularly interesting for PLs using a sub-branding strategy. The results indicate that, for sub-branding strategy, price influences the respondents' perception of product quality as well as purchase willingness.

5 Discussion and Conclusions

In light of earlier research on the price-quality relationship, this study looks at the main effects of key extrinsic cue (price) on perceived quality and purchase intention of PLs, under sub-branding strategy and by controlling for taste differences between the private

label and national brand. The result of this study supports previous findings that state that the judgment of quality by price also hold good for private labels using sub-branding naming strategy (Keller et al. 2016), particularly in a value-conscious emerging economy (like India). When respondents see private labels with their own branding, along with the store name (in addition to price label), their perception of the private label's quality is significantly affected Teas and Agarwal 2000). For the product categories used in this study, evidence supports that a price-perceived quality relationship exists. Caution should be taken in drawing conclusions about the applicability of the findings of this experiment. When buyers do infer a positive relationship between price and product quality, they are likely to compare the price of the product against another. In real-life, consumers tend to choose higher quality products but they are simultaneously concerned about being value conscious. Price imitation of a national brand by a private label enhances the buyers' perception about the private label's product quality. Inversely, price dissimilarity (higher price differences) to a national brand enhances the purchase intention of private labels.

Private label retailers, in turn, may keep in mind this double-edged finding, while pricing their offerings. Particularly for consumer-packaged goods, consumers rely on price as an indicator of quality (Brucks et al. 2000; Zeithaml 1988). It is relatively easier for a retailer to change the price of a private label, as the retailer has more control on these store brands. Nevertheless, changing the quality perception is a time-consuming process. Thus, retailers should pursue competitive advantages by managing their pricing and product strategies coherently.

If consumers perceive a large quality differential between a national brand and a private label, brand managers should attempt to reduce this quality perception gap. Through marketing communications, they could enhance price-quality associations or emphasize on the notion that lower priced products are not lower in quality. They should focus on deciding the optimum price to compete with NBs. Besides, they need to be cautious in adopting the competitive pricing approach. Excessive lowering of prices may signal a lower quality and a very similar pricing strategy may dissuade sales and affect product's profitability. The implication is that consumers may use price as a cue to form impressions of product quality even if it may have little relationship to the actual product quality. The net effect on consumers' perceived quality would help retailers determine and select the price differences between private labels and national brands in the respective product class. In conclusion, if retailers carefully decide price differences between their private labels and national brands, it will positively influence purchase intention without any adverse effect on the private label's perceived quality, also enabling them to the increase sales volume.

5.1 Limitations and Future Research

Certain limitations are inherent in this study. First, a purposive sample was used. Moreover, controlling the brand name and store name and taste of the product, only one independent variable (i.e. price) was considered and one might speculate that multiple independent variables (like packaging) may impact the results. Further investigation is need to replicate these findings with different samples, incorporating other marketing variables and treatment combinations (such as different price levels, packaging

similarity to a national brand) and using different types of products representing various classes. Future research may explore the interaction of price, perceived quality and purchase intention by using a "willingness to pay" experiment. A detailed quantitative approach to measure the most effective price difference between a national brand and a private label using a sub-brand strategy in the same category will provide more nuanced insights. Finally, our measure of price differences is based on self-reported measures. We measured stated price differences, not the actual differences that consumers are willing to pay. In an emerging economy, PLs are generally available on deep discounted offers, particularly in Everyday Low Price (EDLP) stores; hence store formats may also be considered in future studies.

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Comparison of Consumer Involvement Across PLB Categories in Retail Food

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Abstract. Food retail categories are considered to be have low involvement and have few publications. The aims of this research are to explore the level of involvement of different categories in the food industry and to discover how this involvement affects private label share in each category. A new scale of involvement was constructed using six sources of involvement. The data set includes a consumer survey of 1652 shoppers in conjunction with data mining from sales of food chain retailers. The results showed that when using the proposed scale, a large difference exists in the level of involvement between categories, there are significant differences in the effect of the source on each category, and consumers show a large range of importance that they attach to each source and category. The level of involvement is negatively correlated to its standard deviation. Regression analysis suggests that the level of involvement influences negatively the share of private label brands in the category (percentage of category sales) and the relative number of PLB buyers in the category. These results can aid the retail merchant in introducing new PLB categories.

Keywords: Involvement · Retail food categories · Risk · Scale

1 Introduction

Research in the field of consumer involvement has expanded in the last two decades into new areas. One popular area of current research focuses on how the level of consumer involvement in products influences purchasing on the Web (Verhagen and Bloemers 2018; Han and Kim 2017). Another popular research topic studies the role of involvement on buying specialty products, such as organically grown foods (Konuk 2018). However, reports on the impact of consumer involvement on purchase of private label brands (PLB) are currently scarce, possibly because a large part of the sales of PLBs is concentrated in the retail food industry (RFI), and the products sold there are usually considered to be associated with low involvement, thereby garnering little interest by research groups. This research examines differences of involvement in RFI categories, particularly the relationship between involvement in a food category and the willingness of the consumer to purchase the corresponding PLB (Laurent and Kapferer 1985). To examine this relationship, the study uses a measure of involvement that differs from previously published involvement measurements. The measure of

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involvement is constructed with variables that represent the sources of involvement including risk, quality, and price.

The aim of this study is twofold. First, to provide marketers in the RFI with a measurement that is reliable and convenient to use to interpret the origin of involvement. Second, to explore how the level of involvement influences the share of PLB in each of the various categories. The research is based on two kinds of data; a consumer survey and the amount of buying of PLB in each category. The consumer survey data leads to a measurement of the total involvement in a variety of 72 categories, together with identification of their sources. The amount of buying of PLB in each category is expressed in percentages, with the data collected through data mining of sales figures of a retail food chain (with the author's promise of confidentiality).

2 Theoretical and Empirical Backgrounds

Mittal (1989) indicates that within a choice or purchasing context, the level of involvement relates to individual needs and motives. It represents the consumer's personal interest in buying or using an item (Evans et al. 2006). Laurent and Kapferer (1985) and Kapferer and Laurent (1993) suggest that consumer involvement cannot be captured by a single index because there are a number of facets of consumer involvement; it can be focused on the product, it can rely on situations, it may be related to the sources (antecedents) that arouse it or the connecting behavior. Gendel-Guterman and Levy (2013) have found that consumer involvement, represented by the three types economic, functional, and symbolic, has a relation to familiarity and buying intention of PLB sold in the RFI. Nevertheless, their research explored the PLB as a generic name, without reference to its various categories. It is generally agreed that involvement is a product category-specific phenomenon with different products arousing different levels of involvement (Drichoutis et al. 2007; Bruwer and Buller 2013).

In the consumer behavior literature, food, as a product category, is classified as being of low involvement, primarily because of the low cost of food relative to the consumer's total income. However, there is risk related to food choices—both a social risk and a health risk (Bell and Marshall 2003).

In 1994, Zaichkowsky introduced a scale that has become the most widely accepted scale for measuring involvement in most of the research of this field. However, some researchers felt that this scale is not appropriate for all products and services. In the research that focused on shopping and using food, several others scales were built to measure the involvement. Olsen (2001) used a scale based on expectancy-value theory. Juhl and Poulsen (2000) used a large multi-item food-related lifestyle. Candel (2001) used a scale connected to perceived convenience orientation of an individual. Bell and Marshall's (2003) developed a measure of the characteristic of food involvement, based on activities relating to food acquisition, preparation, cooking, eating and disposal. Following these researches, this research takes a new approach to measuring the concept of involvement in food categories and incorporates several factors to construct a scale based on the sources that arise the level of involvement.

The scale is constructed with six sources of involvement found in previous research (Laurent and Kapferer 1985; Mittal 1989; Bell and Marshall 2003). The first five sources are connected to risk.

1. Health or safety risk associated with using the product (buying spoiled meat).
2. Quality risk. The same products prepared by different manufacturers display a large quality range (chocolate, conserves).
3. Price risk. Identical products offered by different suppliers display large price ranges (soft drinks, dairy products).
4. Performance risk. Product performance and quality cannot be determined before trying it (laundry materials, taste).
5. Social status risk. Product use in social settings may result in negative social consequences (serving unbranded wine to the boss in invited at home dinner).
6 Personal relevance. The consumer's personal interest or self-image associated with the product may not be met (scent of laundry materials or shampoo).

Regarding the involvement scale, it is essential to consider two observations: a. A high involvement score can be generated when a single variable (source) has a sufficiently high involvement compared to the other variables. However, typically, a high involvement score results from a set of variables in which a majority have high involvement. b. Because the measurement scale is based on the perception of individual consumers, examination of pooled results will often demonstrate a wide spread of values, reflecting a large range of personal perception between consumers.

3 Methodology

3.1 Sampling and Study Procedure

Participants were recruited randomly from ninety-seven grocery stores of a major, well-known retailer, located over extended geographical areas. The sample's external validity was confirmed by comparing it to the socio-demographic traits of the chain's shoppers. Data were collected via on-site questionnaires. A total of 1652 shoppers agreed to participate and completed the questionnaire. Every version of the questionnaire included eight categories. To decrease biases, every four categories were combined three times with other four different categories. Moreover, the sequence of the categories was changed several times, producing 27 versions of the questionnaire. The total number of answers to each question in each category was 100. Most of the participants were female (60%), for the most part, ages ranged between 26 to 65 (88%), the majority of participants possess a full high school education or above and almost all of them participated in the family shopping trips (95%). Each participant was asked to answer the questions about 8 categories.

3.2 The Share of PLB in Sales

In order to calculate the share of PLB in the sales of the various categories, data mining was conducted using sales figures covering a period of seven months before the

involvement survey was administered. The sales figures were from the same retail chain where the shoppers were interviewed. After data cleaning, 62 categories were suitably comparable to the categories in the survey. The figures included total sales in each category as well as sales of PLB in the same category, enabling calculation of the percentage of the PLB in the category.

4 Results

4.1 Involvement in the Categories

First, an exploratory factor analysis with Varimax rotation was used for building a combined factor of involvement from the six source factors. The sources belonged to one factor. To test the internal consistency of the six items in the factor, Cronbach's α test was used. The result was α = .83 which means that all the items are supposed to reflect the same underlying construct, involvement (Tables 1 and 2).

Table 1. Component matrix of "combined" involvement

Source	Component
Personal relevance	.734
Quality between producers	.728
Performance risk	.689
Difference in prices	.570
Health/safety risk	.523
Status (Important what is served to important guests)	.477

Categories that were found with the highest involvement are fresh meat, baby food, poultry, hygienic products, laundry powder, and prepared salts. Categories with the lowest involvement are matches, basic food (sugar), disposable plates, plasters, cucumber in brine, mineral water, soya oil.

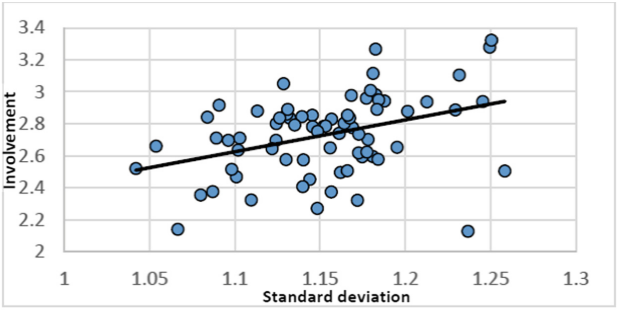
The following tables and figures display some of the notable results (Fig. 1):

Table 2. Highest and lowest scores in each source. Scale: 1 = lowest, 5 = highest

Source	Highest scores	Lowest scores	Difference
Health/safety risk	3.20	1.43	1.77
Quality	3.32	1.80	1.52
Price	3.65	2.50	1.14
Personal relevance	3.50	1.96	1.54
Status (guests)	2.64	1.80	0.84
Performance risk	3.31	2.03	1.28

Table 3. Highest and lowest scoring categories in each source

Source	Highest scores	Lowest scores
Health/safety risk	Fresh meat, matches	Toilet paper, socks
Quality	Soft drinks, chocolate	Poultry, sugar
Price	Dried fruits, animal food	Yogurt, frozen meat
Personal relevance	Underwear, tea	Matches, bleach
Status (guests)	Soft drink, cookies	Not relevant
Performance risk	Laundry powder, coffee	Sugar, cooking tools



B=.34, Correlation is significant at the 0.01 level (2-tailed).**

Fig. 1. Correlation between the combined scores of involvement and its standard deviation.

4.2 Connections Between Involvement and Share of PLB in Sales

Two regressions were conducted to examine how the PLB product's attractiveness is affected by the involvement.

The first, a linear regression analysis used the percent of sales of PLB in the category as the dependent variable. The results affirmed that the share of PLB is affected negatively by the involvement ($\beta = -.379$, $t = -3.077$, $Sig < .01$) and positively by its standard deviation ($\beta = -.374$, $t = -3.041$, $Sig < .01$). Both variables explain about 20% of the variance of PLB share (R-Square = .194).

The second linear regression analysis used the percent of consumers who buy PLB in each category, as the dependent variable and also has found it to be affected negatively by the involvement ($\beta = -.444$, $t = -3.841$, $Sig = .000$), but not influenced by the standard deviation. (R Square = .207).

5 Discussion

There are two noteworthy results arising from this research. First, RFI categories that are considered to be with low involvement (Bell and Marshall 2003) display different levels of involvement in general, and large differences in the load of the various sources of involvement. Each category is influenced by the users of the product, the situations,

and the trust in the producers. For example, the category of matches shows the lowest combined involvement, but shows the highest score in the source of safety risk (Table 3). Soft drinks show a high score in quality and in social status risks while showing low scores in personal relevance and price risk of brands (Table 3).

The second result displayed that for PLB buying, the involvement in food retail products is significant; the higher the level of the involvement, the smaller the share of PLB in total sales.

Two other interesting conclusions could be made. First, there are differences of opinion between consumers about the prominence given to each source, and second, there is a significant positive correlation ($\beta = .34$, sig $< .01$) between the involvement and its standard deviation. The higher the involvement, the higher the disagreement among consumers on its score. Thus, categories with low involvement indicate a consensus of opinion by consumers, as seen from a low standard deviation. Both of these differences of opinions can be explained by differences in situations, family structure, or habits.

There are several theoretical contributions of this research; First, although Zaichkowsky (1994) introduced a scale that has become the most widely accepted scale for measuring involvement in most of the research of this field, other scales can be used. This research adds a scale, subject to the sources of involvement, to the other variety of scales of involvement developed before (Olsen 2001; Juhl and Poulsen 2000; Candel 2001; Bell and Marshall's 2003). Second, the research. proved that even in categories considered to be with low involvement, the level of involvement can be tested and analyzed; This study has found large differences in level of involvement between retail food products when measured by their sources of the involvement. And last, the positive correlation between the levels of involvement with their standard deviations, supplements a new dimension to the research in this field.

Regarding PLB management, before a retailer introduces a new category of PLB, the relative involvement of a category should be considered seriously. Moreover, retailers should consider the approach used to introduce a new PLB category in order to reduce the possible negative effects that can be contributed by the various sources of the involvement.

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Influencing Shopping Engagement Across Channels: The Role of Store Environment

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Abstract. The paper aims at investigating the role of store environment in engaging shoppers during their grocery buying process across multiple channels. Specifically, the study investigates the shopper's buying behavior in three channels, namely: physical, electronic and mobile. The main object of the paper is to spot the light on how the store environment (ENV) generates shopping engagement (ENG) by the means of shopping enjoyment (ENJ) and time convenience (CON). A survey on a sample of 935 grocery shoppers was performed administering a structured questionnaire. Each channel was empirically investigated applying a Structural Equation Model (SEM). Results show that the mobile store-app environment does not suit consumers' need for shopping convenience, limiting the expansion of the mobile grocery channel in comparison with the electronic and the physical channels. Some preliminary theoretical and managerial implications are derived comparing the results of the three SEMs.

Keywords: Shopping across channels · Store environment · Shopping engagement · Shopping enjoyment · Time convenience

1 Introduction

Online shopping is showing a two digits growth worldwide and can nowadays be considered as an alternative option to in-store shopping (Frasquet and Miquel 2017). The growth of online sales is leading scholars to deeply investigate the omnichannel retailing phenomenon trying to understand if consumers buy differently in offline and online channels. Scholars agree to consider the multichannel offer as an opportunity to encounter several consumers' need in alternative and interchangeable purchasing contexts. Thus, for example, the physical store offers to consumers a rich sensorial shopping experience (Xu et al. 2014), while online channels offer them a reduced amount of shopping time and efforts (Xu et al. 2014) and a more enjoyable shopping experience (Childers et al. 2001).

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Despite the increasing diffusion of online sales, there are sectors, such as the grocery one, where the online market-shares is still residual. Thus, for example, in two of the most developed grocery markets worldwide, i.e. US and UK, the online grocery market-share accounts respectively for 5.8% (digitalcommerce360.com) and 6.7% (Mintel 2018). Although the current situation is highly discouraging, scholars expect a reversal trend in the next years (*e.g.* Dawes and Nenycz-Thiel 2014). In the same vein, a recent report published by the Food Marketing Institute in collaboration with Nielsen forecasts that in the next five-seven years almost 70% of consumers will buy groceries online (Nielsen 2018).

In this context, the current paper aims at exploring the shopping buying process of grocery consumers across multiple channels, namely physical, electronic and mobile. Hence, we propose a model in which store environment (ENV), acting on shopping enjoyment (ENJ) and on time convenience (CON), influences the shopping channel engagement (ENG). In this way, the paper contributes to the retailing literature exploring the role of store environment in engaging shoppers during their grocery buying process across multiple shopping channels. In fact, as shown by the value of the online grocery market-share as above reported, to date consumers still prefer the physical channel for their purchases. Accordingly, both scholars and retailers are interested in deeply investigating similarities and differences in the grocery buying process of consumers to understand how to support an appropriate multi-channel approach. Properly design the store environment and offer innovative store's layouts is key to develop a successful multichannel strategy. The channel environment assumes a strategic role as it is associated with particular goals (Puccinelli et al. 2009) and plays a crucial role in influencing shopping experience and patronage intentions (Baker et al. 2002).

To achieve our research objective, we surveyed 935 grocery shoppers who had used a store, a website or a mobile app to grocery shopping at least once in a month-time. Structural Equation Modeling (SEM) was used to verify the proposed three empirical models. Theoretical and managerial implications are derived.

2 Conceptual Model and Hypotheses

Consumers engaged in purchasing activities interact with the store environment which itself influences the purchase decision (Kotler 1973). Accordingly, the atmosphere represents the retailers' effort "to design buying environments [that] produce specific emotional effects in the buyer that enhance his purchase probability" (Kotler 1973 p. 50). Indeed, store atmosphere has a central role in creating a consistent purchase behaviour by means of its components: layout, design, signage, end-caps and merchandising quality perception (Babin and Attaway 2000). Analyzing multiple store environment cues, Baker et al. (2002) found that store design is the strongest cue in influencing consumers shopping experience.

Store environment has been found to exert a positive effect on consumer's shopping enjoyment (Babin and Attaway 2000), through several store attributes (Cox at al. 2005).

A clear and easy to surf store layout, as well as a stimulating store atmosphere, have a positive effect on shopping enjoyment (Hart et al. 2007). Then we posit the following (Fig. 1):
H1: Store Environment positively influences Shopping Enjoyment.

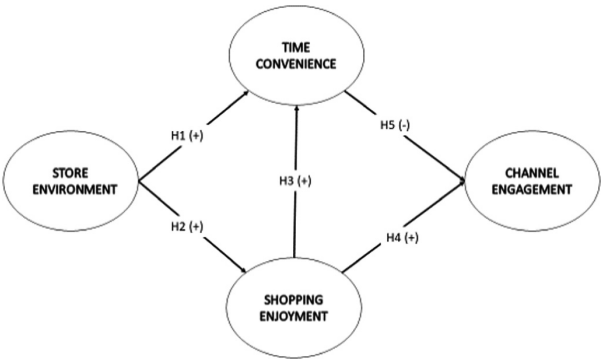

Fig. 1. Theoretical model

Store environment influences "consumers' shopping experience costs, which includes consumers' time and effort in obtaining products, as well as the psychological cost of shopping" (Baker et al. 2002 p. 120). In particular, store environment design influences the perceived shopping speed and efficiency (Baker et al. 2002). In fact, store environment can influence consumers' perception of crowding places, the time spent in payment, the time it takes to surf across shelves to find a product (Puccinelli et al. 2009). Thus, we can postulate that:
H2: Store Environment positively influences Time Convenience.

The dyad between utilitarian and hedonic shopping motives is well discussed in the literature. Nevertheless, a few studies have analysed the relationship between hedonic and utilitarian attributes and their relationship is still not clear. A recent study of Pauwels and Neslin reports "more enjoyable may mean less efficient" (2015, p. 194), assuming a negative relationship between the two aspects. Conversely, in the empirical study conducted by Seiders et al. (2007) shopping enjoyment was found to be positively related to shopping convenience. Considering that an enjoyable shopping experience may reduce the perception of time spent in purchasing, we postulate as follows:
H3: Shopping Enjoyment positively influences Time Convenience.

Individuals with a high level of enjoyment experience a state of flow, which results in higher levels of shopping engagement (Higgins 2006). In fact, they tend to have a more positive mood and are more inclined to increase the time spent on shopping (Childers et al. 2001). Accordingly, we posit the following:
H4: Shopping Enjoyment positively influences Shopping Engagement.

The paucity of time of modern consumers affects their shopping process, making them to look for an even fast and convenient shopping experience (Burke 2002). Thus, consumers looking for shopping convenience in order to reduce the time spent in the store will not be engaged in the shopping act, as follow:
H5: Time Convenience negatively influences Shopping Engagement.

3 Methodology

To verify the postulated theoretical hypotheses a survey on a British online panel of grocery shoppers was conducted in September 2016. Using a hierarchical procedure, respondents were divided in three groups on the basis of their shopping habits: physical, electronic and mobile shoppers.

A total of 935 usable and valid structured questionnaires were collected. Specifically, the dataset is composed of 101 responses for the mobile channel, 235 questionnaires for the electronic channel and 599 answers for the physical channel.

Men were the most numerous respondents (54.1%). 19% of the sample (178 respondents) were aged 34 and below, 15.8% (148 respondents) were aged 35–44 years old, 19.9% (186 respondents) were 45–54 years old, 21.1% (197 respondents) were 55–64 years old, and 24.2% (226 respondents) were over 65 years old. The annual household income of the shoppers, as well as their family composition, is not far from the overall British population (Office of National Statistics 2017). The model's items (Table 1) were evaluated on a 7-point Likert scale.

Table 1. Constructs and measurements factor loadings

Scale	Items		Factor loading	T-Value
Store Environment adapted from O'Brien (2010)	ENV1	My main grocery (store/website/app) is easy to navigate	0.845	N.D.
	ENV2	It is easy to move between different pages/shelves/sections/areas of my main grocery (store/website/app)	0.765	20.356
	ENV3	Products are logically displayed in my main grocery (store/website/app)	0.794	21.365
Shopping Enjoyment adapted from Li et al.	ENJ1	Shopping in my main grocery (store/website/app) makes me happy	0.855	N.D.
	ENJ2	I enjoy shopping in my main grocery (store/website/app)	0.906	40.303
	ENJ3	Buying grocery products in my main (store/website/app) is fun	0.826	36.001
	ENJ4	Buying grocery products in my main (store/website/app) is usually a pleasant experience for me	0.866	33.742
Time Convenience adapted from Childers et al. (2001)	CON1	My main grocery (store/website/app) allows me to save time when shopping	0.842	N.D.
	CON2	My main (store/website/app) makes my grocery shoppingless time consuming	0.791	17.653

(*continued*)

Table 1. (*continued*)

Scale	Items		Factor loading	T-Value
Shopping Engagement adapted from Grewal et al. (2003)	ENG1	I am so involved when I shop for groceries on my main (store/website/app) that I lose track of time	0.923	N.D.
	ENG2	When I buy groceries on my main (store/website/app), I lose track of the world around me	0.854	32.98
	ENG3	The time I spend buying groceries on my main (store/website/app) just slips away	0.781	28.882

3.1 Measure Validity

A two-step approach was used to analyse the data: confirmatory factor analysis (CFA) to test the unidimensionality and convergent validity of the constructs) and a structural equation model with Maximum Likelihood method (SEM) to measure constructs paths. For both procedures, we used the software Lisrel 8.80.

The psychometric analysis of the scales investigated assesses the convergence and discriminant validities. Results of CFA (Table 1) confirm that all items are significantly (t-values > 17) and substantially (factor loading > 0.765) loaded onto the expected latent constructs confirming the convergent validity of measures. All items exhibit a high item-total correlation, indicating their capability to measure the investigated constructs.

Good levels of Average Variance Extracted (AVE) and Composite Reliability (CR) greater than their conventional cut-offs (Steenkamp and van Trijp 1991) assess the convergent validity (Table 2). Furthermore, the square root of each construct AVE is greater than the correlations of the construct with the other constructs, showing that each construct shares more variance with its own measures that it shares with other constructs.

Table 2. Reliability, Convergent and Discriminant Validity and Correlation Matrix

Constructs		AVE	CR	ENG	CON	ENJ	ENV
Shopping Engagement	ENG	0.662	0.890	**0.814**			
Time Convenience	CON	0.667	0.800	0.171	**0.817**		
Shopping Enjoyment	ENJ	0.746	0.921	0.517	0.597	**0.864**	
Store Environment	ENV	0.643	0.844	0.324	0.588	0.698	**0.802**

Indicators of the model fit show a good overall fit. Although the robust Satorra-Bentler chi-square is significant $\chi^2_{(49)} = 279$ p = 0.000, the goodness of fit index is very good (GFI = 0.943) and the model has no substantial problem with the residuals (SRMR = 0.053). Moreover, the incremental fit measurements are greater than 0.90 (NFI = 0.979; CFI = 0.983).

3.2 Results

After verified the goodness of the overall model, we proceeded to estimate three SEMs, one for each retailing channel. All the structural models show good predictive ability for ENG, ENJ and CON (Table 3).

Table 3. Results of the structural equation models

	Physical	Electronic	Mobile
N	**599**	**235**	**101**
R^2 ENG	29.30%	24.40%	50.80%
R^2 ENJ	50.30%	49.10%	62.90%
R^2 CON	46.90%	31.70%	41.80%
ENV → ENJ	***0.709 (13.843)***	***0.701 (11.098)***	***0.793 (4.850)***
ENV → CON	***0.263 (3.170)***	***0.515 (4.314)***	0.438 (0.603)
ENJ → CON	***0.473 (6.001)***	0.066 (0.593)	0.242 (1.091)
ENJ → ENG	***0.671 (10.350)***	***0.546 (7.158)***	***0.882 (6.055)***
CON → ENG	***–0.248 (–3.558)***	***–0.211 (–2.658)***	***–0.518 (–2.881)***
ENV → ENJ → ENG	***0.085 (8.979)***	***0.098 (6.690)***	***0.340 (5.086)***
ENV → CON → ENG	***0.045 (2.309)***	***0.086 (2.156)***	0.583 (0.963)

Results confirm all the hypotheses postulated for the physical channel.

Although the environment is key for retailers as it influences both shopping enjoyment and time convenience, in the mobile retailing context, the store app related to ENV is not able to generate the sense of convenience. In the same way, although shopping enjoyment results as the highest in the mobile channel, it is not able to mitigate the relative negative effect of time convenience on shopping engagement. Therefore, H2 and H3 are rejected for the mobile channel.

Finally, results for the electronic channel are all confirmed apart for the effect of ENJ on CON that is not significant. H3 is rejected in the electronic channel.

Results of the Sobel test confirm the indirect effects of store environment on shopping engagement by the means of shopping enjoyment and time convenience for all the investigated channels, except for the indirect effect of the mobile environment on shopping engagement, channeled by the time convenience.

4 Conclusions

This study contributes to the current multichannel retailing literature proposing a comparison between retailing channels, namely: physical, electronic and mobile. Results confirm that store environment (ENV) is key for retailers as it is able to enhance feelings of pleasure (ENJ) and convenience (CON) in the shopper, no matter the channel used. Findings also confirm that the more the shopping enjoyment, the more consumers lose the track of the time and are engaged in their shopping activity, contributing to the emerging retailing literature analyzing the relationship between

hedonic and utilitarian shopping motives. Nevertheless, consumers looking for a convenient shopping experience, which required a reduced use of time and efforts, result to be less prone to be engaged in the shopping activity. Accordingly, retailers have to carefully arrange their store layout and merchandise in order to simplify the surfing across shelves. In this perspective, indeed, the store environment is key in minimizing the perception of wasting of time during the shopping activity. We need to underline that, conversely to our expectation, to date, mobile store apps are not able to do so. This aspect is strategic for retailers, as consumers prefer online channels for being convenient, with no time constraints. To date, mobile applications do not allow consumers to easily and quickly find products they are looking for, forcing them to spend a lot of time on their grocery shopping. This aspect can be one of the reasons for the reduced market-share for the online sales. However, given the sudden technological developments, we assume that in the next few years mobile grocery apps will be more intuitive and user-friendly. Another important aspect to highlight for both the online channels is the inability of websites and mobile apps to make the usage of the interface as a driver of enjoyment and pleasure to mitigate time convenience. Although the online shopping is considered more recreational and convenient than in-store shopping, our findings show that the two aspects are not yet related in online channels.

A limitation of our research concerns the sample used in the empirical analysis. In fact, the empirical research is a cross-sectional study based on a small sample size, especially considering the number of the surveyed shoppers using the mobile channel. Moreover, the survey was carried out in a single national context that is highly innovative and unique in its competitive retailing scenario. As a consequence, caution must be exerted with respect to the results obtained and causality between the latent variables should be avoided. Future studies should verify similarities and differences between consolidated (e.g. UK, US) and emerging digital retailing markets (e.g. Italy, Russia, etc.).

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The Impact of Consumer Self-regulation in Grocery Shopping on Subsequent Consumption of Healthy and Unhealthy Food

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Abstract. The purpose of the present paper is to investigate if there is any effect between the depletion of self-regulatory resources during the product selection when shopping for groceries and subsequent food consumption. More precisely, we propose that consumers who have to self-regulate in purchasing decisions because of their desire to keep their basket balanced with unhealthy and healthy food deplete their self-regulatory resources and that this will lead to an increase of the amount of subsequent consumed food. The findings of two laboratory experiments indicate that the amount of consumed food increases due to the depletion of self-regulatory resources and that this effect is moderated by the attitude towards healthy eating. If consumers were offered healthy food in addition to the unhealthy food for subsequent consumption, consumers were more likely to chose the healthy option after self-regulation.

Keywords: Grocery shopping · Consumer purchase decisions · Depletion effect · Subsequent food consumption

1 Introduction

As it is intuitive to conclude that healthy eating is related to the purchase of food products, it is important for people to self-regulate not only with regard to food consumption, but also when making purchase decisions for national brands and/or private labels in food retailing. However, self-regulatory resources can be reduced through emotional excitement and emotionally addictive consumption, resulting in a reduction of self-regulation capacity, which can lead to unrestrained eating behaviours (Ayres et al. 2011; Baumeister et al. 1994). Consumers may be inclined to eat unhealthy food after the purchase of healthy foods due to the depletion of their self-regulatory resources when they sought to balance their shopping basket, e.g., consume unhealthy food at free-standing food carts or kiosks in front of supermarkets after finishing their shopping trip. Only a few studies have investigated the role of cognitive depletion through self-regulation during shopping situations (e.g., Vohs and Heatherton 2000; Ward and Mann 2000). Specifically, the impact of a depletion of self-regulatory resources when consumers are willing to balance their shopping basket in grocery shopping on the amount of the subsequent consumption of food has not been

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investigated. Usually retailers provide a range of national brands as well as private labels in their assortment that should enable consumers to self-regulate themselves in shopping situations (e.g., organic or fair trade products). Hence, consumers are faced with a trade-off between healthy and unhealthy foods in grocery retailing and they seek to balance their baskets (e.g., purchasing apples to balance out the chocolate). Thus, the depletion of cognitive resources is considerable if consumers try to resist purchasing such products through self-regulation (Ward and Mann 2000).

The present paper contributes to research in the field of consumer behaviour and retailing by investigating the impact of the depletion of self-regulatory resources in purchase decisions on subsequent food consumption. In two laboratory experiments, we manipulate and investigate whether the depletion of self-regulatory resources will have an impact on the amount (study 1 and study 2) and the kind of food chosen (healthy or unhealthy, study 2). Moreover, we propose a moderating effect of the consumers' attitude towards healthy eating on the relationships under investigation.

2 Theoretical Background and Hypotheses Development

According to Vohs and Baumeister (2004), self-regulation could be understood as the process in which people exercise control over their thoughts, emotions, attentions, impulses and actions to bring themselves in line with their targeted long-term goals. Often, this goes hand-in-hand with the fact that people prevent themselves from doing something, e.g., purchasing a high-calorie candy bar at the checkout. However, the ability to self-regulate is influenced by several stimuli presented to consumers at the point of sale (e.g., national brands or private labels). Some studies examined the influence of product-related factors on self-regulation, such as product information on packaging, the size of the package, and the price of the product (e.g., Baumeister 2002). Vohs and Faber investigated how the manipulation of self-regulation resources affects impulsive buying and found that with previous depletion of self-regulatory resources a so-called "depletion-effect" is likely to occur, which fosters impulsive buying and increases consumers' willingness to pay. The findings of Baumeister indicate that the depletion of self-regulatory resources will influence the amount of food intake. Moreover, factors such as attitudes towards healthy eating and sustainability might have a moderating effect on the relationship between the depletion of self-regulatory resources and subsequent food consumption (Bickart and Ruth 2012).

In grocery shopping, self-regulation takes place through the choice of products and the desire to keep the basket balanced with healthy and unhealthy food items. Particularly, responsible choices change the individual's cognitive resource through self-regulation (Baumeister et al. 1998) and the depletion of cognitive resources through self-regulation will lead to increased consumption (Vohs and Heatherton 2000). By accepting that the process of self-regulation is a limited resource (Muraven and Baumeister 2000), an exhaustion of cognitive resources through self-regulation is characterized by the depletion of this resource, such that the resource is no longer available for a self-control task. In the context this research, a self-control task involves the ability to resist consumption after a previous shopping situation. As consumers have only a limited part of their cognitive resources left, after the depletion of

self-regulatory resources in purchase decisions, this will have an impact on subsequent food consumption. Especially, we expect that the amount of consumed food will increase due to the depletion of self-regulatory resources.

Given that purchasing decisions are influenced by consumer attitude (Fischer and Arnold 1994), another significant factor that could influence buying decisions is the attitude towards sustainability. Consumers who showed no sustained adjustment in product choice were also not influenced in their purchasing decisions by environmental certifications (Bickart and Ruth 2012), whereas consumer attitude towards healthy eating was found to potentially influence product choice. Youn and Kim (2008) confirmed that social and personal responsibility of the consumer affects the support of Cause-related-Marketing measures (CrM) in a positive manner and that the consumption of such an advertised product is the result. Accordingly, we propose a moderating impact of attitude towards healthy eating and the attitude towards sustainability on the relationship between the depletion of self-regulatory resources and subsequent food consumption.

3 Experimental Studies

We conducted two laboratory experiments to test our hypotheses. In both experiments we used previously selected products in a simulated shopping situation to manipulate our experimental factor, the depletion of cognitive resources (high vs. low). A pre-test was conducted to test whether the selected products as well as the simulated shopping situations are suitable to manipulate the experimental factor as intended. In the following we will report the design and the results of the two experimental studies and discuss the findings.

3.1 Study 1: Method, Procedure, and Key Findings

Factorial Design of Study 1

The factorial design of study 1 distinguishes between two experimental conditions (high vs. low depletion of self-regulatory resources). In the high depletion of self-regulatory resources condition, the participants had to conduct a specific – previously tested – self-regulatory task that should reduce their cognitive resources through self-regulation. The participants were told to imagine a situation where an unhealthy product of a national brand or a private label is already in their basket. Four products from similar product categories were presented to them, and the participants had to choose one product, which they think might be suitable to balance the purchase of the unhealthy product. The four products included products of national brands or store brands with an organic label, a fair trade label, a cause-related marketing (CrM) label or a healthy product (without a specific label) because particularly responsible choices reduce self-regulation resources (Baumeister et al. 1998) and the choice of a certified product serves as an indicator of sustainable consumption decision. This task had to be conducted eight times with different products and should lead to a depletion of self-regulatory resources. In the second condition – low depletion of cognitive resources – the participants had to conduct a simple task without self-regulation restrictions to

considerably less exhaust cognitive self-regulatory resources of the participants. In this condition the participants had to select ten products of national brands and store brands, which they often buy when shopping groceries, out of a list of twenty-five products. Therefore, in the latter experimental condition the depletion of self-regulatory resources should be lower, compared to the first condition. After finishing the task, participants in both conditions had to answer a standardised questionnaire. While completing the questionnaires, the participants could eat as much M&M's as they like. According to Baumeister et al. (1998), due to the positive connection between the desire for sweets and the ease of use in the measurement and presentation, only unhealthy food (M&Ms) was used to measure subsequent food consumption in study 1.

Measures of Study 1

Subsequent food consumption was measured by the amount of consumed M&M's (in grams). We used three indicators for assessing the depletion of self-regulatory resources, namely, self-efficacy, self-control and self-monitoring. Self-efficacy is a construct that can be used to check whether self-regulation and a following cognitive exhaustion of the participant occurred and was measured according to Bandura (2006). Self-control is a common measure linked to self-regulation. Breaking habits, resisting temptation and maintaining good self-discipline is reflected by this construct (Tangney et al. 2004). Effective self-regulation is based on the ability to judge oneself. Therefore, another item to measure self-regulation is self-monitoring (Baumeister et al. 1994) (cronbach's $\alpha \geq 0.72$ for all indicators). To measure the attitude of the participants towards sustainability as well as their attitude towards healthy eating, we adapted the scale introduced by Webb et al. to the context of our study. As intended, the findings of a manipulation check show that in the high depletion condition the participants reported a significant lower self-efficacy, lower self-control, and lower self-monitoring, compared to the low depletion condition ($p < .05$).

Subjects of Study 1

N = 113 students of a German University participated in the first study. The average age was M = 23.68 (SD = 2.88) (54% female). The participants were randomly assigned to one of the experimental conditions. Overall, the participants were nearly equally distributed between the two experimental conditions.

Key Findings of Study 1

Overall, 56.6% of the participants consumed M&M's with an average consumption of M = 16.8 grams (SD = 17.1). Because preferences and tastes vary individually, there were participants who exhibited a rather negative attitude towards chocolate or do not eat chocolate at all. However, some of the participants stated that they are not allowed to eat chocolate because of dietary restrictions or that they are allergic to it. To account for a potential distortion of our findings due to non-consumption, we only included the participants, which had eaten M&M's for the hypotheses testing. The finding of a T-test shows a significant impact of the depletion of self-regulatory resources on subsequent food consumption ($t = 2.37$, $p < .05$). Participants in the high depletion condition consumed nearly twice as much M&M's compared to the participants in the low depletion condition.

Moreover, the findings further show that this effect is moderated by the attitude towards healthy eating. Participants with a high depletion of cognitive resources and an above average (vs. below average) attitude towards healthy eating consumed considerably less (vs. more) M&M's. More precisely, cognitive depleted consumers with below average attitude towards healthy eating are likely to consume more unhealthy food (M&M's), compared to consumers with higher cognitive resources.

3.2 Study 2: Method, Procedure, and Key Findings

Rationale and Factorial Design of Study 2

The subsequent consumption of unhealthy food is influenced by the depletion of self-regulatory resources in purchasing decisions as the findings of study 1 show. However, it is questionable whether this effect still will occur if participants can choose between a healthy and an unhealthy option for subsequent food consumption. One might conclude that consumers can be primed towards sustainable consumption through the task in the first part of the experiment when they had to choose between products of national brands and store brands with an organic label, a fair trade label, a CrM label or a healthy product label to balance their baskets. To replicate the findings of study 1 and to account for the possibility of consumers' "self-priming" towards sustainable or healthy consumption, we used the same method as in study 1 with the exception that after the first part of the experiment, the participants were offered, again, M&M's (unhealthy option) and grapes (healthy option). This study was conducted to determine whether people refrained from eating the unhealthy food. If one also provides a healthy option (e.g., grapes), the chosen alternative as well as the amount of subsequent consumption of food might change.

Measures of Study 2

The measurements used in study 2 were similar to those used in study 1 with the exception that the consumed foods being compared in this study were M&M's (unhealthy option) and grapes (healthy option). The manipulation check reveals the intended significant differences between the two experimental conditions in terms of the self-regulation indicators used ($p < .05$).

Subjects of Study 2

A total of N = 86 people participated in this study (51.1% female). The average age was 25 years (M = 25.42, SD = 6.6).

Key Findings of Study 2

Interestingly, participants in the high depletion condition will more likely choose grapes (the healthy option), compared to M&M's (unhealthy option) ($p < .05$) and these participants still consume considerably more food after conducting the self-regulatory task ($t = 3.15$, $p < .01$). Hence, it seems that balancing the basket when shopping groceries leads to a depletion of self-regulatory resources of consumers, which in turn increases the amount of subsequent consumed food, but at the same time it increases the likelihood that consumers will subsequently consume more healthy food. The results of a moderation analyses reveal that if consumers can choose between

healthy and unhealthy food options, the strength of the moderating impact of attitude towards healthy eating on the amount of subsequent consumed food is reduced, compared to the findings of the first experiment, but still significant ($p < .05$). Moreover, the findings show that especially consumers with a below-average attitude towards healthy eating are more likely to consume more food in general, but – interestingly – at the same time they will be more likely to choose the healthy option.

4 Discussion and Conclusions

The findings of the two experimental studies show that the depletion of self-regulatory resources has an impact on subsequent food consumption. If depletion is high, consumers will consume more food. Moreover, this effect is moderated by the attitude towards healthy eating. However, the findings of the second study indicate that self-regulation in purchase decisions in grocery retailing – e.g., when balancing the basket – might lead to some kind of "self-priming" towards healthy consumption, especially for consumers with a below average attitude towards healthy eating, even when the overall amount of consumed food still increases.

One might conclude, if consumers follow a specific strategy to balance their baskets over time, fewer resources should be depleted, which then restores the original capacity of the resource (Baumeister 2002), and accordingly, more resources become available for self-regulation regarding subsequent food consumption. Moreover, Vohs and Heatherton (2000) demonstrated that self-regulation is a resource with limited capacity. However, the resource-based approach indicates that a cognitively exhausted resource can recover (Baumeister 2002) and that cognitive recovery can then diminish the negative impact of self-regulation in purchasing decisions on the subsequent consumption of food. Therefore, further research should examine the relationship between cognitive recovery after previous self-regulation and the subsequent consumption of unhealthy and healthy foods. This study finds that if consumers have to balance their shopping basket in grocery retailing this will deplete more cognitive resources as a result of increased self-regulation, compared to non-restricted product choices. However, future research should consider further differentiations in product characteristics and their impact on consumers' self-regulation in grocery retailing (e.g., price, packaging). In this context, retailers should help consumers by offering clearly labelled products, and food kiosks should offer consumers healthy foods for their subsequent food consumption. To classify health-conscious features of products, consumers must recognize the necessary information with respect to ingredients and nutrition. Such knowledge can then be used in self-regulation processes. Distinct markings and clear labelling of healthy products can assist the consumer when reviewing the relevant information and thereby protect self-regulatory resources.

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Augmented Empathic Capacity: An Integrative Framework for Supporting Customer Engagement Throughout the Automated Customer Journey

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Abstract. The rise of automated touch points (ATPs) upsets firm-customer interactions, and its net effect on customer engagement (CE) is under scrutiny. We posit that ATPs negatively affect CE by degrading a firm's empathic capacity. First, ATPs impair human interactions, which decreases the ability to *share* customers' affective and mental states. Then, ATPs rely on computer-based solutions, which increases the ability to *decode* customers' affective and mental states. However, *decoding* without *sharing* affective and mental states can lead to egocentric behaviors, which are reminiscent of those of a psychopath. This threat highlights the importance of redefining the boundaries of empathy. Accordingly, we introduce a new integrative framework: the augmented empathic capacity. It describes two routes that stem from the two main components of empathy: the socio-affective route and the socio-cognitive route. The socio-affective route relies on two emotional connection systems (bottom-up system, top-down system), and aims at sharing customers' affective and mental states. The socio-cognitive route relies on two emotional appraisal systems (covert system, overt system), and aims at mentalizing customers' affective and mental states. The joint evaluation of both routes enables to deploy an empathic chain value—the roadmap for promoting prosocial interactivity and CE throughout the automated customer journey.

Keywords: Customer engagement · Emotion · Empathic capacity · Omni-channel retailing · Automated touch points

1 Introduction

Engaging customers is important for promoting interactivity, collaboration, and co-creation of value. Customer engagement (CE) is a part of the overall customer experience: it constitutes touch points along the customer journey and results in cognitive, emotional, and behavioral responses (Lemon and Verhoef 2016). Nowadays, touch points evolve significantly. Automated touch points (ATPs)—all automated/computerized forms of interaction—are now an integral part of omni-channel retailing. Chatbot, automatic self-checkout systems or self-ordering kiosks, become essential

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touch points along the customer journey and may even replace traditional dyadic interactions between the firm and the customer (Singh et al. 2017). However, the transition from traditional to ATPs is tricky. Recently, Walmart and Canadian Tire removed automatic self-checkout systems in several stores[1], while Japan's robot hotel Henn-na replaced half of its robots with human employees[2]. Firms explain that automatic systems often break down and cost more than they should have. But customers' complaints are different: some customers think they do the retailers' job; automatic self-checkout systems are cumbersome to use; it is still warmer to interact with employees. The perception gap between firms and customers is interesting as it indicates that ATPs are not customer-focused enough and relate to critical touch points ("moment of truth"; Lemon and Verhoef 2016, p. 82). From the firm's perspective, it is a matter of cost. But from the customer's perspective, it is rather a matter of connectedness. And CE—the extent to which the customer connects with the firm—refers to such a connectedness.

To date, studies have neglected the notion of connectedness despite the call of several researchers for updated models that identify how customers use specific touch points and what the effects of these touch points on CE are (Lemon and Verhoef 2016; Malthouse and Calder 2011). For instance, Ostrom et al. (2015, p. 132) identified the topic "*managing the customer experience across complex and diverse offerings, touch points and channels*" as the third most important research priority among 80 subtopics in retailing and consumer services. Lemon and Verhoef (2016, p. 84) suggested to "*take a fresh look at the customer's overall experience and to determine whether and how new approaches and technologies may be able to remove friction or pain points*". Additionally, Larivière et al. (2017, p. 241) underlined that customers are people first, and the optimal balance between "tech" and "touch" must be found for every firm-customer touch point. More recently, Pansari and Kumar (2017) have shown that customers become engaged with the firm when a relationship has an emotional connectedness. The current paper adopts this line of investigation by understanding the long-term effect—positive, negative, negligible?—of ATPs on CE.

Despite the CE conceptualizations, little attention has been paid to the role of emotion connectedness (Pansari and Kumar 2017). We believe this to be an important aspect for two reasons. First, emotion is an interface between customers and touch points that contributes to transform customer experience into experiential knowledge (Jayanti and Singh 2009; Marinova et al. 2017) and action readiness (approach/avoidance; Scherer and Moors 2019). Second, emotion connectedness refers to the firm's empathic capacity; the capacity to *share* as well as to *understand* customers' affective and mental states in order to develop prosocial interactivity and sustain CE. This paper aims to address these two gaps by introducing the augmented empathic capacity integrative framework to support CE throughout the automated customer journey.

[1] https://www.cbc.ca/news/business/canadian-tire-self-checkout-cashiers-automation-1.5011981.

[2] https://www.hotelmanagement.net/tech/japan-s-henn-na-hotel-fires-half-its-robot-workforce.

2 Unpacking the Emotional Antecedent of CE

Emotion is an antecedent of CE (Pansari and Kumar 2017). It contributes to connect and engage the customer with the firm. But little is known about the psychophysiological antecedents of customers' emotion—and therefore why emotion matters in emotional connectedness and CE. Based on the cognitive appraisal theory (Scherer and Moors 2019), we define emotion as an emergent, dynamic episode that involves a continuous change in customers' cognition, motivation, physiological reactions, motor expressions, and feelings to adapt flexibly to relevant touch point experiences. The elicitation of customers' emotion—and the determination of its characteristics—relies on the subjective, continuous, and recursive appraisal of the touch point experience. Four appraisal criteria structure this automatic, subconscious process (Scherer and Moors 2019):

(1) Goal relevance, which refers to the congruence between the customer's goal and the touch point experience ("*Is the firm likely to satisfy my needs?*");
(2) Valence, which refers to the customer's intrinsic pleasure during the touch point experience ("*Are my interactions with the firm pleasant?*");
(3) Agency, which refers to the source or cause of emotional episode (e.g., *Customers? Peers? Firm? Firm's partners?*);
(4) Fairness, which refers to the altruistic or egoistic-oriented touch point experience ("*Does the firm answer me in a prosocial, altruistic manner?*").

The cognitive appraisal process results in an emotional episode, characterized by physiological (e.g., skin conductance response), expressive (e.g., facial expressions), and subjective (e.g., feelings) reactions. Since a customer's cognitive appraisal is subjective, there is a potentially infinite number of emotions associated with touch point experiences. Finally, the emotional episode is embodied and experienced in a unified way—the distinction between appraisal and emotion being impossible to consciously establish by the customer—to form the customer's action readiness: approach (emotional connection and engagement) or avoidance (emotional disconnection and nonengagement). Over the long term, the sensorimotor integration and representation of a customer's emotional experiences in the central nervous system help him/her to learn about his/her experiences and to develop experiential knowledge, skills, and approaches to solve touch point-related issues (see the somatic marker hypothesis; Damasio 1996).

Our theory-based definition of emotion emphasizes that the customer's emotional touch point experiences are not only thought about: they are also embodied and they strongly determine the long-term valence and intensity of the emotional connectedness and CE with the firm. It is therefore necessary to maintain an emotional connectedness with customers along their journey to succeed in the cognitive appraisal checks and elicit positive CE. But what are the effects of ATPs on such an emotional connectedness? Customers are primarily human beings who need empathy to connect and engage emotionally and socially with firms. However, the current technological shift in touch points may present the risks of a short-term, profitable strategy only. Limiting firm-customers' interaction to the technical capacity of ATPs would lead to a

rationalization and dehumanization of the relationship that are a source of customer frustration, which is detrimental to CE (Gorry and Westbrook 2011). ATPs reduce the opportunities for emotion-sharing and force customers to rationalize their experiences by adapting them to the technical constraints imposed by ATPs. For example, language-processing algorithms limit the effectiveness of *chatbots* to elementary queries and conversations. Firms gradually lose the physical link with customers—now perceived as a fragment of a transaction process—and compromise their empathic capacity in leveraging emotional connectedness and CE.

3 Effect of Automated Touch Points on Firm's Empathic Capacity

Empathy plays a key role in reciprocity-based social interactions between customers and firms to establish emotional connectedness and to engage customers in an interactive, collaborative, co-creative relationship (Wieseke et al. 2012). Although the marketing literature suggests different definitions of empathy, we introduce here a definition that stems from contemporary social neuroscience research, and which will lay the foundation of the augmented empathic capacity integrative framework. Empathy is a sociobiological process referring to our ability to *share* as well as to *understand* other peoples' affective and mental states—feelings and emotions on the one hand; beliefs, thoughts, and intent behaviors on the other. It describes two independent but interacting components: the affective component—mainly automatic and unconscious—and the cognitive component—more controlled and cognitively mediated. Both components are jointly required to elicit empathy, which is oriented toward prosocial action readiness.

Frontline employees are empathic beings who respond spontaneously to customers' affective and mental states, which constitutes the firm's empathic capacity (Wieseke et al. 2012). But what is the consequence on emotional connectedness and CE if frontline employees are replaced by ATPs? We posit that ATPs may negatively affect CE by degrading firm's empathic capacity—a firm's ability to *share* as well as to *understand* customers' affective and mental states in order to engage with them. On the one hand, ATPs elicit loss in human interactions, which decreases the firm's ability to *share* customers' affective and mental states—the affective dimension of a firm's empathic capacity—and results in emotional disconnection with customers. On the other hand, ATPs provide access to an impressive amount of data (big data) and increase the firm's ability to *decode* the customers' affective and mental states—the cognitive component of a firm's empathic capacity—but without increasing its ability to *share* them. Such a firm does not feel and share the customers' affective and mental states: they digitize them, code them, and process them to develop predictive models and streamline customer relations.

However, *decoding* without *sharing* customers' affective and mental states can lead to antisocial and egocentric behaviors solely aligned with the firm's benefits, which we argue are reminiscent of those of a psychopathic individual (Mealey 1995). Such psychopathic firms are unable to *share* customers' affective and mental states. But they are efficient at *decoding* these states and can even take social, emotional, and financial

advantage of others. This "mind-reading" skill—by means of artificial intelligence, big data analytics, and machine learning—would make psychopathic firms competent to anticipate customers' social and behavioral intentions and manipulate them, whilst lacking consideration for customers' well-being, devoid of guilt. Over the long term, the firm's psychopathic behaviors—manipulative, selfish, and antisocial toward customers' needs and wants—will negatively affect emotional connectedness, CE, and eventually the firm's performance.

This issue goes beyond empathy in face-to-face, frontline, dyadic interactions: it puts the empathic process at a strategic level of the firm and highlights why a firm's empathic capacity is important to leverage technology-enabled customer engagement. In order to tackle this issue, we introduce a new integrative framework—the augmented empathic capacity—which describes the firm's capacity not only to *decode*, but also to *share* customers' affective and mental states, in order to develop prosociality, build emotional connectedness, promote CE throughout automated customer journey, and eventually sustain the firm's performance.

4 The Augmented Empathic Capacity

The augmented empathic capacity is an integrative framework that describes two sequential routes that stem from the two main components of empathy: the socio-affective route and the socio-cognitive route (Fig. 1).

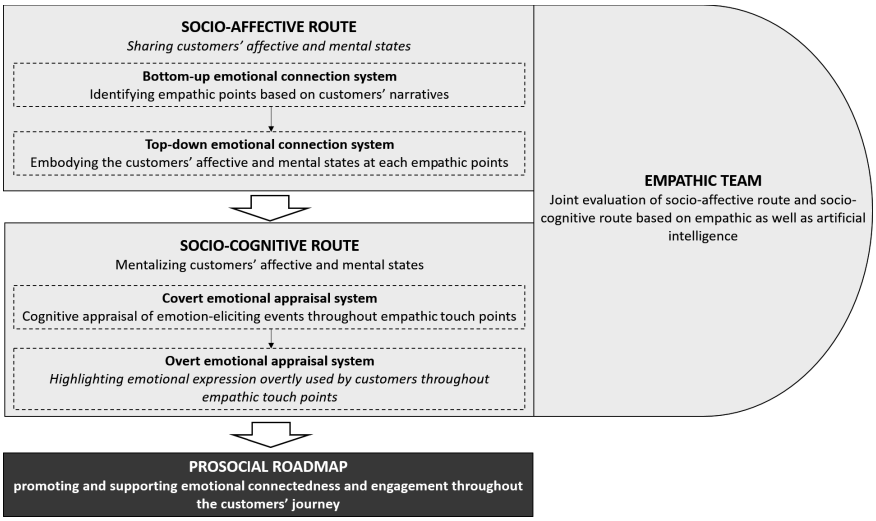

Fig. 1. The augmented empathic capacity integrative framework

The Socio-affective Route of Augmented Empathic Capacity

The socio-affective route aims at *sharing* the customers' affective and mental states and appeals to employees' empathic intelligence. These dedicated employees—the

empathic team—show high scores in emotional intelligence and are trained in empathic intelligence. Listening empathically to customers, correctly identifying the emotional signals they give, being able to adopt the customers' point of view without confusing the self with others in order to prevent any risk of contagion and emotional distress are all empathic skills that could be taught to employees through the narrative of customers' experiences. Accordingly, the socio-affective route of augmented empathic capacity relies on two emotional connection systems:

- *The bottom-up emotional connection system*, which refers to empathic panels where what we call "customer-partners" share their affective and mental states in a narrative form with the empathic team, on the firm's premises. The aim is to define an empathic value chain and to identify "*empathic points*"—the moment of truth—these highly emotional touch points along the customer journey that require a physical interaction structured around the principle of emotional connection.
- *The top-down emotional connection system*, which refers to the deployment of the empathic team in the field to "feel the heat" of in situ experiences with the customer-partners. The aim is to put employees in the customers' shoes at each "*empathic point*" previously identified, and to embody the customers' affective and mental states during "*empathic points*" experiences in order to select potential prosocial courses of action.

The socio-affective route of the augmented empathic capacity has several major advantages. First, from an operational perspective, the identification of "*empathic points*" would then enable the deployment of frontline employees for touch points that have value for the customers. This makes it easier to establish an emotional connection with the customers and to respond empathically to their expectations, and to engage with them. Then, from a strategic perspective, identification of "*empathic points*" is conducive to the monitoring of the customers' affective and mental states related to specific touch point experiences, and then to the dissemination of this information throughout the firm for the continuous improvement of Customer Relationship Management.

If we reason by opposition, the identification of "*empathic points*" makes it possible to identify touch points that do not merit a particular emotional connection with the customer. In that case, the customers would appreciate ATPs because they meet their simple and immediate needs. The augmented empathic capacity model could therefore consider ATPs as the firm's prosocial, altruistic response to leverage customer engagement. In addition, ATPs would help to protect frontline employees from "empathic fatigue": feeling empathy at any time and in any place is particularly challenging and can lead to emotional contagion and distress, which would be counterproductive.

The Socio-cognitive Route of Augmented Empathic Capacity

The socio-cognitive route aims at "mentalizing" the customers' affective and mental states throughout their journey by using artificial intelligence applications and analytics. While the *sharing* of customers' affective and mental states can be triggered very quickly and outside the threshold of consciousness, its *understanding* requires explicit and sustained cognitive development that can be disrupted by the lack of time and attention constraints. Moreover, this mentalization process requires a form of anchoring

and of adjusting the inferences developed with others to be effective. Artificial intelligence could assist empathic teams in this mentalization process, and thus facilitate the development of their empathic capacity. Accordingly, the socio-cognitive route of the augmented empathic capacity relies on two emotional appraisal systems:

- *The covert emotional appraisal system*, which refers to the cognitive appraisal of emotion-eliciting events during customers' touch point experience—the cognitive component of emotion. The aim is to "drill data" to identify the origin and the emotional nature of the CE, to situate it in a specific consumption context or touch point experience, and thus better anticipate the customers' intentions and behaviors. Accordingly, the covert emotional appraisal system would facilitate the identification of prosocial solutions adapted to the customers' needs that are sometimes difficult to verbalize.
- *The overt emotional appraisal system*, which refers to emotion labelling by means of sentiment mining and multi-modal emotional recognition such as facial expression and vocalization—the expressive component of emotion. The aim is to identify and understand, on a large scale, how customers emotionally engage with a firm's touch points throughout their journey. The overt emotional appraisal system contributes to highlight the emotional expression overtly used by customers to describe their affective and mental states, and would assist empathic teams in accurately understanding the ongoing customers' affective and mental states throughout the journey.

The socio-cognitive route of the augmented empathic capacity plays an important role in the development of a strategic and prospective approach to augmented empathic capacity. Based on big data analytics, the socio-cognitive route identifies the customers' emotional motivators—the intrinsic, implicit, and emotional goals that guide CE throughout their journey—based on what they *do*, rather than on what they *say*. Indeed, customers are not always fully aware of the real reasons for their engagement, which makes reporting data somewhat unreliable. Behavioral data are more objective and offer the opportunity to continuously determine the motivational drivers of CE—data being digitized and stored in real time, including through the use of smartphones and social networks. Identifying the customers' emotional motivators using big data is a central step in the strategic development of empathy. It refers to the firm's empathic capacity to establish the emotional connection by aligning its brand with the customers' motivations, thus helping it to achieve its far-reaching and unconscious goals (Magids et al. 2015).

Finally, in the augmented empathic capacity integrative framework—as for any empathic process—the joint evaluation of the socio-affective and the socio-cognitive routes is required for the complex evaluation of customers' affective and mental states. The mastering of the socio-affective route as well as the socio-cognitive route by the empathic team members is therefore mandatory for eliciting genuine empathy that would be reflected in the roadmap promoting emotional connectedness and prosociality along the customers' journey.

5 Perspectives

The rise of ATPs in retailing and consumer services is a factual situation and the effects of such ATPs on CE are still under investigation. In order to contribute to this important topic, we introduced the augmented empathic capacity integrative framework that triggers an important mind shift: the question is no longer whether ATPs are positive or negative for CE, and/or how to make ATPs more empathic. Rather, the question is at which step of the empathic value chain firms should implement ATPs to promote emotional connectedness, prosociality, and raise CE.

This new perspective breaks with the view that empathy is only a matter of in situ, dyadic interaction, during service or product delivering. Instead, it is regarded as firms' empathic capacity—deployment of ATPs should be a matter of empathy—which results in prosociality based on a technology-enabled interactivity for responding empathically to specific customers' needs (e.g., flexibility, availability, cost reducing). However, and simultaneously, firms need to maintain a physical, emotional connectedness with customers, specifically where/when "need for human touch" is required.

This is therefore the challenge that firms will have to face in the near future: to develop their augmented empathic capacity and direct it toward empathic Customer Relationship Management in order to promote CE and value creation for both firms and customers.

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Multivariate Analysis of Consumer Preference Structures Across Multiple Categories

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Abstract. That consumers' purchase behavior varies across categories is being documented actively by the marketing science community. The variation in such behavior can be attributed to the heterogeneity in consumer preferences across categories as well as the nature of categories (e.g., perishable goods). In this research, we implement a multivariate probit model specification that helps deduce how the nature of a category influences a consumer's preference structure not only for that category but across multiple categories. We use scanner panel data across multiple categories to calibrate the model. Over and above critically evaluating the results from this model, we derive marketing metrics using customer survey data from the same panel of customers. We then deduce the (i) effectiveness of a retailer's pricing and promotional policies, and (ii) suggest directions for improving customer relationship management. Given the complex nature of the modeling approach, we use Hierarchical Bayesian methods (MCMC) to obtain model parameters.

Keywords: Retailer analytics · Multivariate probit · Scanner data · Survey data

1 Introduction

Understanding and validating consumer purchase behavior using scanner data has been prevalent in marketing science literature (Guadagni and Little 1983). For a retailer, it is vital to understand this behavior within and across product categories. Generating pertinent metrics has become a vital tool for retailers to strategize their marketing policies effectively. A basic requirement for this activity is fruitfully investigating consumer response (or purchase) behavior within and across product categories. Several studies account for influence of the nature of the relationships between categories on response parameters (e.g., Manchanda et al. 1999), such as price and promotion sensitivities. Other studies have extended this literature by examining the nature of association in response parameters (e.g., Duvvuri et al. 2007). These studies delve into the effects of the relatedness of categories (e.g., complementarity) on consumer responses to marketing stimuli, such as prices and promotions. The major objective of our study is two-fold: to investigate associations in response parameters when the relatedness—complementarity or substitutability, is not clearly definable; then attempt to dissect the associations using survey data from the same panelists used in model calibration.

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2 Modeling Approach

Since we account for heterogeneity across households (or consumers) making purchases across multiple categories, we adopt the random utility framework defined as:

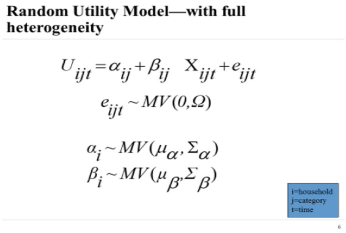

Fig. 1. Multivariate probit model

The assumption of a multivariate normal distribution, for the errors across the utility functions and the response parameters for i = 1, …, I consumers and j = 1, … J categories at purchase occasions t = 1, … T, yields a multivariate probit model (Fig. 1 above). We use this framework as it is a generalizable specification for investigating consumers' cross-category purchasing behavior.

3 Data

The data for this study are provided by a stand-alone Garden & Home retailer from the Northwest Pacific region of the United States. The retailer classifies product offering into two major divisions—garden and home. Within the garden division, they categorize the plants they sell into four major categories– Annuals & Poinsettias, Tropical & Indoor, Nursery, and Perennials.

- Annuals & Poinsettias: are plants that grow for one season and die (poinsettias are typically purchased during the Holiday season in the United States);
- Tropical & Indoor: plants that require certain "climatic" conditions to survive;
- Nursery: plants and trees that are propagated for planting elsewhere; and
- Perennials: are plants that regrow every spring.

We focus our investigation on these four categories of plants.

The scanner data include marketing mix variables, e.g., type of plant, prices, and promotions. One of the limitations of scanner panel data has been that there is no account for factors that drive consumer purchase behavior. To circumvent this, we avail of customer survey data collected by the retailer to help them build profiles for their

customers—using demographic, attitudinal, and preferential data. The calibration scanner panel data extracted for the study span two years across 1500 customers. A subset of 1075 of the 1500 customers in the scanner data panel participated in the customer survey overlapping with the duration of purchase histories. This survey is the first customer survey the retailer has conducted to better understand the attitudes and underlying nuances of their customers' purchase behavior.

4 Highlights of Preliminary Results

Given the complex nature of the modeling framework and our interest in understanding the nature of heterogeneity in purchase behavior, we used Hierarchical Bayesian inference to estimate model parameters. This helps us in obtaining customer-level parameters making it conducive to match the data from survey for conducting sensitivity analyses.

	Annuals & Poinsettias	**Tropical & Indoor**	**Nursery**	**Perennials**
Annuals & Poinsettias	1.00	**-0.11**	**0.08**	**0.35**
Tropical & Indoor	…	1.00	**-0.18**	**-0.10**
Nursery	…	…	1.00	**0.22**
Perennials	…	…	…	1.00

Fig. 2. Error correlation matrix

Figure 2 above depicts the nature of correlation among the errors, or coincidence, among the four categories of plants. In other words, a negative correlation between any two categories implies that when one of these categories is purchased, the probability of purchasing the other is lower–substitutability. Extending similar logic, if two categories share a positive correlation, then purchasing one may increase the probability of purchasing the other—complementarity. All the correlations are statistically significant (after checking the 95% confidence intervals). Hence, Annuals & Poinsettias-Nursery, Annuals & Poinsettias-Perennials, Nursery-Perennials pairs share complementarity, while the Tropical & Indoor category shares substitutable coincidence with all other categories. These results are reasonable as Annuals & Poinsettias, Nursery, and Perennials categories share similarities in terms of acclimatization to the region they are sold in, when (seasonality) and how they are sold.

Plant Category	N	Intercept	Price	Promotion
Annuals & Poinsettias	1500	**1.105**	**-0.242**	**31.193**
Tropical & Indoor	1500	**…**	**0.004**	**-9.600**
Nursery	1500	**…**	**-0.007**	**-6.003**
Perennials	1500	**…**	**-0.036**	**-2.669**
Annuals & Poinsettias	1500	**…**	**0.057**	**-5.565**
Tropical & Indoor	1500	**0.817**	**-0.610**	**43.432**
Nursery	1500	**…**	**0.021**	**-23.721**
Perennials	1500	**…**	**0.020**	**-11.078**
Annuals & Poinsettias	1500	**…**	**-0.010**	**-2.508**
Tropical & Indoor	1500	**…**	**0.111**	**-22.826**
Nursery	1500	**1.002**	**-0.297**	**34.812**
Perennials	1500	**…**	**-0.007**	**-5.017**
Annuals & Poinsettias	1500	**…**	**-0.087**	**-0.521**
Tropical & Indoor	1500	**…**	**0.011**	**-13.689**
Nursery	1500	**…**	**-0.011**	**-7.517**
Perennials	1500	**2.943**	**-0.568**	**31.782**

Fig. 3. Response parameters

Figure 3 above summarizes the response parameter estimates. The own-price sensitivities for all four categories are negative and significant (after checking the 95% confidence intervals). Customers are most price-sensitive for Tropical & Indoor category followed by Perennials, Nursery, and Annuals & Poinsettias categories (in that order). The cross-price sensitivities are small but significant (except for Tropical & Indoor plants), however, yield a different pattern. While Annuals & Poinsettias, Nursery, and Perennials share complementary relationships (cross-price sensitivities are negative) with each other, Tropical & Indoor plants beg to differ! There is an interesting pattern for cross-price sensitivities for Tropical & Indoor plants: the cross-price sensitivities are all positive indicating that these plants are substitutable, especially with plants from Nursery. Overall, the results for price sensitivity are in tune those for coincidence from Fig. 2 above.

The own-promotion sensitivities are all positive and significant (after checking the 95% confidence intervals). The cross-promotion sensitivities across all four categories are negative and significant implying substitutability in responses to promotions, especially between Tropical & Indoor and Nursery plants. This is a reasonable result since promotions evoke deal-proneness (Blattberg et al. 1978).

For the 1075 customers who completed a survey about their purchase behavior, using the Two-Step algorithm in SPSS, we conducted cluster analysis on their price sensitivities which yielded 2 clusters with 500 and 575 customers in each. We then conducted several sensitivity analyses that may help shed light on the behaviors of customers in these clusters. For example, Fig. 4 below shows the output from factor analysis on data collected from the survey on 9 different types of satisfaction. The satisfaction variables were measured on a Likert-like scale (1 = Completely Dissatisfied to 10-Completely satisfied). Factor analysis for both clusters yielded one component/factor implying an "overall satisfaction" for the store in question.

Interestingly, one can use the factor score variable not only for selecting customers for future targeting (e.g., top 20%) but also for further analyses. Comparing the results across the clusters, one can see that satisfaction for Product Selection, Product Quality, and Parking are greater in Cluster 1. The weights for the other types of satisfaction are pretty similar. Hence, Cluster 1 may be the more loyal segment? Clearly, we need to corroborate with other evidence, such as quantities purchased.

Store Attributes	Cluster 1	Cluster 2
Customer Service	.739	.766
Product Selection	.802	.762
Product Quality	.837	.798
Price	.604	.605
Store Appearance	.824	.811
Parking	.731	.654
Location	.655	.626
Specials and Promotions	.712	.716
Size of Store	.812	.815

Fig. 4. Factors driving customer satisfaction

5 Next Steps

Based on our preliminary results, it is quite evident that fine tuning the results from model and conducting sensitivity analyses using survey data will be very beneficial. The promotion sensitivities also need investigation as they can validate behaviors such as loyalty. Survey data includes several other variables such as perceived competitors, social media usage, demographics, etc. We propose to extend our analyses further and generate metrics that help the store with gauging their position in the marketplace and in their customers' attitudes.

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Online Context and Digital Transformation

Building Trust in Private Label (PL) Online: Qualitative Insights from Home Retail Practitioners

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Abstract. Consumer trust represents a key driver in PLs and online shopping. Despite the extensive research on this concept, a gap still exists in the literature due to an emergent retail practice i.e. the online trade of high-involvement PLs (e.g. home fixtures). Some questions have risen and require answers to update our knowledge of consumer trust and to better understand this emergent retail practice. They are: *what does consumer trust signify in this retail practice? What can the meaningful drivers be? Are the drivers related to customer experience?* Based on in-depth interviews with practitioners in the home retail sector, we suggest two conventional and one new facets underpinning consumer trust. They are ability, integrity and authenticity. We also identify and suggest experiential drivers (e.g. education, effortless and enjoyment) are as important as functional drivers in building consumer trust in this emergent retail practice. We contribute to theory by bridging the two literature of PLs and online shopping, and contribute to practice by offering insights into marketing and managing an online business that trades high-involvement PLs.

Keywords: Trust · E-tailing · Home retailing · Customer experience

1 Introduction

A PL refers to a brand owned, controlled and sold exclusively by a retailer, and thus is also known as a store brand, own brand or retailer's brand, (Burt 2000; Konuk 2018). A popular product strategy in the retail landscape, PLs serve as cheaper alternatives to manufacturer or national brands and offer comparable functions or benefits (Dawes and Nenycz-Thiel 2013). Retailers favour PLs because they can be produced more cheaply, be tailored to their market image and, ultimately, be sold at greater profit margins (Hökelekli et al. 2017; McGoldrick 1984). PLs have existed for a considerable long time and seem to have its origin in low-involvement or low-value products like

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groceries (Burton et al. 1998; McGoldrick 1984). As a product concept PLs have flourished since its inception and today they can be found in an array of product sectors including those of high-involvement, high-value nature, such as home fixtures (e.g. bathroom fixtures and fittings). The trading platforms of PLs have also expanded, including both offline and online channels these days.

Trading PLs via the brick-and-mortar channel has been an established retail practice usually with low-involvement products (e.g. groceries) (Garretson et al. 2002; Jones and Kim 2011). On the contrary, trading PLs of high-involvement products (e.g. home fixtures) is rather an emergent or unusual retail practice. Because of their complex product specifications, consumers generally desire physical inspection of these products at a physical showroom and face-to-face interaction (or consultation) with sales personnel. This new retail practice is growing at a considerable rate. For example, from 2012 to 2015, the sales of bathroom pure players such as VictoriaPlum.com rose from £26.2 to £70.3 million, victorianplumbing.co.uk went up from around £9 million to £43 million, and soak.com achieved £59 million turnover. Despite the emergent success of the online retailing of high-involvement PLs, extant literature has paid very little attention to this emergent retail practice. Extant literature has examined consumer behaviour associated with either PLs or online retailers independently but not collectively in a single study. A meaningful investigation into the online trading of high-involvement PLs will require the fusion of the literature domains of PLs and online shopping.

Consumer trust may be a crucial factor in online PL retailing (Guenzi et al. 2009). As the drivers of trust vary greatly between PLs and online shopping, the present study seeks to develop a list of drivers that are meaningful to build trust in high-involvement PLs that are sold online. It however seeks to develop this list based on the perspective of practitioners, such as from retailers and supplies. They represent an under-researched stakeholder in this context (Molesworth and Suortfi 2002). With a qualitative research design, the present study addresses three research issues: *(1) what does consumer trust signify in this emergent retail practice? (2) what can the meaningful drivers be? (3) are the drivers related to customer experience?* The third research issue respond to the growing emphasis on consumer experience in contemporary retailing (Verhoef et al. 2009) and the trend of consumers seeking to experience more in their purchase journey (Lemon and Verhoef 2016).

2 Related Literature

Broadly, consumer trust can be defined as the consumer's confidence in an exchange partner's reliability and integrity (Morgan and Hunt 1994). It can also be interpreted as the expectations held by the consumer about the dependability and reliability of a retail store, its products and its people to deliver on their promises (Sirdeshmukh et al. 2002).

2.1 Consumer Trust in PLs

Whilst there has been a plethora of studies on PLs (Hara and Matsubayashi 2017; Nenycz-Thiel and Romaniuk 2016; Schnittka 2015), surprisingly, only a few

(Calvo Porral and Levy-Mangin 2016; Guenzi et al. 2009; Konuk 2018) have delved into the topic of consumer trust. Even so, these few studies have investigated consumer trust as a secondary research focus as opposed to the primary research focus within the PLs setting. For example, in a supermarket setting, Guenzi et al. (2009) established support for the important and diverse roles of trust in PLs in influencing consumers' shopping behaviours. They operationalised trust in PLs on three attributes. They are trustworthiness, reliability and keeping promises. *Store communication* and *store assortment* served as significant drivers and the latter exhibited a stronger effect on consumer trust in PLs.

Konuk (2018) measured consumer trust in PLs on four attributes, namely, *trustworthiness*, *reliability*, *honesty* and *safety*. He empirically established *store image* and *perceived (product) quality* as the two drivers of consumer trust in PLs and store image being a stronger driver. In a grocery food context, Calvo Porral and Levy-Mangin (2016) studied consumer trust in PLs as a moderator in the relationships between a set of factors. They included PL price, PL familiarity, store image, purchase intention and PL brand loyalty. They did not measure any drivers of consumer trust in PLs, and merely operationalised it with a single statement, "Food products of private label brand X are reliable and trustworthy".

The aforementioned studies share two key insights pertinent to the present study. First, they indicate several facets or attributes underpinning trust in PLs, notably, *trustworthiness*, *reliability and keeping/delivering promises*. Two, they suggest a combination of drivers influencing trust in PLs, namely, *store image*, *perceived product quality*, *store communication* and *store assortment*. They also suffer some shortcomings which require further attention. First, they have consistently studied consumer trust in PLs within the grocery food sector. It is considered as lower involvement and lower risk, in terms of the purchase decisions, when compared with other product sectors such as home fixtures (Ratchford and Vaughn 1989). Accordingly, the extent to which the defining facets and the drivers of trust identified are also applicable to examine consumer trust in PLs within high-involvement product types remains unclear. Nenycz-Thiel and Romaniuk (2016) have indeed called for more research in PLs available in other product sectors such as homeware. Second, they have focused mainly on the consumer perspective and seem to have neglected other relevant stakeholders, such as practitioners. Their inputs into building consumer trust in PLs are equally important as they may reveal defining facets and/or drivers that consumers are not aware of, especially when a PL entails complex product specifications like home fixtures.

2.2 Consumer Trust in Online Shopping

Consumer trust has been studied more widely in the online retailing literature than in the PLs literature. A plentiful of studies exist and offer a wider array of drivers of consumer trust. For example, Kim and Peterson identified ten drivers in a meta-analysis of online trust relationships in e-commerce, notably, perceived security, disposition to trust, perceived reputation, perceived risk, perceived system quality, perceived information quality, perceived usefulness, design quality, perceived privacy and perceived service quality. They defined online trust on three facets, namely, integrity, ability and

benevolence. More specifically, *integrity* is the trusting party's perception that the trusted party will be honest and comply with an acceptable set of principles or codes; *ability* refers to the skills and competencies enabling a party to have influence within a specific domain; benevolence refers to the extent to which the trusting party believes that the trusted party wants to do good things rather than just maximising profit. These findings are echoed by other scholars, such as Kim and Niehm (2009) and Toufaily et al. (2013).

The aforementioned studies suggest that consumer trust is a multifaceted construct even if it is mainly defined as trustworthiness. Ability, integrity and benevolence are consistently theorised to underpin trust or trustworthiness. Second, a wide array of drivers are meaningful to develop consumer trust in online shopping, consisting of product, seller, personal and context types. (Lee and Turban 2001; Wang et al. 2004) The number and nature of trust drivers identified in this literature are more extensive than those presented in the PLs literature. Third, they seem to have consistently favoured trust drivers that are functional and that are quite tangible to detect, such as technical competence, third-party certification, return policy and security features (Lee and Turban 2001; Wang et al. 2004). They have rarely considered trust drivers that are more experiential, less tangible and yet potentially meaningful to promote consumer trust in online shopping, such as authenticity (Beverland and Farrelly 2010), effortless (Watkinson 2013), and enjoyment (Mathwick et al. 2001). As customer experience has been recognised as an integral concept of contemporary retailing (Lemon 2016; Verhoef et al. 2009), it thus seems fitting to consider the extent to which this concept is also meaningful to study consumer trust in online shopping. Fourth and final, despite a broad range of products have been studied, the online shopping literature has given little attention to high involvement PLs like home fixtures.

3 Methodology

The present study focuses on the online trade of PLs in the home fixtures sector. The purchase decision of this product type is high involvement because it usually entails a great deal of mental, emotional and financial investments (Ratchford and Vaughn 1989); (Peng et al. 2016). PLs account for a sizeable trade within the home-fixtures sector due to desirable demand and supply factors (e.g. low brand awareness, competitive prices and high profit margins).

The present study opted for a qualitative research which involved in-depth interviews with practitioners affiliated with a bathroom pure player. They have worked in varied managerial roles in their respective companies. The pure player was established in 2011, specialising in bathroom, kitchen and heating products. Since its inception, it has achieved consistent annual growth above market average and attracted over three million visitors each year. It transacts via three websites, each one with its unique market positioning. Its product portfolio comprises six PLs with over a thousand product lines. It employs over fifty people and works with more than thirty suppliers. Based on the recommendations by Hennink et al., an interview guide was developed and applied to facilitate data collection. It contained main and probe questions related but not exclusive to the research issues under study. Interview questions was designed

broadly to allow new or unexpected issues to emerge Bernard and Ryan. Example questions included *"what are the advantages versus disadvantages of trading PLs (and then trading online) in this product sector?" and "what are the key success factors of trading PLs and only online in this product sector?"* The interviews produced 32 pages of transcripts in total, suggesting a reasonable volume of data collected. Drawn on the guidelines of King and Brooks, template analysis was performed on the transcripts with the help of a code sheet developed from the literature review.

4 Results and Discussion

Because of space constraint, we present mainly the findings related to the success factors of trading PLs online within the home-fixtures sector here. The initial responses from the practitioners revolved around functional or operational attributes, such as *"good quality products", "good product selection", "trendy and unique products", "good during and after sales service", "accessible to components and parts", "good online help", "knowledgeable staff", "technical information", "inspirational images", "relevant and accurate content", and "strong online presence"*. They can be grouped into five broad categories: (1) product assortment and quality; (2) information/content quality; (3) service quality; (4) online interactivity; and (5) online image (narratives). Most of these categories are consistent with the findings identified in the extant literature as key drivers of consumer trust. Some less functional attributes were also mentioned, specifically, *"making sure products are fit for purpose", "taking onus of the product and the content", "check and be responsible for faulty products", "have good sales and technical knowledge", and "come across as experts in what we do"*. They correspond to the ability and integrity facets discussed in the literature.

As the dialogues continued, the practitioners revealed a new facet of consumer trust that is rarely considered in the extant literature, namely, authenticity (Beverland and Farrelly 2010). Because their products were PLs and were being sold online, the practitioners stressed the importance of creating an *"original and differentiated online presence"* to lure and promote confidence in their target customers. This corresponds to the authenticity concept which has been discussed by scholars mostly in tourism contexts via an experience lens (Cohen 1988; MacCannell 1973; Wang 1999). It is rarely examined in the literature of PLs and online shopping. Besides functional drivers, experiential drivers are also identified to be necessary to promote consumer trust in the online trading of high-involvement PLs. A macro-analysis of all of the identified functional attributes suggested three potential experiential drivers, namely, effortless, education, and enjoyment. *Effortless* relates to the extent to which the process is perceivably uncomplicated and stress free despite the PLs are high-involvement and complicated in nature (Watkinson 2013), and this stems from the functional attributes of information/content quality, service quality and online interactivity. *Education* refers to the degree to which the process facilitates people's learning and understanding of complex products and in turn are able to make informed purchase decisions (Pine and Gilmore 1999). It stems from product assortment and quality, information/content

quality, and online interactivity. *Enjoyment* involves the extent to which people find the process pleasurable and engaging (Mathwick et al. 2001). It derives from online interactivity, product assortment and quality, and service quality (e.g. friendly product exchange or return).

5 Conclusion and Implications

The extant literature offers an incomplete understanding of consumer trust and its drivers, especially related to the online trading of high-involvement PLs (e.g. home fixtures). These two retail practices traditionally operated in isolation as reflected in the extant literature; however, they have now collided and formed a new retail practice. It therefore requires a fresh, or a more holistic, understanding of consumer trust and its drivers pertinent to this new retail practice. Defining consumer trust in PLs online will require the consideration of two conventional and one new facets. They are ability, integrity and authenticity. We also learn that functional attributes (e.g. product and information qualities) remain as critical drivers of consumer trust but may be inadequate to fully build consumer trust in this emergent retail practice. Consumers these days are seeking to experience more (Lemon and Verhoef 2016), and thus we suggest the consideration of three experiential drivers, along with functional drivers, in building consumer trust in PLs online. They are education, effortless and enjoyment. The findings of this paper are preliminary but will provide the 'seed' for a larger study on the aforementioned research issues. It will involve in-depth interviews with more practitioners and with consumers and then a survey with a large sample of consumers. We aim to triangulate qualitative and quantitative data to validate the proposed framework. Our study responds to the call by Kim and Peterson for more investigation into consumer trust and its antecedents associated with other product sectors and from other stakeholders' perspectives.

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The Seller's Experience in Consumer-to-Consumer E-Commerce

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Abstract. Digitization has reshaped the retail landscape and changed the way that consumers buy, use, and dispose of products. One such development is the rise of consumer-to-consumer electronic commerce (C2C e-commerce) platforms. These platforms complement and compete with existing forms of retail, which is why studying the characteristics of customer experience in these platforms is both managerially and academically interesting and topical. The purpose of this study is to explore and analyse the selling experience on C2C e-commerce platforms. More specifically, the paper (1) identifies the phases that make up the selling experience as a process and (2) characterizes and analyses these experiences. A qualitative research approach is used to generate these insights. This study contributes by focusing on the seller's perspective and investigating it from the experiential perspective, which has remained relatively overlooked in prior research. Nonetheless, the seller's experience is vital, as it is the supply of used goods that determines whether C2C markets can be established in the first place.

Keywords: Consumer-to-Consumer (C2C) · E-Commerce · Customer experience · Retailing

1 Introduction

Digitization is redefining the nature of retailing. The locus of attention is extending towards new forms of retailing platforms and business models that go beyond the traditional logistical heritage. One characteristic of this retail transformation is two-sided markets (Gassmann et al. 2014), or platform business models (Osterwalder and Pigneur 2010). Platform business models accumulate a wide array of demand and supply, thereby, connecting sellers with potential buyers in an effective way. In addition, they serve buyers through aggregating supply, providing convenient access to a vast array of used goods and offering a venue for establishing communication as well as other mechanisms for facilitating transactions, such as logistics and payment.

Consumer-to-consumer (C2C) e-commerce is an interesting and increasingly important form of platform-based business models. C2C e-commerce is defined as consumers transacting (i.e., both buying and selling from one to another) electronically (Leonard 2011). A few years ago, C2C commerce was estimated to represent as much as 80% of all e-commerce in China (Hoffman et al. 2012); additionally, the number of Chinese C2C companies has risen rapidly (Statista 2018a). Furthermore, more recent

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studies have concluded that approximately 65% of U.S. consumers use different online marketplaces to buy used goods (Statista 2018b). This development is exemplified through eBay's gross sales, which rose to over 90 billion USD in 2018 (Statista 2018c).

Consumers transacting among each other is not a new phenomenon per se – neither for consumers nor scholars. In the 1980s, consumer researchers were already focussing on understanding how consumers acquired used goods and sold their excess products (Belk et al. 1988; Sherry 1990). However, digitization has reshaped the nature and extent of the phenomenon to a new level, which has also generated interest among scholars. This has resulted in the exploration of the phenomenon from multiple perspectives, such as consumers' utilitarian and hedonic motivations (Chang and Chen 2015), the role of platforms (Cheung et al. 2014; Chen et al. 2017), social C2C e-commerce (Chen et al. 2016), C2C consumer profiles (Saarijärvi et al. 2018), and C2C e-commerce implications (Yrjölä et al. 2017). Prior literature has also addressed the interlinkages between important retailing constructs, such as C2C platforms' website quality and consumer satisfaction (Fan et al. 2013) or consumers' excitement and higher prices (Vragov et al. 2010).

Despite the activity concerning C2C e-commerce research during the past decade, it is still in its infancy. While the number of users as well as suitable platforms for C2C e-commerce transactions has been increasing (e.g., Statista 2018a, 2019), competition among different platforms has also intensified. This exerts pressure on developing consumers' buying and selling experiences in order to remain competitive among all platforms. Only by delivering superior experiences can platforms attract an adequate amount of buyers and sellers and establish their *raison d'être*. Gaining theoretical insight into the characteristics of digital experiences is also generating increasing scholarly attention (Marketing Science Institute 2016). However, despite the relevance of consumers' experiences in buying and selling used goods via different C2C e-commerce platforms, research on the determinants of such experiences, and how digital platforms could facilitate those experiences, has remained unexplored.

The purpose of this study is to explore and analyse the selling experience on C2C e-commerce platforms. This is achieved by focusing on the phases and characteristics of the C2C e-commerce selling experience. Hence, the study adopts a seller's perspective, which has been a marginal focus in prior research. However, understanding the key characteristics of the selling experience is critical, as it is the supply of used goods that eventually determines the extent to which C2C e-commerce markets can eventually exist.

To address this purpose, we briefly review relevant literature on the customer experience and C2C e-commerce. We follow by describing the applied research methodology for the data generation and analysis, and we present and discuss the results. Conclusions, limitations, and suggestions for further research conclude the present study.

2 Theoretical Foundations and the Conceptual Framework

Today, customers interact with firms through a myriad of touchpoints in different kinds of channels, which has increased both scholars' and practitioners' interest in the concept. Customer experience is a multifaceted and complex phenomenon, involving

hedonic, interactive, novelty, comfort, safety, and stimulation dimensions (Otto and Ritchie 1996; Klaus 2013).

While there are many different approaches to what customer experience eventually comprises, there is a wide consensus on its multidimensional nature; the customer experience can be understood as a customer's cognitive, emotional, behavioural, sensorial, and social response to a firm's offering, and it emerges during the customer's journey. During this, the customer's experience occurs as a result of different touch points, i.e. the direct and indirect interactions between the customer and the firm. Lemon and Verhoef categorize these touchpoints as brand-owned (interactions that are designed and managed by the firm), partner-owned, (interactions that are jointly designed, managed, or controlled by the firm and/or its partners), customer-owned (the customer's own action beyond the control of the firm or its partners), and social/external-owned (interactions that are influenced by other customers). This journey is often divided into different stages: pre-purchase, purchase, and post-purchase. Another way to approach the customer journey is through the traditional decision-making process: the recognition of needs, the search for information, the comparison of alternatives, the transaction, and post-transaction behaviour.

This categorization of touch points and the different stages offer a well-established basis for analysing the selling experience in C2C e-commerce. In the context of the C2C e-commerce experience, the role of platforms is critically important today, as platforms facilitate many types of interactions between the buyers and sellers. Due to their roles as connectors between demand and supply, many C2C companies are good examples of two-sided market business models (Gassman e al. 2014). Moreover, C2C platforms exhibit a low degree of company control and a high degree of consumer control over the transactions (Yrjölä et al. 2017). As customer control over the service experience contributes to the overall experience (e.g. Klaus 2013), C2C commerce provides an interesting context for study. From the buyer's point of view, the C2C activities can also be conceptualized through economic, functional, emotional, and symbolic value (Yrjölä et al. 2017), which can also be used for profiling consumers on the basis of the type of value they perceive (Saarijärvi et al. 2018).

This experience develops through different stages and occurs as a result of interactions in multiple channels (e.g., website and face-to-face). Most importantly, the selling experience emerges through different touchpoints. In comparison with other industries, the C2C e-commerce experience is naturally characterized by the major role of other customers. Furthermore, the nature of interaction between the seller and buyer is critically important in shaping the overall experience.

3 Methodology

In line with an explorative approach, this study adopts a qualitative methodology to understand the phenomenon of the C2C selling experience within its context. Twenty semi-structured interviews were conducted with consumers who had engaged in C2C e-commerce activities as sellers during the past year (Table 1). These informants shared their experiences in an interactional way, which allowed for a more in-depth understanding of the process and characteristics of their selling experiences.

Table 1. Study informants

Informant	Gender	Age	Self-assessed level of experience in selling products
A	Female	23	Low
B	Male	23	Low
C	Female	23	High
D	Male	24	High
E	Female	49	High
F	Male	50	Moderate
G	Male	49	Moderate
H	Male	49	High
I	Male	39	Very high
J	Male	23	Moderate
K	Female	27	High
L	Male	53	Low
M	Male	25	Very high
N	Female	23	High
O	Female	22	High
P	Male	24	Low
Q	Male	24	Low
R	Male	80	Very low
S	Male	23	Low
T	Female	77	Very low

The data were analysed in two stages, both of which were informed by prior research on customer experiences, thereby, following abductive rather than inductive logic. First, the authors identified and categorized the phases that make up the selling experience. Second, a closer description and comparison resulted in a characterization of the selling experience. These findings are discussed in the following section.

4 Findings

To fulfil the research purpose, identifying and analysing the C2C selling experience, we present a tentative framework herein (see Fig. 1). This framework results from an iterative process between the data and theory, i.e., the analysis of the empirical data is informed by the prior literature on customer experience. The literature provides theoretical guidance in understanding the phenomenon of the C2C selling experience. This framework, including the selling experience phases and characteristics, is discussed next in three stages.

Maturing Selling Motivations

Consumers face multiple triggers that motivate consumers' selling behaviour on C2C e-commerce platforms. For example, these include lifestyle changes, status-seeking behaviour, decluttering, changes in personal relationships (e.g., moving in together, separation), or the fact that children get bigger and clothes become too small. These triggers initiate the selling process; in other words, they alter the consumers' need to consume a particular product. Some of these triggers are self-focused (e.g., willingness to get rid of excess items) while others focus more on other people (such as spotting a forum post by someone looking for a certain item). As depicted in Fig. 1, this stage in the selling experience is largely characterized by customer-owned touchpoints: they are largely beyond the control of the platform. As the selling motivation matures, a consumer may not yet have initiated any interaction with C2C companies but, due to different triggers, may have decided to start the selling process. In addition, the customer is exposed to external influences, such as becoming aware that there is a growing demand for a particular used item or hearing positive word-of-mouth related to selling used items on particular platforms. Altogether, the first stage of the C2C selling experience is often beyond the control of the C2C company. Some examples are shown in the participants' interview responses below.

> *Being young, I don't have that much money; so, I try to take advantage of every opportunity to earn something back, and selling something online is easy when compared to flea markets and the like. […] I always try to figure out if something's worth the trouble. It's especially good when selling electronics because electronics are bothersome to dispose of or recycle. You can kill two birds with one stone; you get rid of the item, and you earn some money. (Participant D)*

> *The last item sold was an old camera. I was cleaning our house and going through all the useless stuff we had, and I thought, "This camera hasn't been used in at least ten years." I figure I could earn something for it. After all, it would be a shame to just throw it away. (Participant E)*

> *Skiing boots, because we had no use for them in the family. Our place is full of junk, so I wanted to get rid of them. It was fun to try…*

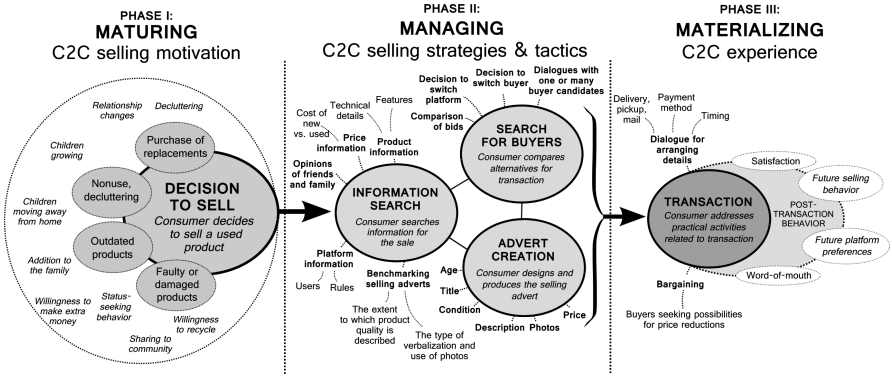

Fig. 1. The C2C selling experience

Managing Selling Strategies and Tactics

After the decision to sell is made, consumers search for information (e.g., available product and price information, opinions from peers), compare different platforms for where to sell the item (e.g., social-media-, auction-, or fixed-priced-based platforms), create the advert for the platform (e.g., a description, photos, setting the price), and search for buyers (e.g., converse with multiple buyer candidates simultaneously). Altogether, this phase is characterized by a high degree of active process management by the sellers. This was evident in the time and effort invested in these processes. In turn, most sellers reported that they had very short time-spans; they were quick to change platforms if they did not receive bids or replies fast enough. For example, participants B and E engaged in benchmarking other sellers' behaviour while participant I described how the potential buyers sometimes approached him, as seen below.

> *I paid attention to how others had sold theirs and with what kind of information, for example, how they described the condition or were there only the physical measurements*. (Participant B)

> *I browse the ads that others have placed when I'm planning to sell something, like [the] Wii Fit. I looked at the titles and prices others had used.* (Participant E)

> *I belong in a community of vinyl record collectors. There are over 70,000 of us in that group. […] Many members have posted photos asking for help fixing their audio equipment and stuff. I'm there right away giving them advice on what they should do. So, this way, many people just approach me in [Facebook] Messenger and ask directly for advice. […] And that's why many ask me whether I'd be willing to sell some item or another that I've posted pictures about. (Participant I)*

Altogether, these interactions are often parallel in nature; they are integrations of both brand-owned and external touchpoints.

Materializing the Experience

After the transaction agreement, all practical issues related to the transaction need to be addressed. These include, for example, dialogue to arrange the transaction details (e.g., how the item is delivered). What especially characterizes this stage is the fact that interactions can be face-to-face and social; customer-to-customer can convert into human-to-human. This can have both positive and negative outcomes. For example, some buyers also try receive an additional discount by starting to bargain when the transaction takes place. In contrast, some sellers may even provide an extra discount when it is understood that the item is serving a good deed.

> *That woman sent me a message asking where she could pick up the chair for her child. […] So, the next day, she came over, and I carried the chair for her. She was about to hand me some money, but I said that's fine. I had meant to ask for five euros but decided to just give away. […] The chair went for a child, so, I'm glad it went to good use. (Participant B)*

> *The post office takes a small commission from the operation, but the buyer himself suggested that he'd pay for the delivery if I would just ship the item right away. For some reason or another, I think he trusted that I would send him a decent item. In a way, my side of the risk was completely removed that time. Although, every time you transact on Facebook, you do it by your own name and picture. […] Even if you tried to create a fake profile, it would take quite a bit of time and effort to make it convincing, and, in those kinds of communities, like the one for boat aficionados, you can only get away with fraud once because the community instantly reports these guys, and there are these private investigator types of people that start checking up on these frauds. That way, the communities around certain hobbies are somehow easier or*

have lower risks involved because the community is so actively keeping watch and reacting to those frauds. There's a kind of social bond between the users. (Participant G)

Altogether, in this phase of the selling experience, social interaction can shape the experience in a strong way, either positively or negatively. The touch points are largely external and social in nature and therefore heavily influenced by other customers.

5 Discussion and Conclusion

The purpose of this study was to explore and analyse the selling experience on C2C e-commerce platforms. A tentative framework for the selling experience as a process was introduced (Fig. 1), and three complementary phases and their respective characteristics were identified: maturing selling motivation, managing selling strategies and tactics, and materializing the selling experience. As a result, we discuss four implications.

First, because selling used goods is about more than utilitarian needs/motivations, companies wanting to enter this market should also display their value propositions through themes like community or environmental values. For the sellers, these dimensions of value propositions can offer important benefits as they search for potential platforms to be used in their processes. Second, because the C2C selling process consists of many phases and involves active management, platform companies might develop services that either reduce the need for active management by the sellers or eliminate/enhance some of these phases. Prior C2C research has shown that perceived trustworthiness is important for buyers (Hajli et al. 2013; Lu et al. 2010), but our data showed this to be the case for sellers as well. Therefore, platform players or retailers considering entry into the market should consider how to design the optimal degree of buyer/seller control and risk in these transactions. They need to develop appropriate mechanisms that both attract sellers and ensure trustworthiness for buyers.

Third, it is evident that many consumers engage in C2C transactions for more than merely economic or utilitarian needs (e.g., Saarijärvi et al. 2018; Yrjölä et al. 2017), and our data from the sellers also confirms this. Non-monetary benefits played a key role in triggering the process in the first place as well as in evaluations of satisfaction after the transaction. These included feeling good about helping others, getting to know new people, acting in an environmentally sustainable way, wanting to try new things, and wanting to contribute to society or to a specific community. These are important post-transactional outcomes that could also be facilitated by platforms.

Fourth, related to aforementioned social factors, such as identity and community, play a large role in some of the C2C selling processes. For instance, for many of the sellers, it was important *to whom* they sold their items (e.g., peers vs. those who were less well off). Participant B, for instance, remarked, "I was satisfied to hear that the chair went to a child, so that there's someone using it." From some of the interviews, it was also apparent that sellers might see the act of selling an item as a part of status or identity building. This might have motivated them to sell certain items while they decided not to sell others. For example:

I would be ashamed to sell my old belongings to anyone. I've had them so long that I belong in a museum already. I wouldn't dare give them to anyone. (Participant T)

These social factors were especially evident when the sellers talked about their post-transaction behaviour (e.g., evaluating the process and the outcome, positive emotions arising from nostalgia and from finding a new home for the goods).

Altogether, during these three phases, sellers mature the decision to sell, managing different types of selling strategies and tactics that eventually contribute to materializing the experience. Consumers take multiple criteria into account in their selling behaviour (e.g., channel selection criteria, different cues used to evaluate trustworthiness of a potential buyer, pricing considerations). Therefore, understanding all of the different activities related to the selling process can help platforms to better orchestrate the design and delivery of the experience.

C2C e-commerce platforms not only compete against traditional retailers but also against other platforms that focus on facilitating C2C transactions. Therefore, while they focus on delivering efficient exchanges, they must also pay attention to delivering seamless digital experiences – both for buyers and sellers. In the context of this study, focus was placed on understanding the phases and characteristics of the selling experience. With this understanding, companies can develop their business models and value propositions by addressing the issues consumers perceive as meaningful. This not only contributes to better customer experiences but also facilitates a circular economy and sustainability by enhancing consumers' future intentions to continue using C2C e-commerce as a complementary means for consumption.

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Internet of Things and Artificial Intelligence in the Hotel Industry: Which Opportunities and Threats for Sensory Marketing?

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Abstract. The purpose of this study is to investigate which opportunities and threats the use of Artificial Intelligence (AI) and Internet of Things (IoT) may have in relation to the multisensory brand experiences of guests in 4- and 5- star hotels. The reason is that digital experiences have become an important issue in the hotel industry. At the same time, an increasing number of high-end hotels have developed sophisticated multisensory strategies to generate multisensory brand experiences of their guests during their stay. To answer our research question, we carried out two studies, i.e. interviews and an internet survey. Our findings show that both hotel managers and guests seem to believe that the application of IoTs may stimulate guests' sensory experiences and increase their satisfaction and loyalty. Nevertheless, we demonstrate that the different digital tools available on the market need to be carefully analyzed (e.g. SWOT) in view of their potential impact on customers' sensory experiences prior to their implementation. Limitations and avenues for further research are given.

Keywords: Hotel industry · Sensory marketing · Internet of Things · Artificial Intelligence

1 Introduction

Since the beginning of the new millennium the paradigm of sensory marketing has gained considerable importance. According to Hultén (2015), "sensory marketing represents a service process that focuses on sensory strategies and stimuli with the goal of creating a multi-sensory brand-experience". In other words, the objective is to offer an experience which appeals to the consumers' sense of vision, sound, smell, touch, and taste in retail environments. At the same time, according to Forrester (2019), e-commerce boosted sales growth in the luxury goods market by 39% in 2017 and is expected to drive 59% of luxury sales growth by 2023. In particular, the Internet of Things (IoT), combined with Artificial Intelligence (AI), has been playing an increasing role in retailing (Brasel and Gips 2014). In fact, IoT can be considered as the "Third Wave of Innovation" following the Industrial Revolution and the Internet Revolution. Therefore, to be part of this dynamic, the hotel industry must accelerate its developments in favor of an omni-channel and seamless customer experience. Hotels need to provide a unique and personal experience. Verhoef et al. (2009: 35) argues that

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"Technology-based service delivery systems are becoming an integral part of shopping, and hence are critical to examine in terms of their impact on customer experience".

Given these two trends in marketing, the question arises, to which degree retailers may capitalize on the application of IoT technology to enhance customers' sensory experiences and, simultaneously, to which extent its use may curb consumers' sensory experiences. In order to investigate the opportunities and threats involved with respect to these two current trends in retailing we have chosen the hotel industry, and, especially, 4- and 5-star hotels, since they are most likely to dispose of the necessary budget for integrating IoT in their offerings by using AI and, hence, to generate outstanding multi-sensory customer experiences.

In the following, we, first, present literature on sensory marketing as well as IoT and AI. Then, we investigate the potential combination of these relatively new marketing trends in 4- and 5-star hotels to create a digitally connected ecosystem and, at the same time, multisensory brand experiences. Subsequently, we present the findings of two studies we conducted for the present article. First, we did interviews with hotel experts and guests, and, second, we carried out an internet survey. Finally, we draw conclusions and point out managerial implications.

2 Literature Review

Providing excellent guest experience helps to ensure a competitive advantage in the market and should be employed across all channels, from physical to mobile ones (Johnston and Kong 2011; Pine and Gilmore 1999; Shaw and Ivens 2002; Voss 2003; Prahalad and Ramaswamy 2004; Meyer and Schwager 2007). A holistic concept of 'customer experience' encompasses the cognitive, emotional, social, and physical responses between the customer and retailer (Verhoef et al. 2009). This experience in the hotel consists of factors the retailer can control (e.g. store atmosphere, services, and price range) as well as factors beyond their control (e.g. influence of others and purpose of purchase). Some research goes even further by illuminating the experience as "composed of cognitive…, emotional, physical, sensory, [and] spiritual" elements suggesting that customers seek "robust, compelling, and memorable" experiences (Gilmore and Pine 2002). In light of such a holistic concept of customer experience, it becomes obvious that the perceived guest experience underpins the booking intent.

2.1 Sensory Marketing in the Hotel Industry

As early as in the seventies of the last century, Kotler (1973: 61–64) posited that in order to gain a competitive advantage, retailers need to apply stimuli from the five senses (sight/visual, sound/auditory, touch/tactile, smell/olfactory, and taste/gustatory) in their retail environments to create an atmosphere which increases purchase propensity. Kotler coined the term "atmospherics" for this endeavor. Since the beginning of the new millennium the concept of 'atmospherics' has been broadened and, hence, the new paradigm

of sensory marketing has been developed (Derval 2018, 2010; Gains 2013; Georges et al. 2014; Hultén et al. 2009; Hultén 2015; Krishna et al. 2017, 2013, 2012, 2010; Lindstrom 2010; Mattila and Wirtz 2008). Krishna (2013: 5–6) defines sensory marketing as "marketing that engages the consumers' senses and affects their perception, judgment, and behavior". It is important to mention that research in sensory marketing is not limited to the analysis of sensory stimuli applied in retail environments, akin to research in atmospherics, but it has gone beyond the analysis of retail environments to the analysis of products, e.g. design and packaging (Lick et al. 2017; Krishna et al. 2017; Velasco and Spence 2019) and media in marketing communications, like websites, commercials, and billboards. Therefore, sensory marketing considers any sensory stimuli, in any sensory modality, to convey the image of a brand. Furthermore, based on Gestalt psychology customers usually first get an overall impression of the retail environment, or the packaging, before potentially paying attention to any details. Therefore, the stimuli used in the sensory marketing strategy pursued need to be coherent (Hultén 2015: 208). Since we focus on sensory marketing strategies with respect to hotel interiors, refer to Table 1 which presents stimuli from the five senses which may be used in the interior of high-end hotels including e.g. the lobby, guest rooms, restaurant, spa, etc.

Table 1. Multi-sensory cues in hotels

Sensory Stimuli	Examples
Visual	Colors, windows, ceiling height, flowers, floor covering, walls, layout of the lobby and guest rooms, fountains, lighting, logos of co-branded toiletry, towels, newspapers, TV, other guests, etc.
Auditory	Background music (may change with the time of the day) in the lobby and elevator, voice of front-desk officer or server in the restaurant, sound from the ice-machine on the floors, shower, coffee machine, etc.
Olfactory	Signature scent of the hotel in the lobby, elevators, and on the floors, smell of coffee, scented hotel pens, fragrance from the toiletry, perfume strips in the hotel magazine on display, etc.
Tactile	Porcelain cups, bed linen, towels, carpeted floor, chairs, touch screens for the check-in, handshakes, shape of glass bottles, etc.
Gustatory	At the check-in, a bowl with exclusive confectionary or coffee and ice-tea; mini bar, chocolate candy, or fruit basket in the guest rooms, food and beverages in the restaurant, etc.

It needs to be noted that stimuli may entail different sensory experiences at the same time, like a carpeted floor influences the sense of sight, touch and sound and a cup of coffee has an impact on the sense of sight, touch, smell, and taste.

2.2 IoT and AI

The clever use of digital amenities can help hotels to enhance consumers' experiences. A digital ecosystem connects smart devices enabling an array of innovative technologies to work in sync and exchange value (e.g. information, entertainment, promotion, and

economy) between services and guests. In recent years, Internet of Things (IoT) and wearable devices have been rapidly gaining ground in various domains such as the healthcare industry, smart homes, smart communities and smart cities. In particular, the number of users of smart home devices exceeded 1 billion in 2017 and up to 212 billion smart devices will be sold by 2020, according to Gartner (2017). IoT as a global infrastructure connecting the physical world to virtual 'things' will be part of our everyday lives in the coming years. The real stake for businesses is to anticipate tomorrow's new trends and indispensable smart objects (Acas 2017) in order to foresee future interactions consumers can have with IoT. Smart devices, referred to as IoT, are objects connected to the Internet, which enable real time, object-to-object, and object-to-actor interactions. For instance, a sensor may detect the proximity of a 'smart license plate', or a smartphone, and initiate location-based systems (LBS) to push notifications to nearby tourists offering promotions through their social media channels (Buhalis and Amaranggana 2015). Consequently, the main challenge for marketers is to rather focus on the experiences which can emerge from interactions than to comprehend the functioning of the individual devices or their use (Hoffman, and Novak 2017). A strategic use of digital devices may help to direct connected tourists to their hotels. As an example, the hotel infrastructure could be reinforced by Wifi aerials installed along the corridors prompting social interactions. Indeed, more and more consumers use mobile technology connected to the Internet through Wifi or other tools, such as Bluetooth or Beacon aerials allowing access to information through websites, apps, and social platforms (Pelet et al. 2017a,b in Pelet et al. 2018).

Social media combined with IoT and AI can help to build customer relationships as the combined technologies represent an innovative approach to draw in connected hotels and capture sales (Pelet et al. 2017b). AI and IoT may target nearby potential tourists while social media push communication tools, such as social media alerts, text messages, and advertising can be used, e.g., to promote hotel events. Push notifications received at or near the hotel may have a higher influence on guest behavior than digital messages received at home, because hotel guests are primed with the intent to purchase (Gazley et al. 2015). Hotel professionals who understand how to use these innovative digital tools will help to develop a loyal guest base who advocates the brand and spends more money (Tubaro et al. 2012).

2.3 The Use of IoT and AI in Hotels to Create a Digital Guest Experience

In the following, we briefly present some tools hotels may use to create a digital guest experience, which Radde (2017: 29) defines as "*the personal perception and the interaction with the digital service provided which a guest experiences while staying in the hotel*". Hence, this term refers to any direct or indirect digital touchpoint a guest is exposed to during their hotel stay. The goal is to increase revenues and reduce costs as well as to enhance guest satisfaction and loyalty.

Starting at the check-in, guests may prefer to check in themselves at terminals placed in the lobby. Subsequently, rooms may be digitally assigned based on mathematical algorithms, where rooms are attributed efficiently taking an array of criteria, such as length of stay, future arrivals, room features, loyalty level, and guest type into account Radde (2017: 36–42).

Another tool is a digital signage system, where interactive touchscreens are mounted on the walls of the reception or outside conference rooms to show delegates their way through the hotel, to give them flight or rail information, or to advertise special rates for a spa treatment (Radde 2017: 66–69). Such touchscreens (visual and tactile sense) may include sounds (auditory sense) and even diffuse the hotel's signature scent (olfactory sense), which may be on sale at the reception desk. If the touchscreen invites the viewer to a local wine tasting, it indirectly stimulates their gustatory sense. Therefore, such touchscreens may simultaneously stimulate a multitude of senses. Moreover, Bluetooth beacons, QR codes, or even face recognition technology may be utilized to detect the gender and age of the person standing in front of the screen to adapt promotional messages (Radde 2017: 72–73).

In the hotel room, so-called 'concierge tablets' may be put at the guest's disposal replacing traditional guest folders. Apart from providing general information on the hotel, the tablet can be used to control room features, like curtains, room temperature, lighting, and air-conditioning as well as to offer newspapers, magazines, and books to read. The guest may also use live chat to enter into direct contact with the hotel's employees to book a golf course or a table in the restaurant. For that purpose, 'concierge tablets' may show photos of the meals, inform about ingredients, and suggest accompanying wines (Radde 2017: 76–82). In terms of cross-selling an integrated merchandising shop may offer items carrying the brand of the hotel, such as its signature scent, bath-robes, towels, cushions, or bed linen (Radde 2017: 84).

Another tool are beacons which send push information to the guest's smartphone when they are near particular spots in the hotel. The hotel may send relevant, up-to-date, and promotional messages to the guests provided that they have installed the corresponding app on their smart phone (Radde 2017: 90–91).

Finally, by means of virtual reality headsets put into the rooms guests may experience virtual visits to the golf course, the restaurant, or the main tourist landmarks in town, to select the sights they do not want to miss out on (Radde 2017: 115). Virtual reality headsets may also help organizers of conferences or events to visualize different room designs or seating arrangements by virtually populating different layouts with virtual people (Radde 2017: 117-118). An advancement of virtual reality represents augmented reality, which Radde (2017: 123) views as "*a computer-based display that enriches the real world with virtual aspects*". For example, the receptionist may wear a Google Glass equipped with face recognition which enables them to address the guest personally. After the check-in, guest may use their smartphone to be guided through the premises of the hotel by a virtual butler (Radde 2017: 128–130).

All the tools pointed out above may considerably broaden guests' sensory experiences in the hotel. Yet, when, e.g., the guest checks in with their smartphone or at a terminal in the lobby, they may perceive a lack of personal contact on arrival. The receptionist may not shake hands with the guest, which may be especially required when they are regular customers. Hornik (1992) revealed that when customers entering a bookstore were slightly touched on their upper arm by a shop assistant when handing over sales literature, they spent significantly more time in the store, were friendlier to the store, and bought more, compared to other customers who had not been touched.

3 Methodology

To answer our question of which impact IoT and AI may exert on guests' sensory experiences in a hotel, two studies were carried out. In Study 1 (exploratory study) we conducted interviews with owners and guests of 4- and 5-star hotels to gain insights into their perceptions and behaviors related to the use of AI and IoT.

3.1 Exploratory Study

For Study 1 we carried out 20 semi-directive qualitative interviews. Our sample included both experts (hotel owners) and hotel guests of 4- and 5-star hotels. We stopped doing further interviews when our data collected attained semantic saturation. An interview guide was used for the interviews, which was pre-tested among 2 respondents. The interview guide included questions about the interviewees' perception of the strengths, weaknesses, opportunities and threats (SWOT) of fully-connected infrastructures in 4- and 5-star hotels. The length of the interviews ranged from 20 to 30 min. After transcribing the interview data, we used a traditional coding technique by coding the interview transcriptions into three distinct levels from granular to thematic categories (Strauss and Corbin 1998). Open codes were then analyzed through an iterative process by comparing our findings to the literature and refining data interpretations according to thematic and selective codes (Arsel 2017).

Table 2 shows the strengths, weaknesses, opportunities, and threats (SWOT) of replacing switches with voice commands, a function of IoTs most frequently mentioned by the respondents. The following SWOT analysis is presented according to the 5 different senses.

Table 2. SWOT analysis of the replacement of switches with voice commands

Sense	Strengths	Weaknesses	Opportunities	Threats
Visual	Voice commands may replace switches to turn on/off, e.g. the light or music, or to open/close shutters	Guests may become confused due to the absence of switches	Creating switches which are visually appealing and also work through voice commands for guests who are not familiar with this new technology	Difficult for people who are deaf-mute
Auditory	Speakers, like *OK Google*, will be used to place orders and to search on the Internet	If there is more than one guest in the room, the speaker may encounter difficulties in differentiating between different voices	Saving a guest's voice recognition and then use it each time the guest stays at the same hotel	If the voice is not recognized correctly, it may lead to a negative mood on the part of the guest

(*continued*)

Table 2. (*continued*)

Sense	Strengths	Weaknesses	Opportunities	Threats
Olfactory	Carpets, towels, shutters, and bed linen can diffuse fragrances and change the fragrance automatically with each new guest	Too much odor may prevent the nose from distinguishing different scents; difficulty in properly applying the signature scent of the hotel	Using sensors to detect when the scentscape is overloaded	Using odors through IoTs, which start to diffuse a scent once the guest enters their room
Tactile	Switches with a texture that gives a smooth feeling when switching on the light, opening/closing the curtains, etc.	AI/IoT may diminish the sensation of pleasure when operating switches, doors, curtains, etc.	Using of the same material on smart switches and other surfaces, such as remote controls, to create a coherent haptic experience	The switches and other tactile surfaces may wear out and diminish the sensation of precision
Gustatory	Offering tastings of food and beverages and give guests directions of how to get to local producers; use of maps and location-based services or beacon aerials in the proximity of the hotel	Fewer guests at the hotel restaurant if they discover competing restaurants in the vicinity through this system based on AI and IoT	Creating new business relationships with vendors of locally-produced food and beverages near the hotel	Cooperating with vendors of locally-produced food and beverages whose products do not match with the image of a 4-, and 5-star hotel

3.2 Confirmatory Study

The results of the qualitative study represented the basis for Study 2 (confirmatory study). The goal was to explore hotel owners' and guests' knowledge of AI and IoT as well as their view of which purpose these may serve in high-end hotels. Furthermore, we sought to find out about the prerequisites and constraints involved when using AI and IoT.

Sample - The sample consisted of 224 respondents aged between 25 to 55, of whom 42% were males and 58% females. Non-probability criterion-based purposive sampling was used because it allowed us to intentionally select participants who had experience with the central phenomenon under investigation (Hair et al. 2010). 52% of the respondents had never heard of AI in their professional environment. Both machine learning and automatic language processing were known the best.

Survey Instrument - To measure the users' attitudes we adapted six items from Venkatesh et al. (2011): the AI and Security of personal information, Perceived Usefulness, Perceived Ease of Use, the impacts of AI on work, the obstacles to the implementation of AI devices in 4- and 5-star hotels, and the budgets assigned to the implementation of AI devices; we used the scale suggested by Venkatesh et al. (2011). Participants responded to all items using a 5-point Likert scale, where '1' referred to 'strongly disagree' and '7' to 'strongly agree'.

Results - For most respondents AI is used by 4- and 5-star hotels for the objectives reported below, in particular, the use of AI aims at improving customer experience (91%) through the prediction of purchasing behaviors (93%) and the customization of interactions (89%) (Table 3).

Table 3. Results of Study 2

	Yes	No
Improve the customer experience	91%	9%
Improve user experience and targeting	79%	21%
Customize/individualize messages (retargeting via e-mail, text messages, etc.)	89%	11%
Understand consumer behavior	80%	20%
Predict purchasing behaviors	93%	7%
Detect future consumption trends	84%	16%
Harness data from social networks	81%	19%
Process more data	88%	12%

The results reveal that professionals appear to be convinced that the development of AI solutions is expensive (mean = 3.83). Moreover, technological skills to choose AI solutions may be needed (mean = 3.58) and corporate culture must evolve to accept AI-based solutions (mean = 3.59). In addition, AI may replace low-skilled jobs (mean = 3.74) and dehumanize relationships with prospects and/or customers (mean = 3.55). Nevertheless, AI may help to create new products/services (mean = 3.99) and accomplish tasks without added value and free up time (mean = 3.71).

The implementation of AI seems to require technological skills. More specifically, the ease of use appears to have an impact on the attitude of users ($t = 3.65$, $p < .01$). The AI user may not feel apprehensive about the security of personal information. However, GRDP and other regulations could slow down the development of AI (mean = 3.26) and influence the user's attitude ($t = 2.55$, $p < .05$).

4 Conclusion

In view of the relatively recent trends in marketing, i.e. sensory marketing as well as the use of IoT technology in conjunction with AI, we envisaged to explore how the employment of IoTs in 4- and 5-star hotels may enhance their guests' sensory experiences. We also explored potential threats this new technology may represent to guests' sensory experiences.

First, we pointed out, in some detail, the potential use of both sensory cues (Table 1) and IoTs, such as check-in terminals, digital signage systems, or concierge tablets. Then, based on the findings of our Study 1, we focused on a particular digital tool, i.e. voice commands in guest rooms, to illustrate its strengths, weaknesses, opportunities and threats (SWOT) to the guests' sensory experiences in relation to the five senses (Table 2). Study 2 revealed that both hotel managers and guests appear to consider that the use of IoTs in hotels may represent a considerable enhancement of customer experiences. Especially, IoTs may allow customizing messages and predicting purchasing behavior. Yet, managers seem to perceive the implementation of IoTs as rather expensive requiring technological skills and an appropriate corporate culture. However, it may contribute to the efficiency of certain processes. In general, guests do not seem to be concerned about the protection of their data.

Hence, managers of 4- and 5-star hotels need to devise a clear sensory marketing strategy by using coherent multisensory stimuli which support the hotel's positioning. Simultaneously, the growing use of IoTs in hotels may help to enhance customers' sensory experiences. Nevertheless, managers are advised to critically assess (e.g. SWOT) each tool they want to implement with respect to their potential influence on their target group's sensory experiences.

A limitation of this paper is that it solely concentrates on 4- and 5-star hotels located in Europe. However, it would be a viable option to look into the application of IoTs in this type of hotels in countries, like Japan and the US, where cutting-edge digital tools, such as check-in robots, have been used. Moreover, we concentrated on the stay phase of the 'digital customer journey' (Radde 2017: 20–21) with respect to hotels. However, the application of IoTs in the pre-stay and post-stay phase and their influence on guests' sensory experiences may be explored, too.

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The Advent of the Voice Moment of Truth: The Case of Amazon's Alexa

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Abstract. Interactive Voice Assistants (IVAs), such as Apple's Siri, Microsoft's Cortana, Amazon's Alexa and Google's Assistant, are increasingly being integrated into consumers' daily lives. Indeed, IVAs are unfolding new opportunities for retailers to capitalize on Internet of Things (IoT) technologies and generate incremental value. This is affecting the consumer purchasing cycle through the advent of what this study coins as the Voice Moment of Truth (VMOT). This paper introduces a conceptual framework discussing this new moment of truth, which is expected to alter shoppers' behavior, as well as brands' and retailers' strategies. The VMOT is presented to be segmented into five key components: activation, conversation, perception formation, duration, and relationship formation. In addition, the introduction of the VMOT sets forth a new relation between shoppers, brands and online retailers that is crucial for its success.

This new voice-based moment of truth introduces new challenges that are yet to be defined or analyzed by any pre-existing literature. The importance of defining the interaction between these IVA devices and users is key to understand the implications that these interactions will have on shoppers.

Keywords: Interactive Voice Assistant · Shoppers' behavior · Retailing · Amazon

1 Introduction

Advancements in technology are reshaping the traditional communication process between humans and computers (Weyers et al. 2017). Human interaction with any digital device depends heavily on the sight, hearing, and touch senses, which allow initiating an action or receiving a response (Dix 2009). In recent years, human-computer communication has progressed to include non-physical communication methods, such as virtual or voice-initiated interactions (Callaghan et al. 2018) utilized to induce an action. Indeed, modern technology has made it possible for users to communicate to virtual agents through voice commands, a reality that was achieved through the evolution of the Internet of things (IoT) (Hoy 2018). Social conversational agents such as Interactive Voice Assistant (IVA) devices are being increasingly integrated into consumers' daily life (Purington et al. 2017). In fact, the IVA market is expected to reach an estimated $2.1 billion by 2020 (Gartner 2016). This upsurge in the

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adoption rate of IVAs is opening new opportunities for marketers to target and sell their products to users through unprecedented touch points.

Consumer electronics that function using the IoT technology are believed to be improving the quality of life (Thapliyal 2018). Apple's Siri, Microsoft's Cortana, Amazon's Alexa, and Google's Assistant are the most popular software agents that make use of these IoT technologies to communicate with users through voice (Hoy 2018). As IVA devices continue to grow, more opportunities will unfold for retailers to capitalize on this technology (Wortmann and Flüchter 2015). The growth and penetration of these devices into consumers' homes are causing a shift in the moment of truth (MOT) occurrence as means of exposure to goods and services are becoming vocal in nature. The moment of truth was originally defined as the opportunity for customers to perceive and form an impression about a specific brand based on an initial encounter (Ertemel and Başçı 2015). Nonetheless, the innovation of IVAs is expected to bring with it a new MOT that is fully dependent on the vocal interaction between the user and the IVA device. This new voice-based MOT introduces new challenges that have yet to be defined and analyzed.

Accordingly, this paper addresses the mediating role that IVA devices are playing in influencing the purchase moment and perception formulation of users when interacting with IVAs. The aim of this conceptual paper is hence to fill the existing gap in the literature by defining and segmenting the stages of the new voice-based MOT, hereby the "VMOT". This new moment of truth is expected to affect and alter shoppers' behavior, as well as brands' and retailers' strategies that this paper discuss through a conceptual framework. For that aim, the case of Amazon's Echo device powered by Alexa is used to assess how this leading IVA device (González 2017) is satisfying the consistently growing needs of shoppers.

2 Conceptual Framework Development

Voice assistance began with the introduction of Chatbot in the 1960s. Yet, despite the efforts made to mimic human behavior through the use of artificial intelligence (AI), the technology was yet to succeed in doing so (Dale 2016). It was not until the introduction of IVAs, that AI was able to achieve this human-like interaction (Marinchak et al. 2018).

2.1 The Advent and Development of IVAs

The advent of IVA devices would not have been possible without the advancement in IoT technologies that allowed devices, such as the Amazon Echo, to communicate with users through voice (Hoy 2018). IoT devices are identified as "objects that have embedded communication modules that support internet connection, allowing it to exchange data without direct human intervention" (Gubbi et al. 2013, p. 1646). This communication of information is facilitating the exchange of goods and services through the assistance of IoT devices (Weber and Weber 2010). IoT devices gave rise

to a highly digitalized world of e-commerce, which is re-defining the consumer purchasing journey (Cullinane 2009). The increasing popularity and integration of social conversational devices into our daily life is leading researchers to investigate this phenomenon to understand its implications on consumers and brands (Purington et al. 2017). A leading such device is the Amazon Echo (Bhat and Bose 2018) that was created by Amazon in 2015.

2.2 Amazon Echo

In the market since 1994, Amazon is renowned for its personalization and recommendation algorithms of products and services to customers (Smith and Linden 2017). By offering users convenience, low prices, customer service and fast reliable deliveries, Amazon.com sets itself as a leader in the e-commerce sector (Smith et al. 2017). Furthermore, Amazon smart integration of customer relationship management and information systems allows the company to grow amid a highly competitive market (Bhat and Bose 2018). The Amazon Echo device, powered by Alexa operating system, is considered by many as the greatest invention by Amazon after Kindle (Nickinson 2015). The Echo is a smart speaker with an integrated IVA that provides a variety of services activated though voice commands. The main purpose behind the 'Echo' is to assist users in making purchases, setting reminders, asking for the weather, playing music and many other functionalities that are expanding exponentially (Jackson and Orebaugh 2018). In fact, the idea behind its design was to create a hub within users' homes that integrates and controls other elements inside the home with a simple voice command (Euromonitor 2017). Through the help of Alexa, Amazon has created a smart ecosystem able to analyze consumers' behaviors and patterns, cater responses based on previous interactions, and become smarter with repeated use (Jackson and Orebaugh 2018).

The Amazon Echo has several features that permit users to personify the device. To operate an Echo, the users need to interact with Alexa by initiating a command activated by the wake word "Alexa" (Jackson and Orebaugh 2018). This interaction categorizes the device as a socially interactive device (Fong et al. 2003). Assigning a name, gender and personality to the operating system of an IVA leads to the personification of the agent in consumer eyes (Purington et al. 2017). Indeed, the users are anthropomorphizing the device by assigning to it human-like characteristics in a human-like manner (Gonnerman 2008). Amazon has introduced several personality traits to Alexa such as being smart, humble, enthusiastic and friendly, amongst many other human-like characteristics (Rubin 2017).

This personification is in its early phases as the Amazon Echo device is still limited to a reactive response to a user's request; indeed, Alexa fails to be able to completely communicate in a human manner, as the conversation needs to be initiated by the user. Only when the IVA will become intelligent enough to conduct a full conversation with the user, the device will become fully personified in the consumer's eyes. Indeed, "if these assistants communicate naturally with humans, then they essentially disappear as computers and instead appear as partners" (Ebling 2016).

2.3 The Moment of Truth

The service encounter between a customer and a sales representative, plays a key role in the success of any service firm (Solomon et al. 1985). Hence, it is crucial that the customer formulates a positive impression through this encounter for the sale to succeed. This instance is referred to as the moment of truth (MOT), defined as the opportunity for customers to perceive and form an impression about a specific brand based on an initial encounter (Normann 2002). The MOT definition was altered by Procter & Gamble in order for it to be applicable to a retail setting (Ertemel and Başçı 2015). Devised from the MOT school of thought, the First Moment of Truth (FMOT) represented the first seven seconds in which a shopper is exposed to a product on a store shelf and begins to formulate an impression about the brand (Nelson and Ellison 2005). This definition underlines the interaction with a physical item rather than a human interaction, focusing solely on the product or brand exposure in formulating perception. Based on this established perception, a purchasing decision can be made. The Second Moment of Truth (SMOT) was later defined by Procter & Gamble as the perception of the brand after using and experiencing a specific product or brand (Ertemel and Başçı 2015). This MOT occurs after the initial purchase, when shoppers use the item purchased and create a perception about the product or brand that endorses or contradicts their initial FMOT (Łysik et al. 2014).

The rise in Web 2.0 technologies is creating a significant shift in the consumers purchasing cycle. Users can now consume and publish information on digital platforms with a simple push of a button (Riegner 2007). In fact, it has become very common for digital consumers to browse the internet for products, brands and market information before deciding on a purchase (Moran et al. 2014). This hunt for information exposes the consumer to other MOTs that are highly dependent on the touch points they interact with. One of the key MOTs that further examine this concept, is the Zero moment of truth (ZMOT), defined as the moment a consumer is exposed to a stimulus and decides to seek online information from a third-party source in order to validate the initial perception received from the Stimuli (Lecinski 2011). The ZMOT is highly influenced by consumer-generated content, content that appears in search engine results and which consumers seek for validation. Technological advancements have created a great shift in the traditional moment of truth. This has caused the purchasing cycle to become highly dependent on the touch points that consumers are exposed to (Badrinarayanan et al. 2012). A challenge arises for retailers to capitalize on these touch points and remain relevant in this highly competitive environment. The introduction of new touch points is creating new opportunities for retailers to market their products, narrowing the gap between consumers and brands (Day 2011). However, these innovations do not come without their challenges particularly as touch points become more complex and targeted towards specific individuals.

The MOT is consistently changing as new touch points are introduced. The traditional mental decision-making process begins with the ZMOT that occurs after exposure to a stimulus, moving towards the FMOT occurring in a retail store, and finally arriving into the SMOT (Ertemel and Başçı 2015). Consequently, during this decision-making process the consumer goes through the five key stages of the purchasing cycle: awareness, interest, evaluation, commitment and loyalty (Moran et al. 2014).

The exposure to touch points can be anywhere along this cycle; however, the medium used can change as technologies evolves. This change has a great influence on any moment of truth; as the medium of interaction changes, so will the method of perception formulation. The introduction of IVA devices has introduced new touch points for marketers to target consumers (Marinchak et al. 2018). These touch points are dependent on the consumer's interaction with the IVA device. This interaction facilitates a new MOT that is dependent on the perception formation achieved through conducting a purchase using an IVA device. The purchase decision is no longer taking place at the retail store (FMOT) but instead vocally using an IVA.

3 The Advent of the VMOT

We define the voice moment of truth (VMOT) as the instance in which a user activates an IVA and receives feedback on a specific purchase of goods or services. This definition focuses solely on the purchasing behavior of the consumer when using an IVA device. At this particular VMOT, the perception can be developed prior to the purchasing decision through the ZMOT or the repurchasing behavior of previously used goods and services. VMOT is highly dependent on the response of the IVA as no perception can be formed or altered without a successful interaction with an IVA. Since this interaction between the user and the IVA is key for the success of the VMOT, it is crucial to analyze the technical components effecting this relation. We segment these components into five key elements: *activation, conversation, perception formation, duration, and relationship formation.*

For an IVA device to remain connected, a combination of software and hardware components must function simultaneously through the use of IOT technologies. This connectivity facilitates the exchange of data between the IVA and its cloud server, allowing it to issue a response (Wortmann and Flüchter 2015). Once the request is issued and a response is generated by the IVA, the VMOT takes place. However, without a valid connection to the retailer's cloud server, the device will not be able to recommend, search or conduct a purchase, limiting the IVA device to function mainly as a speaker. Thus, connectivity of the IVA device serves as a key limitation for the activation of the VMOT.

Artificial Intelligence is concerned with the study and duplication of the human thought process through machines (Turban et al. 2018). For a social agent to be considered intelligent when interacting with a user, it needs to be able to be appealing, affective, adaptive and appropriate (Gong 2003), all of which are human like behaviors. These behaviors are progressively learned within continuous interactions with an IVA. Complex adaptive systems (CAS) implemented into IVA devices allow them to adapt and learn from user's interaction with these devices (Crosby and Langdon 2018). This plays an important role on the interaction that takes place between the IVA and the. Currently IVAs can only respond to voice commands initiated by the user (Chung et al. 2017). This limits the conversation to be reactive in nature, which hinders the VMOT to the response issued by the IVA device. Also, since machine learning capabilities are related to this interaction, the recommendation algorithm associated with the response triggered by the VMOT will be affected.

Formation of perception is a key element in defining any moment of truth (Ertemel and Başçı 2015). Machine learning capabilities allow IVAs to deliver a highly personalized response that offer a unique experience to users (Crosby and Langdon 2018). This response permitted users to formulate perception about the products/services to be purchased based on the recommendation of the IVA. Besides, there exists an initial perception formed prior to a purchase that is based on a recognized need formed by the shoppers repurchasing behavior of pre-used goods and services, or through the support of the ZMOT. The VMOT occurrence is highly dependent on the perception formed prior to activation of IVA to purchase, as no purchase can be initiated without this perception formation leading to the need recognition. Unlike the FMOT which typically lasts for 7 s, the duration of the occurrence of VMOT cannot be measured as the activation of the IVA device is entirely dependent on the user's convenience. The duration is measured by the time a user acts on his/her perception and moves from the evaluation phase to purchase using the IVA device.

IVA providers focus on improving the natural language processing algorithms and AI technologies of devices to better understand and respond to user's requests (McTear et al. 2016). These advancements create IVAs that are smart enough to communicate with users in a human like manner (Marinchak et al. 2018). Assigning a name, gender, and personality to the operating system further builds on the human characteristics of the IVA device (Purington et al. 2017). Once a human like communication begins to occur, users begin to express a sense of emotional connection and social relationship with the IVA device (Han and Yang 2018). This interaction categorizes the IVA device as a socially interactive device (Fong et al. 2003). The VMOT is heavily dependent on this relation as it influences the level of collaboration of the user with the IVA (Turban et al. 2018). This relationship is built on the overall communication of the IVA device with the user. Nevertheless, the current interaction of the IVA device is still restricted to a reactive response by the IVA, hence the relationship between the user and the device is still at its early stages of personification.

IVA technologies are growing all thanks to the evolution of IT and machine learning. This paper builds on a key theoretical foundation that IVAs will one day become smart enough to initiate a conversation with users. Once these devices become proactive and initiate a human like conversation with a user, a new voice moment of truth 2.0 occurs. We define the voice moment of truth 2.0 (VMOT 2.0) as the instance at which a user or an IVA device engages in a proactive conversation in order to propose or purchase goods and services. The VMOT 2.0 can be activated by the user of the IVA or proactively activated by the IVA itself, whereby a human like conversation is conducted around a product/category of interest that would result in possible recommendations leading to a purchase.

4 Implications on Shoppers, Brands and Online Retailers

The introduction of VMOT sets forth a new interrelated relation between shoppers, brands and online retailers. For a successful purchase to occur using an IVA device, a request needs to be issued by the shopper to the online retailer requesting a purchase of a specific brand. If one of these stages fails to occur, the VMOT will not take place.

a. Shoppers

The use of IVA devices to conduct a purchase introduces a new convenient method for shoppers to order goods and services using online platforms. Shoppers will experience the VMOT once interacting with the IVA device in order to initiate the purchase. Such decision made by shoppers to use a specific IVA device to conduct a purchase, depends heavily on the relation the shopper has with the online retailer and the brand to be purchased. IVAs are integrated with databases that allow them to find requested items and conduct a purchase. These databases differ from one retailer to another, as different retailers offer various products. Shoppers will choose to buy IVA devices that are associated with retailers that offer the brands that customers seek to purchase. The VMOT will not occur if the shopper does not use the device to purchase products and services from online retailers. Accordingly, the relationship between the shopper and the online retailer plays a big role on the interaction between the user and the IVA device. In addition, the choice of brand made by the shopper plays a role in the VMOT occurrence. The first step towards conducting a purchase using an IVA is recognizing a need created by the repurchasing behavior of pre-used goods and services, or through the support of the ZMOT. Driven by the need recognition, the decision made in regard to what brand to be purchased is based on the shopper's preferences and relation with the brand. Once the purchase intention is formulated, the VMOT takes place. If consumers dislike the brand offering by the online retailer, then the VMOT will fail to occur.

Another element that plays a key role in limiting the VMOT is the security and privacy risks associated with conducting a purchase using an IVA device (Alepis and Patsakis 2017). With the growing insecurities of exposing one's personal life and information, shoppers will fear the invasion of their privacy by the IVA. The consideration of such risks by the shopper will impact the interaction with the IVA device, and therefore influence the VMOT. With the advent of the VMOT 2.0, these risks will further grow as IVA devices become proactive, further affecting users' trust towards IVA devices (Chung et al. 2017).

b. Brands

The integration of IVA devices is crucial for brands as it introduces a new platform for retailers to sell goods and services. This innovation in e-commerce allows brands to capitalize on the established relationships between the users and their IVA devices to conduct a purchase. Based on this interaction, the formulated perception by the user takes place through the occurrence of the VMOT. However, the success of this occurrence is limited to the offerings on the IVA database. This database is developed based on preset agreements between retailers and brands that allow the latter to compete in selling their offerings through the online retailer's platform. Hence, users are restricted to the brands offered by the online retailer associated with the IVA device. The rise of IVAs introduces new challenges for brands to remain relevant in this highly competitive environment. The ability of IVAs to initiate purchases is limited to its database. Thus, there exist barriers to entry for brands that are not available on online retailer's databases. As the VMOT 2.0 develops, interaction with the IVA device becomes more capable of modifying the consumer perception towards a specific brand. As the interaction becomes more proactive, the brands can target the users with interactive stimuli that might lead to a purchase using an IVA device.

c. Retailers

Retailers create their own ecosystems to emphasize the brand offering available on their platforms. The availability of the brands on the online platform of retailers, highly influences the occurrence of the VMOT. The more diverse the brands offered, the more likely users' needs can be satisfied through these platforms. If the product offering by the retailer does not match the consumers' purchasing habits, then the use of the associated IVA device will become less likely. However, the brand offering available on the retailer platform is not the only factor affecting the occurrence of the VMOT. The services provided by the retailer through the IVA need to be secure, timely, affordable and accurate for shoppers to continue purchasing from online retailers. Consequently, it is crucial that the overall experience of the user with the IVA device be smooth and convenient to encourage future use and generate a positive word of mouth. The attitude formed by the user based on their experience with the IVA device reflects heavily on the online retailers' brand image. This association places an important mediating role led by the online retailer in achieving the right balance between brand offering and IVA capabilities associated with the purchase process.

In the past, the role of the IVA providers was separate than that of the retailers as they focused on the technical aspects that go into designing the IVA, while the retailer focused solely on the product offering and the purchasing cycle associated with the IVA. However, with the introduction of the Amazon Echo, the market witnessed a merge between the role of the retailer and that of the IVA provider. Amazon has introduced its own "Echo-system" where the IVA device became integrated with the retailer's online platform. This "Echo-system" facilitates the growth of the e-commerce platform Amazon.com. The expansion of the Echo family, led by the introduction of the Echo look and Echo Show devices, will further build upon the capabilities of this "Echo-system". While the Amazon.com platform continues to grow the relation will strengthen, hence reinforcing the VMOT. Similarly, if Alexa becomes proactive, the bond formed through the reoccurring success of the relationship may reinforce the occurrence of the VMOT 2.0.

5 Conclusion and Future Research

The majority of market leaders in the field of technology, including Google, Baidu, Apple and Samsung are increasingly integrating voice assistants into as many devices as possible in order to drive mass adoption (Chua 2018). IVA devices are on the rise and are continuously improving with the growth of IoT technologies. The importance of defining the interaction between these IVA devices and users, through what this study coined as the VMOT, is key to the understanding of the implications of these interactions on shoppers. This research is not without limitations: it is conceptual in nature as it discusses potential developments in the future of the IVA devices alongside the relationship with its users. Future research could hence build empirically on the theoretical propositions set forward by this paper.

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Buying from Online Supermarkets: The Main Factors Influencing the Experience of Flow, Purchase Intent and E-loyalty

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Abstract. This paper aims to clarify and characterize the role of flow in online supermarkets. To this end, an integral model of flow in online supermarkets is proposed and tested. The empirical part of the research was based on both qualitative and quantitative techniques. The former consisted of five in-depth interviews carried out with experts in online supermarkets. The latter consisted of an online survey resulting in a sample of 651 valid questionnaires. The theoretical model was tested and validated using the standard methodological procedure based on exploratory and confirmatory analyses. The results indicate that concentration and personalisation are the main direct antecedents of flow. Other factors such the perception of product assortment (a new variable not considered in previous flow studies) reveals that having a wide range of products in online supermarkets has a negative impact upon consumers' positive emotions during the activity, and therefore impedes the flow experience. Furthermore, two direct positive consequences of the flow experience are proved: purchase intent and e-loyalty. In sum, it can be concluded that businesses are better off providing users with supermarkets webs conducive to getting them into a flow state.

Keywords: Online supermarkets · Flow · Structural equation methodology · Purchase intent

1 Introduction

In addition to tools commonly used to study the attitudes of consumers in "bricks and mortar" environments, researchers examining the behaviour of digital consumers employ new aids that have been widely utilised in digital environments to help us better understand the behaviour of those browsing the internet.

Amongst these aids, particularly noteworthy is the concept of "flow", a study tool that has been widely used in academic literature to classify human behaviour in different environments. The term was first coined by Csikszentmihalyi (1975), who defined it as a cognitive state in which an individual is fully immersed in the activity

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they are carrying out, forgetting their sense of time and any other activity outside of the task they are performing. Introduced into the study of online consumer behaviour, it was noted how businesses facilitating flow experiences for their users reaped benefits (Lee and Sung 2018; Gao *et al.* 2017; Hsu *et al.* 2017; Jamshidi *et al.* 2017; Jeon *et al.* 2017; Kim *et al.* 2017; Ozkara *et al.* 2017). More specifically, flow has been particularly employed within e-commerce (Ettis 2017; Ali 2016; Alcántara-Pilar *et al.* 2015; Wang *et al.* 2015) it is a determinant in online consumer behaviour, affecting revisits, attitudes towards brands, web usage, purchase intent, and the perception of website quality, amongst other aspects (Chen *et al.* 2017; Huang *et al.* 2017; Kim *et al.* 2017; Ali 2016; Landers *et al.* 2015; Shim *et al.* 2015; Wang *et al.* 2015; Obadă 2014).

This research uses flow to progress in our understanding of digital consumer behaviour with fast-moving consumer goods (FMCG) and, more specifically, in their behaviour with regard to online supermarkets. It is surprising how flow has been used as a study tool to analyse consumer conduct in widely differing digital environments, but not FMCG. We therefore aim to define the concept of online flow in this specific field, identifying the flow's background as well as its most significant outcomes when a consumer browses an online supermarket website. With the goal of proposing a theoretical model for flow in online supermarkets, for this research, we have reviewed the literature on this concept and proposed a theoretical model for it. The overall goal is to place on record the influence of flow on consumer behaviour in online supermarkets. Figure 1 depicts the theoretical model for flow, comprising a total of seven variables.

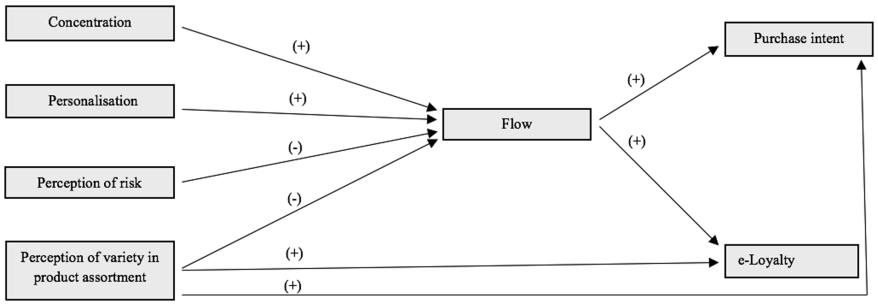

Fig. 1. A theoretical model for online flow

2 Research Methodology (Procedure for Data Collection, Sample, Measures)

We performed a qualitative study and quantitative research by means of in-depth interviews with sector experts and an online questionnaire sent to consumers living in Spain who are online supermarket users. We then performed confirmatory factor analysis to validate the initial exploratory factor analysis. To manage the missing values, we followed the complete-case approach, including only the responses from fully completed questionnaires. It was possible to employ this technique because the

questions users left blank were completely random and did not follow any specific pattern (Hair, *et al.* 2008). Additionally, the resulting sample size was large enough to permit the exclusion of all the incomplete questionnaires. The remaining sample was suitable for our research goals (Hair *et al.* 2008), with an estimated margin of error of +/−3.8%. After applying this criterion, 20.8% of users responding to the questionnaire remained, giving a final total of 651 surveys completed in their entirety. Likert scales, widely used in literature on online flow, were developed to measure the model's latent variables. A series of initial items was generated for evaluation, and the elements were adapted to the specific context of online FMCG. Wherever possible, elements that had already been tested were used to increase the reliability and validity of the scales.

3 Data Analysis and Results

3.1 Exploratory Factor Analysis

Exploratory factor analysis (EFA) was performed in the form of an analysis of the principal components with varimax rotation to evaluate the constructs considered in the flow model. In all cases, analysis of the Kaiser-Meyer-Olkin (KMO) indicator gave values above the required minimum. Furthermore, Bartlett's test for sphericity was significant for all dimensions (with a value of $p < 0.005$). The results obtained with EFA confirm the existence of a single underlying factor for the items on each proposed scale and, additionally, that the variance is, in each case, high (with a factor above 0.5). Similarly, all the proposed indicators are significant (with factor loading above the recommended minimum of 0.5), except for two: the first item of the e-loyalty variable (EL1) and the third item of the purchase intent variable (PI3). In these cases, the indicators were eliminated from the relevant measurement instruments. Once these items had been extracted, we saw a significant increase in the percentage of variance explained for the relevant scale.

3.2 Confirmatory Factor Analysis

The results of the EFA were again validated with confirmatory factor analysis (CFA) using structural equation modelling (SEM).

CFA of all the measurement scales gave satisfactory results, suggesting a good fit for the model (χ^2/df = 2.948; GFI = 0.912; RMSEA = 0.055; CFI = 0.965; TLI = 0.954; NFI = 0.948; IFI = 0.968). We also checked the reliability and convergent and discriminatory validity of the measurement scales employed. Pursuant to Steenkamp and Van Trijp (1991), to analyse convergent validity, we checked each indicator's loadings against the latent variables, revealing them to be significant and above 0.5.

We also performed average variance extracted (AVE) analysis to confirm the convergence of the model's scales (Ping 2004). The results for all the scales were satisfactory, with indicator values of above 0.5.

Lastly, in all cases, the compound reliability (CR) of the constructs was above the recommended cut-off value of 0.7 (Hair *et al.* 2008).

3.3 Structural Model Testing

To test the structural model's causal relationships, we used structural equation models. We commenced by analysing the goodness of fit of the overall model with structural parameters. The general scores for the model structure's goodness of fit were quite acceptable (χ^2/df = 6.319; GFI = 0.902; RMSEA = 0.069; CFI = 0.956; TLI = 0.943; NFI = 0.942; IFI = 0.956) (see Martínez-López *et al.* 2013). With regard to the importance of the estimated parameters, the results obtained for the estimation of the model make it clear that all the hypotheses raised are significant.

4 Conclusions

For this research, valid and reliable scales were provided to assess the flow and constructs associated with the specific context of online supermarkets. An integral flow model for online FMCG environments was validated empirically and its structure was verified.

The evidence obtained indicated that concentration (C) and personalisation (P) are the main direct determinants of this experience. These two factors are the basic preconditions for an online supermarket user entering into a state of flow. Also, and in line with the evidence obtained by literature on online flow, we have confirmed the importance to users of online supermarkets of feeling secure (RP) whilst browsing the website for entering into a state of flow. We also verified the impact of perception of product assortment (A) in the flow. This reveals, for the first time, that digital FMCG consumers prefer less variety in online supermarkets than in "bricks and mortar" ones, indicating that having a wide range of products in online supermarkets has a negative impact upon consumers' positive emotions during the activity, and therefore impedes the flow experience.

Our research also points to two consequences of flow in this field: purchase intent and, albeit less intensely, users' brand loyalty. It has also verified the influence of the perception of variety in product assortment on these two outcomes.

5 Managerial Implications

This study also has a number of practical implications for businesses acting as online FMCG retailers.

Perhaps the most important is that providing flow experiences has positive outcomes that are desirable not only for consumers, but also for the retailers selling to them, in that they impact upon both purchase intent and e-loyalty. Therefore, the criteria taken into account when designing websites should include, in addition to purely commercial factors, others that allow consumers to enjoy pleasant digital experiences.

Firstly, since consumers need to be concentrated to experience flow, it is advisable for the browsing and purchasing experiences to remain uninterrupted. This means that it is important for online supermarkets to have websites that ensure the swift browsing

and loading of pages, that remember previous purchases to make searching for products easier and that avoid communications that are of no value to the consumer.

Secondly given the significant influence of personalisation on flow, it is essential that online FMCG retailers offer consumers the chance to personalise the appearance and functionality of their websites in accordance with their needs. Additionally, online advertising and special offers should be adapted into line with consumers' interests.

Thirdly, if users perceive that they are at risk whilst browsing and purchasing on a website, there is a negative impact on flow. This means that websites should be designed to include clear privacy policies that are respected by retailers. Also helping to reduce perceived risk is a feeling on the part of consumers that they are in control. In this regard, a well-designed website that is easy to use and attractive helps consumers to carry out purchase processes more consistently and therefore achieve the desired outcomes. Additionally, it has been noted how the greater their experience in purchasing from online supermarkets, the lower the risk perceived by consumers, thus facilitating a state of flow.

Finally, the experience of flow is affected by the perception of variety in the product assortment on offer. It is therefore worth ensuring that this correctly gauged: an online supermarket's website must contain the right variety of products to meet consumers' needs while avoiding tiring them out, causing them to "walk away" from the shopping basket. In this regard, a perception of a huge variety of products gives users the feeling they are wasting a lot of time on a routine activity, with a negative impact on the activity's enjoyment and on flow.

The results of our research here show that creating states of flow in users while they browse a website constitutes a key competitive edge for online supermarkets. In this regard, businesses are called upon to develop initiatives aimed at boosting the precursors to flow in this specific sphere of online browsing and consumption.

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How to (Not) Survive a Social Media Firestorm: The Dolce & Gabbana's Ad Debacle in China

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Abstract. The objective of this study is to explore the complex phenomenon of "social media firestorms", because such crises can substantially affect brand reputation and the financial performance of the company owning the brand. Analysing the case of Dolce & Gabbana (D&G), we tested some extant theories concerning the antecedents of such form of collaborative brand attacks. Furthermore, focusing on brand management strategies in response to consumer attacks, we found out what brands should do, or not do, to survive a social media crisis.

Keywords: Brand management · Brand ideological incompatibility · Collaborative brand attacks · Consumer behaviour · Cross-cultural differences · Social media firestorms

1 Introduction

Negative user-generated content occurs when an individual speaks poorly about a brand (Bonifield and Cole 2007) on social media platforms. Occasionally, brands receive public offenses from a large number of internet users. The intent of such collaborative brand attacks (CBAs) (Rauschnabel et al. 2016) is to force the targeted brand or company to change behaviour on the market. A complex phenomenon such as large quantities of messages containing negative word of mouth and complaint behaviour against a brand or company in social media networks is also defined "social media firestorms". This concept, introduced to the academic world by Pfeffer et al. (2014), has been adopted in marketing literature by Hansen et al. (2018) to indicate a typical case of brand crisis in the digital age.

According to Rauschnabel et al. (2016) CBAs is a relatively new topic, therefore very little is known about when and how such phenomenon occurs and under which circumstances brand attacks are amplified or mitigated.

The purpose of this research is to contribute to the debate about social media firestorms by investigating a recent case involving the Italian fashion brand D&G. Specifically, the case study analysis is focused on the exploration of the antecedents and consequences of such phenomenon, as well as the strategies that brands can adopt to manage negative relationship with consumers.

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2 Theoretical Background

As highlighted by many researchers (Hennig-Thurau et al. 2010; Labrecque et al. 2013) the explosion of the internet and social media offered to consumers the possibility to express their opinions to other consumers and create contents (i.e., complaint messages) directly addressed to marketers that can be very harmful for brands. This means that the technology that was supposed to empower marketers has empowered consumers (Fournier and Avery 2011). If consumer empowerment is a necessary condition to achieve consumer activism goals in markets, such as CBAs, brand hate is the trigger (Krishnamurthy and Kucuk 2009).

Reviewing the extant literature about negative consumer emotions towards brands, we found out that people can form negative brand attitudes due to a variety of reasons, such as political motivation (Sandıkcı and Ekici 2009), negative past experience with product/service, self-concept/brand image incongruity, and ideological incompatibility (Hegner et al. 2017). Kucuk maintains that brand hate antecedents can be usefully discussed in two main categories: (1) individual level and (2) social level. In the first case, consumer hate is triggered by service and product failures. In the second case, the determinants of consumer brand hate regard the lack of corporate social responsibility, that is, a negative impact of company's business model on society and the wellbeing of the natural environment.

From a semiotic perspective, user-generated contents are a particular form of multimodal text. According to Baldry and Thibault (2006: 3), "Multimodal texts integrate selections from different semiotic resources to their principles of organisation. […] These resources are not simply juxtaposed as separate modes of meaning making but are combined and integrated to form a complex whole which cannot be reduced to, or explained in terms of the mere sum of its separate parts." This means that messages published by consumers online are not limited to written language, but represent the combination of written material, images, video, sounds, link to other external multimodal text (i.e., websites), and emoticons or emoji representing a plethora of positive and negative emotions.

Negative user-generated contents are an example of "semiotic democracy". This term, coined by the media scholar John Fiske, describes a world where individuals freely and widely engage in the use of cultural symbols in response to the forces of media (Fiske 1987). A semiotic democracy enables consumers to "resist", "subvert" and "recode" certain contents produced by economic actors, thereby empowering consumers, rather than producers (Katyal 2012).

3 Methodology

Considering that the phenomenon to investigate is still new and not specifically defined, this research has an explorative nature. According to Yin (2017), the main purpose of exploratory studies is that of understanding what is happening in a specific

phenomenon, to seek new ideas and insights. Generally, in order to carry out an exploratory study, Kothari (2004) suggests using one or more of the following methods: (a) the survey of concerning literature, (b) the experience survey, and (c) the analysis of "insight-stimulating" cases. To gain insights and information about the research objective, the current exploratory research combines two of the three above-mentioned methods, specifically (a) and (c). A brief literature review has been furnished in the previous section. Conversely, in the next paragraph will be introduced the "insight-stimulating" case selection procedure, and the methods adopted to investigate such unit of analysis.

3.1 Case Study Design

The researchers opted for a single case study, because it is not as expensive and time consuming as multiple case studies. Furthermore, focusing on a single case offers the possibility to have a deeper understanding of the exploring subject, because a more careful study is made. The selection of the case concerning D&G firestorm in China is based on the authors' prior knowledge, that is, information assimilated from both traditional media and digital media (i.e., online newspapers and blogs). We selected this case because it is one of the most recent example of social media firestorms and also because, according to Yin (2017), it represents a "critical case" to confirm, challenge, or extend the theory.

Among the different techniques to access to case data suggested by Gummesson (2017), the most appropriate to explore the case of D&G seems to be online research. Social media firestorm is a typical phenomenon that emerges in the internet, thus the effective way to collect information consists of observing the tracks left by such event online and scraping data from website manually or automatic via specific extraction tools (i.e., Netvizz, Facepager, and YouTube comment scraper).

Online materials, such as written or multimodal texts produced by consumers or the transcripts of the dialogues between marketers and consumers, can reveal human perceptions about reality, behaviours, and the hidden choices behind certain actions. Since the majority of the collected data are texts (see Table 1), this research adopts content analysis techniques. According to Krippendorff (2004), content analysis is a research technique for making replicable and valid inferences from data to their context, with the purpose of providing knowledge, new insights, a representation of facts and a practical guide to action. The main goal is to achieve a condensed and broad description of the phenomenon, and the outcome of the analysis is concepts or categories describing the phenomenon. Therefore, the content analysis of written, visual, or multimodal texts implies the description of the manifest content, close to the text, as well as interpretations of the latent content, distant from the text but still close to the lived experience of the subject who produced the text.

Table 1. Collected materials.

Source	Type of material	Volume
Instagram (Period: 2018-11-18 to 2018-12-02)	D&G posts	22
	User-generated comments	147.854
YouTube	Apology video to China published by D&G	1
	User-generated comments	2.647
Facebook (Period: 2018-11-18 to 2018-12-31)	D&G posts	75
	User-generated comments	1.985
Google (Keyword: "Dolce and Gabbana crisis")	News	79

4 Case Study Analysis

D&G is an Italian luxury fashion house founded in 1985 in Legnano by Italian designers Domenico Dolce and Stefano Gabbana. The two met in Milan in 1980 while they were both working as assistant designers in a fashion studio. In 1982, they decided that the best way to express their unusual and extremely personal style was to work for themselves and open a design studio; in time, it grew to become "Dolce & Gabbana". On November 18, 2018, D&G released a now-deleted post on Weibo, a social media platform similar to its American counterpart Twitter but used only exclusively in China, to promote its upcoming runway show in Shanghai (on November 21, 2018), with hashtags #DGLovesChina# and #DGTheGreatShow#. In that and related videos, a young Asian model in a red sequin D&G dress appears to have trouble eating Italian foods such as pizza, pasta, and cannoli with chopsticks but finally figures it out. In a particularly garish error in tone, in the video featuring cannoli, a male narrator asked the model "it's still way too big for you, isn't it?"

Many social media users in China accused D&G's multi-video online campaign to be stereotypical, racist and disrespectful for Asian female upon its release. The anger spread so quickly across the Weibo platform that D&G deleted the three posts featuring the videos less than 24 h after its release. But that has not calmed down the angry crowd at all. In fact, the online crisis get worst after that Diet Prada, an Instagram account dedicated to bringing light to brand issues, shared screenshots from an alleged private conversation between Stefano Gabbana and fashion writer Michaela Phuong Thanh Tranova, in which the Italian designer appeared to make derogatory comments about Chinese people and Chinese culture. Specifically, the messages purportedly written by Gabbana said the Italian designer had never wanted to delete the video, and it was removed because of his "stupid" office. "China Ignorant Dirty Smelling Mafia," the message added, referring to China as "the country of (poop emojis)". This sequence of events increased the indignation and D&G was forced to cancel "The Great Show" catwalk.

Focusing on the social media firestorm process, the content analysis reveals that the main antecedent of the attack that has been launched to the Italian luxury fashion brand is represented by a company-related trigger depending on the ideological incompatibility between the symbolic meaning expressed by the brand and the Chinese people.

Furthermore, the antecedent regards the social level rather than the individual level, because it is an entire population who felt resentment for wounded pride. D&G campaign was widely considered as offensive and disrespectful towards Chinese culture and traditions, but probably not enough to cause a crisis of this scale. What really made the Chinese netizens upset, was what came after; instead of clarifying the context of the advert, the brand's co-founder Stefano Gabbana offended an entire country on Instagram and his emoji cannot really be misunderstood, no matter what language someone is speaking.

As shown in Fig. 1, one of the most frequent term recurring in the large quantities of messages containing negative word of mouth and complaint behavior against D&G is "boycott". Jing Daily, a leading digital publication on luxury consumer trends in China, reported that "Boycott Dolce" has been mentioned on Weibo more than 18.000 times as a result. The main objective of this collaborative brand attacks on the Chinese social media was to damage the fashion brand both on the reputational and financial plane. According to the disseminated negative word of mouth about the hated fashion brand, on Thursday November 20, 2018, major e-commerce platforms across China, including Tmall, JD.com, Suning Tesco, NetEase Koala and Vipshop, removed D&G products. The backlash, as proved by the several photos of empty D&G stores posted online by many Chinese netizens, had an effect on the Italian brand's brick and mortar locations in China too.

Fig. 1. Word cloud of the most frequent words and phrases that occur in the textual dataset.

In addition to the numerous written texts that Chinese netizens shared online, the brand has been subject of videos of consumers burning, destroying and otherwise renouncing their D&G products. Furthermore, on Instagram is possible to retrieve thousands hilarious, disapproving, caricatural and offensive images containing the hashtag "#boycottdolcegabbana".

Focusing on the social media crisis management process, after the publication of the screenshot of comments attributed to Stefano Gabbana went viral on Wednesday November 21, 2018, the co-founder of the Italian fashion brand published a post on Instagram in which he stated that his account had been hacked. The post contained an image with the words "NOT ME" written across one of Tranova's screenshots. The company similarly claimed to have been hacked in a statement posted on its official Instagram page. This justification message collected 73.800 comments. The content analysis reveals that the majority of the people considered this statement untrue, as illustrated below:

> **servicerobotwaitress** D&G, do you think we Chinese are stupid enough to believe your superficial posts here? (Instagram, November 21, 2018)
> **sunnysunny619** The hackers not hacked the ID, they hacked the designer's head. (Instagram, November 21, 2018)

Someone called the two fashion designers "cowards", other instead invited them to be more respectful towards Chinese people and to apologise sincerely, as the following excerpts illustrate:

> **miniminismini** "Hacked" 😂😂😂 People aren't stupid, at least admit your own mistake you coward. (Instagram, November 21, 2018)
> **lsz0920** Your ins account has been hacked should not be your excuse, you need change your attitude, dude!! (Instagram, November 21, 2018)

On Friday afternoon, China time, D&G released an apology video on its official Weibo account. The video shows Domenico Dolce and Stefano Gabbana sitting at a table with grave expressions on their face. The two speak in Italian as they say that they "feel very grieved" over what their "statements and actions" have brought about "for Chinese people and their country" over the past few days, and that they hope they can be forgiven for their "misunderstanding of [Chinese] culture." They end the video by apologizing in Chinese, saying "dui bu qi".

D&G shared their apology video both on their Facebook page and on YouTube Channel, collecting a huge quantity of negative comments and insults. Specifically, from the content analysis of these comments emerged essentially two themes. Firstly, D&G apologies are considered forced, fake and insincere. Instead to look in the camera it seems they are using a teleprompter is the insinuation moved by someone on YouTube. Secondly, the brand is perceived as racist and disrespectful towards Chinese culture and population. The impression is that this feeling of indignation of Asiatic population towards the Italian fashion brand will not go away easily. As illustrated below:

> I'm afraid I can't accept your apologies. Things are not so easy as you expected. We don't want to forgive. We don't think your actions deserve it. You just have to get out of China […] (Facebook, Male, November 25, 2018)

According to Business Insider Italia, D&G posted revenue of 1.29 billion euros in the fiscal year ended March 31, 2018, of which 25% came from the Asia-Pacific region. Although it remains unclear just how much the brand will lose after Chinese boycott, we can say that this situation represents a significant setback for D&G, because it affected sales. Many consumers, in fact, returned goods and all major e-commerce platforms in China stopped selling their products.

5 Conclusions

In line with Hegner et al. (2017), the findings reveal that one of the main consumers' motivation to hate and publicly attack or boycott brands is related to ideological incompatibility.

The case of D&G teaches that for many brands creating impactful ads in a market of very different cultural traits can be difficult. D&G's use of clichés and misrepresenting Chinese culture was their biggest mistake. This means that for brands is vital to understand the cultural differences of a country before to create specific marketing and communication strategy focused on international market penetration.

The most surprising thing regards the incapacity of D&G to manage the entire social media crisis process. In fact, the activities 2, 3, 4 (see Table 2) implemented online by the Italian Fashion brand contributed to intensify people's outrage. Specifically, netizens perceived their explanation messages about the hack and the subsequent apology video not enough to cancel their mistake. Moreover, the brand deleted many user-generated comments written in English from their Instagram profile, probably because such comments were more comprehensible to a wider audience than Chinese ones, as illustrated below:

> **whcvcur** Then why did you delete so many comments written in English? To stop people from knowing the truth? I feel sick (Instagram, November 21, 2018)

Table 2. Collaborative brand attacks: antecedents and brand reaction process

CBAs antecedents	Brand reaction
Company-related trigger based on ideological incompatibility	1. Removal of the multi video online campaign from their social media profiles 2. Instagram post about the story that both D&G and Stefano Gabbana Instagram accounts were hacked 3. Deletion of some user generated comments written in English from their Instagram profiles 4. Apology video

According to Melancon and Dalakas (2018, p. 164), "deleting negative feedback could potentially generate further negative attention either by the person who posted the original post or by others, and is typically not the best approach for handling such comments."

After the crisis, it would have been better if D&G had avoided any media coverage for a while, instead its social media activities had continued as if nothing had happened. The consequence was that every image posted on Instagram continued to be flooded with insults and poop emoji even after the publication of the apology video.

D&G's strategy denotes lack of authenticity, but most of all arrogance. Besides, how reported by The Business of Fashion, on November 23, 2018, "according to sources, members of D&G's local team in China warned the Milan-based company not to proceed with the marketing campaign that sparked the uproar but were overruled."

This paper has some managerial relevance and practical implications. Firstly, the case study analysis gives to practitioners a holistic representation of the peculiar aspects and variables that determine the emergence of social media crisis. Secondly, the findings can teach to practitioners how and why other brands committed mistakes. Finally, this study suggests that, in order to avoid social media crisis and firestorms, brands must stay authentic, follow stunning values and be associated with specific corporate responsibility goals. Furthermore, strong brands listen not just how the audience feels about the brand, but also how they feel about everything. Understanding the human being is the only possibility for brands to: (1) have a compelling value proposition to its customers, (2) evolve, (3) become cultural icons, and (4) co-create value with their customers and other stakeholders.

This research has some limitations that have to be pointed out. First, analysing a single case does not allow generalisation, thus future studies should examine other CBAs cases, maybe adopting a cross-case analysis. Second, the findings are the result of a retrospective observation and analysis of a phenomenon actually occurred, future study could adopt a quantitative perspective, for example analysing the real effect that the firestorm in China had on D&G financial performance.

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Identifying Critical Determinants of 'Digital Customer Services' Usage – An Exploratory Study

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Abstract. Digital technology has reinvented retail business as well as commerce. This study aims to examine consumers' perception and usage of digital customer services (DCS) and investigate three significant post-adoption and marketing consequences: simplicity, awareness, and usefulness. Using a purposeful sampling technique, 10 semi-structured, in-depth interviews were conducted with banking customers in Finland in January 2019. The research findings suggest that simplicity regarding DCS occupies a key position in their prolonged use, while awareness and usability are also important. This study offers some valuable theoretical and managerial implications and suggests an agenda for future research.

Keywords: Digital customer services · Simplicity · Awareness · Usefulness · Finland

1 Introduction

Digitalization, which is also known as digitization, means transforming analog data into digital data. However, research has provided a more comprehensive explanation of the term "digitization." For example, Sklyar et al. (2019) stated that it involves the use of digital technology to provide new and innovative value-creating and revenue-generating opportunities to business firms. By contrast, a "digital service" is an activity or benefit that can be offered over electronic networks, which are essentially intangible (Gimpel et al. 2018).

In this era of digitalization/digitization, tech-savvy consumers expect digital customer services (DCS), which is the context of this study, from service providers across different industries, such as e-commerce or online retail, banking and payment, insurance and e-business, etc. The proliferation of handheld devices has further augmented consumers' expectations of DCS. To meet demands for more innovative and convenient digital services, various organizations have developed and offered downloadable service applications that are meant for portable devices, including smartphones and tablets.

The scope of this investigation covers only the non-financial aspects of the DCS that are provided to regular bank account holders via downloadable mobile banking

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applications. Thus, the scope of this study covers neither mobile banking transactions nor mobile financial services and their usage per se but rather examines DCS that are integrated on the same platform (i.e., mobile banking). Anecdotal evidence and a growing body of research have suggested that extensive research (Karjaluoto et al. 2018; Glavee-Geo et al. 2017; Shaikh and Karjaluoto 2015; Hepola et al. 2016; Shaikh et al. 2015a) has examined mobile banking applications and services using various models and their modifications. Unlike these studies, this study has conducted a critical analysis of DCS applications in the retail banking context. This is an important gap because mobile banking applications differ regarding which DCS options are embedded in them.

This study tested the effects of three significant post-adoption and marketing consequences: simplicity & usability of digital services, awareness of & familiarity with digital services, and usefulness & functionality of digital services. This research provides significant implications and valuable directions for the banking industry, especially regarding the new regulatory framework: the revised payment system directives (PSD2). These regulatory developments, introduced and implemented by European Commission in May 2018, have radically transformed the financial services industry because PSD2 allows greater collaboration and competition as well as increased access to strategic customer accounting data to non-banking entities, such as financial technology firms, for designing and providing financial and payment services to various customer segments.

The following sections provide a brief overview of the post-adoption consequences, the research methodology used, and the study's findings. This paper concludes with a discussion on the study's contributions, implications, limitations, and future research possibilities.

2 Literature Review

2.1 Simplicity and Usability

Although research on simplicity is considered recent in the human-computer interaction field (Choi and Lee 2012), it is an important design feature (Eytam et al. 2017); it has notably been defined as one of the key factors in designing easy-to-use services and products to develop the usability of information (Lee et al. 2013). Simplicity of digital services promotes usability (or ease of use). It includes design features that provide a clean, concise, clear, and intuitive layout, which require less effort toward achieving the desired task, and language features that are crisp, clear, simple, and easy to understand (McKinsey and Co. 2009).

2.2 Awareness and Familiarity

Customer awareness, which is at the top of the marketing funnel, regarding digital services is widely considered a pivotal element in the continuous use of services (Glavee-Geo et al. 2017; Hanafizadeh and Khedmatgozar 2012; Howcroft et al. 2002). Here, the awareness, knowledge, and/or familiarity of a DCS refers to both the

understanding and the acknowledgement of the services offered via a downloadable mobile banking application as well as the content and functions that are available to customers. Perhaps, a lack of awareness can damage a service's usefulness, usage frequency, and adoption.

2.3 Usefulness and Functionality

Several studies (Kim et al. 2019; Bhattacherjee 2001) have used the term "service usefulness" interchangeably with "service benefits" and "service performance." In general, the term "usefulness" refers to the issue of whether an application or information system can be used to achieve the desired goals of the consumer (Zhang et al. 2019). To better understand the usefulness of a system, research (Zhang et al. 2019) has divided this aspect into "utility or functionality" and "usability." Here, functionality refers to the number of features that are included in either the product, service, or system and how well a system (in principle) can do what is needed. The product's functionality influences its perceived usefulness, which is a key component of the technology acceptance model (Eytam et al. 2017). By contrast, usability is how well users can use that functionality to perform a desired task (Zhang et al. 2019).

3 Research Methodology

The examination of DCS is a relatively new area for research; therefore, to gain a deeper understanding of the field in a developed country context, a qualitative research approach was used to collect and analyze the data. A pre-tested interview protocol was used to conduct face-to-face, semi-structured, in-depth interviews in Finland during January 2019 with ten key informants. Here, the study participants were selected using the purposeful sampling technique (i.e., the study participants consisted of ten bank customers, both male and female, in different age groups, who owned a smart phone, had been using the mobile banking application for a minimum of six months, and had used the DCS options). Participation in the study was voluntary, and the interviews were conducted in English.

The interview location was carefully selected to ensure that it offered a quiet place for the researcher to record the interviews on an MP3 player (Shaikh et al. 2015b). Therefore, all interviews were conducted in a meeting room that was provided by a local university in Finland. The interview participants were sufficiently informed about the study's objectives and its implementation prior to the interviews. The interview conversations lasted between 20 and 25 min and were recorded after securing consent from the study participants. The interviews were transcribed using a simple Word application. The author followed a three-step qualitative content analysis approach, as suggested by Shaikh et al. (2015a) and Hsieh and Shannon (2005). This three-step approach involves qualitative data reduction, data display, and data verification. In the first stage, the interviews were transcribed around the three major themes of the study: simplicity, awareness, and usability of the studied digital services. The data analysis began immediately after the first interview.

4 Findings

4.1 Simplicity and Usability

The study participants were asked about the level of simplicity when accessing the application on their cell phones. In general, the participants verbally claim to be satisfied and stated that the access method (entering a four-digit pin) was convenient and easy to use. Nonetheless, a few noted their concerns and proposed an alternative method to accessing the application. For example, a few participants suggested activating biometric functions for accessing the application. When explicitly asked why they had made this suggestion, some of the respondents said that it would increase both security and ease of use.

> *"I like the very simple and easy sign-in mechanism of using the four-digit code, but it would be a lot easier and nicer for me to access using biometrics, such as my fingerprints. Then, I do not need to remember anything" (User 8).*

A few respondents considered simplicity a process that involves different steps versus a one-time or click activity when accessing and using digital services. The best consumer experience empowers customers to customize the application layout of the DCS per their needs and requirements.

> *"For me, simplicity is like a process—a mini-customer journey—from log-in to actions that I perform and sign-off from the application. This process should be simple and should not trigger any strong emotions, such as anger. I should be able to customize the layout myself for increased simplicity and according to my needs and requirements" (User 5).*

A simple complaint resolution mechanism should be in place for the timely address of consumer complaints to increase consumer trust, positive experiences, loyalty (stickiness), and commitment. Trust and positive experiences with DCS increase customer advocacy intentions and referrals.

> *". . . because of the easiness, when I have to complain, I prefer to lodge it using the online/mobile banking application. The bank should provide a multi-lingual service" (User 2).*

4.2 Awareness and Familiarity

A significant relationship was found between the sustained usage of DCS and consumer awareness and familiarity with these services. Here, most of the respondents explicitly said that they would have used the DCS offerings more frequently and for different purposes if they had known which functionalities were provided via the mobile banking application. Hence, this lack of awareness resulted in the limited use of digital services, damage to the user's long-life value, and increases in visits to the bank branch. Discussion with the study participants suggested that the use of digital services is lagging far behind consumer awareness.

> *"One day, my boyfriend introduced me to the digital services offered by my bank. I am, therefore, learning how to use different services and applications from other people and not from my bank" (User 4).*

Another finding suggest that the consumers in Finland prefer periodical newsletters and emails from their service providers about new products and services or changes in any services. They do not like to be contacted by phone about any service or products. In addition, some respondents noted concern regarding their lack of awareness about different digital services that are either available in or added to their mobile banking application. Due to this lack of awareness, the users could not fully benefit from the digital services.

"If I were aware of the digital banking services, I would have used them because I consider them very important" (User 9).

4.3 Usefulness and Functionality

Although the formation of customer loyalty with their bank was largely found to be associated with the availability as well as the usefulness of the application, the study participants, in general, were difficult to impress. For example, some of the study participants suggested designing digital services in a way that reflects their individual needs and can evolve as those needs change. The tendency in digital services to believe that one-size-fits-all is neither useful nor beneficial; thus, it should be considered void and ineffective. Mobile banking applications were considered an important component of the everyday life of the user, as described by a few participants. Therefore, uselessness or ineffectiveness of such digital services could trigger the consumer toward either a switching behavior or the discontinuation of these services.

"I have been using online/mobile banking and associated digital services for many years now, and I consider these services a necessity and not luxury" (User 1).

Some study participants explicitly suggested that a continuous and uninterrupted availability of a comprehensive range of mobile banking offerings and services are the face of new banking, and anything less is unacceptable.

"I am a single mother, and it's easier to use my cell phone for payment than to take my four-year-old child and stand in a queue for a cash withdrawal or payment. It is very convenient and easy to use online services. I am satisfied with the mobile application because it offers various value-added features, including digital customer services" (User 10).

The increased use of digital services has significantly changed the old habits of using branch banking and ATM Banking.

"I think the last time I visited my bank was seven months ago. Based on my need, I visited my bank an average of twice a year. My bank is taking care of my mortgages and other matters very nicely and, as such, I do not feel it is necessary to visit my bank branch without an unavoidable reason. Online/mobile banking and digital services have radically transformed my banking and customer experience" (User 3).

5 Conclusion, Implications, and Limitations

This study augments the extant literature on DCS from the consumer viewpoint by identifying three major post-adoption components of DCS. The societal context of this article is the developed country of Finland, which is widely considered a pioneer in the digitalization of payments. Moreover, unlike in other developed countries, mobile payments found their way into the Finnish market a few decades ago due to an increasing consumer appetite for cashless transactions and the use of mobile technologies and devices that allow greater adoption and use of digital services.

The findings of this study suggest that simplicity occupies a key position in adopting and using DCS. Simplicity develops a positive consumer experience and influences consumers' behaviors and attitudes toward digital services that are offered on various channels, including mobile. This positive experience with DCS increases customer advocacy intentions and referrals. Consumer awareness and familiarity with DCS increase their usage and satisfaction. Earlier explorations (Hanafizadeh and Khedmatgozar 2012; Howcroft et al. 2002) argued that one of the most important causes of customers' reluctance to adopt retail digital banking services, such as net banking, was their lack of awareness of the retail service and its advantages. Findings about the usefulness and functionality of DCS suggest that consumers will most often exploit payment systems when they find them useful (Luarn and Lin 2005). From the viewpoint of the study participants, the convenience, accessibility, interactivity, and ease-of-use of the application were considered highly significant in their continuous usage of digital services. Referrals and word-of-mouth also play a significant role in the adoption of digital services (Susanta et al. 2013).

In summation, the banking industry should ensure greater simplicity and increase the usability (or ease of use) of all DCS for all consumer segments, either through in-house innovations or in collaboration with non-banking entities that specialize in designing and implementing DCS. Awareness of DCS is central to the successful implementation, adoption, and usage of mobile applications. The results of this research indicate that the initiative taken by the industry (to date) in promoting consumer awareness of DCS has been thin and has not resulted in any fruitful outcomes. A comprehensive awareness program that addresses weak DCS know-how will empower consumers to access and use value-added DCS. Finally, the perceived usefulness of DCS largely suggests that the continuous and uninterrupted availability of a comprehensive range of DCS is the face of new customer relationships, and anything less will be considered unacceptable.

This study is not without limitations. For example, generalizations of the findings cannot be made because the study was exploratory in nature and data were collected from a single location. Therefore, it would be difficult to establish case-and-effect relationships. The consequences of prolonged use of DCS are not limited to simplicity, awareness, and usefulness; therefore, future research should consider additional outcomes of DCS. Finally, future research should consider and recruit study participants from a wide variety of backgrounds and examine other markets for more comprehensive results (Shaikh et al. 2015a).

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Understanding the Influence of Brand Information in Online Purchase Decisions for Health Products

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Abstract. In 2016, over 6% of all retail spending at health and personal care firms was done through an electronic medium. Purchasing health products online provides an interesting challenge to consumers, as not only do consumers often have limited knowledge about which health goods that will best suit their needs (as these tend to be experience goods bought infrequently), but they also face the additional challenge of having to discern the quality of a good only based on its online listing. Hence in this context, a signal, such as the brand information of a good, may be useful in identifying its quality. Additionally, given that online purchasing decisions occur in private, we can rule out some other explanations for consumers choosing branded products, such as reputational concerns. Using data from a health goods retailer operating through Amazon.com from 2013 and 2014, we test whether brand information in the product's listing influences the demand for health-related goods. We find that having branded information displayed in the product's listing photo significantly increases the probability consumers consider a health good in their choice set (measured as page views) but not the demand for the goods, except for the case of bandages and dressings.

Keywords: Brands · Brand equity · Health products · Experience goods

1 Introduction and Research Question

Economists have long recognized the asymmetric information problem faced by consumers when buying goods for which they have imperfect information about the quality (see Akerlof 1970; Nelson 1970; and Wolinsky 1995). This issue is especially salient in the case of experience goods, for which consumers cannot ascertain information about quality until after they purchase the good (Nelson 1970). One such category of experience goods for which consumers may face a particular challenge in assessing pre-purchase quality are health-related goods. Most consumers buy these types of goods very infrequently and have limited information about how to assess the quality of such a good without expert medical advice. Hence, we may think it unlikely

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that consumers would choose to buy health goods online, where consumers often receive limited signals of product quality, as they cannot observe the physical product itself. Additionally, while in some retail settings an expert, such as a pharmacist, may be able to aid the consumer in choosing the good that best serves their needs, online shopping decisions are made in private. Instead consumers rely only on product listing information.[1] Yet despite this, in 2016, over 6% of all retail spending at US health firms was done on an electronic medium, such as an online selling platform (US Census Bureau 2018).

What information then do consumers use when shopping for health goods online to assess the quality of a good? There is evidence that consumers have a preference for familiarly branded products when purchasing health goods; Bronnenberg et al. (2015) find that consumers are more likely to purchase branded over-the-counter drugs than health experts are. Consumers may prefer branded products for many reasons, including the social "status" that is conferred when using a specific brand and "social utility" of using a similar product as a peer. Yet as the decisions in question are made in private and are not of the type likely to confer much status, it seems unlikely that these are driving factors in consumers preferring branded health products. Instead, we would suppose that consumers may view brands as a signal about quality; choosing a product from a brand in which a consumer is familiar or appears to the consumer to be "legitimate" may reduce the uncertainty about the quality of a health good, especially in an online marketplace for which there is a high variance in the quality of goods sold (Wernerfelt 1988; Erdem and Swait 2004). Indeed, Carrera and Villas-Boas (2016) find in a retail setting that a labelling intervention in which consumers are assured of the quality of the product (by providing information about how many other shoppers choose the generic brand) increases demand for generic OTC drugs.

In this paper, we explore the question of how brand information affects what health goods consumers consider as part of their choice set (measured in this context by which products' pages they view) and their purchasing decisions for health goods in an online context. We use a panel data set consisting of observational data of all purchases made for a health goods seller on Amazon.com between January 2013 and March 2014. We consider two measures of brand information: whether the product has the brand name in its listing title and whether the brand name appears prominently in photos of the product included in the product listing. We find that branded information significantly increases the number of consumers who consider a given good as part of their choice set, but ultimately does not significantly increase demand for the good, except for the case of bandages and dressings. Practically, this implies that for managers of firms selling health goods for which consumers have limited quality information, brand information can provide reassurance of quality, putting the good on a consumer's "radar."

[1] Sometimes consumers also can receive information on product quality online through reviews left by other consumers. However, these too can be a noisy signal, as it is unclear who the reviewers are. Especially for the case of health-related goods, it is also unclear if products that best serve one consumer may also best serve another consumer.

2 Data

The data set used comes from a medium-sized seller operating through the Amazon.com retail platform selling health-related goods. It contains information on all product prices, quantities sold, and profits for each individual item sold for all months between January 2013 and March 2014. Average monthly seller's revenues and profits over this period were $109,900 and $17,240 respectively. Over this period, the company sold at least one unit of 2,316 unique products (as defined by their "Child ASIN," which is how Amazon.com identifies individual products). In total, there are 7,961 product by month observations.[2] The products this seller offers include a variety of health-related goods, including braces and splints, bandages and dressings, compression socks and other diabetes care items, medical creams and ointments, and other medical equipment. However, to be able to perform analysis of the branded characteristics of the product listing (to identify if the brand was listed on the product/in the picture), additional information about the product listing had to be collected. This was done by the authors between December 2018 and January 2019. As not all of the products were still being sold on Amazon.com, this reduced our sample size to the 4,876 product by month observations we were able to match for 1,372 unique products.[3] Summary statistics are listed in Table 1 below.

Table 1. Summary statistics of variables used in the analysis

Variable	N	Mean	Std. dev.	Median	Min.	Max.
Retail price	4,876	$27.90	$31.37	$18.62	$0.19	$492.80
Unit profit	4,876	$6.29	$9.82	$3.37	–$47.60	$135.80
Units sold	4,876	7.90	24.26	2.00	1.00	589.00
Wholesale price	4,876	$17.97	$20.78	$11.45	$0.00	$312.00
Page views	4,876	848.20	5,287.83	77.00	0.00	193,000.00
% with brand in title	4,876	75.33%	43.11%	100.00%	0.00%	100.00%
% with brand in picture	4,876	54.82%	49.77%	100.00%	0.00%	100.00%

Notes: All observations are at the product by month level. Retail price is calculated by adding the wholesale price, the profits, and Amazon's commission (this does not include shipping costs). The observations of "0" page views can be explained by the intricacies of Amazon; sometimes a product can be purchased from another product's page.

[2] We only observe a product in a given month if a positive quantity in that month was sold (except for one observation of 0 sold, which we drop). We cannot differentiate in our current data if a product was simply not offered in a given month or if it was offered but not purchased.

[3] This surely may introduce some selection issues (overall more demanded and perhaps higher quality products are likely to still be sold), and it is also possible that the product listings have changed over time. Yet, these issues would likely bias us against finding significant results.

3 Empirical Strategy and Results

We consider two questions in our analysis; first, whether branded information influences the number of consumers that consider a good as part of their choice set and second whether branded information influences the demand for the good. We take each separately. First, in order to see the influence of branded information on the number of page views a given good has (which is a proxy for whether consumers consider a good as part of their choice set in their purchase of a health good), we run the following regression specification:

$$Pageviews_{it} = \alpha_1 Brand_{it} + \tau_t + \varepsilon_{it} \quad (1)$$

where i indexes good and t indexes month, $Pageviews_{it}$ denotes the number of views the webpage of good receives, τ_t is a time fixed effect, and $Brand_{it}$ is a vector of branding indicators, including some combination of: $Brandname_{it}$ which denotes whether there is a brand name listed in the title (that corresponds to the brand of the product as denoted by Amazon.com's listing), $Brandpic_{it}$ which denotes whether at least one of the product listing's photos has a brand name prominently displayed, and interaction of the two.[4] The results are in Table 2. We find that simultaneously having both a brand name in the title and in the picture garners an additional significant 1,238 page views a month.

Table 2. Influence of branding on page views

Variable	(1)	(2)	(3)	(4)
Brand picture	828.308*** (152.227)		782.442*** (152.852)	–147.703 (305.496)
Brand in title		622.212*** (175.602)	532.922*** (176.015)	–75.240 (246.662)
Brand pic*brand title				1237.749*** (352.119)
Monthly FE	Yes	Yes	Yes	Yes
N	4,876	4,876	4,876	4,876
R-Squared	0.0084	0.0049	0.0102	0.0127

Note: *** denotes significance at the 99% level, ** denotes significance at the 95% level, and * denotes significance at the 90% level.

Next, in order to determine the effect of branded information on online purchase demand for health goods, our goal is to estimate the effect that branded product information has on the quantity demanded. However, in simply regressing quantity purchased on price and brand information we come across the standard econometric system of equations issue, where it is ambiguous as to whether we are estimating a

[4] Our optimal brand variables would include information how well known the brand is, but development of such a measure is beyond the scope of this paper.

supply or demand relationship. To get around this, we run a two stage least squares (2SLS) procedure, where we instrument the listed retail price of the good with the wholesale price of the good. This instrument captures information about the supply curve. In other words, we use supply side driven variation in prices (supply side cost shifts in wholesale prices) to identify the slope of the demand curve.

Hence we run the following first stage:

$$Retailprice_{it} = \beta_1 Wholesale_{it} + \beta_2 Shipping_{it} + \beta_3 Pageviews_{it} + \beta_4 Brand_i + \tau_t + \omega_i + \varepsilon_{it} \quad (2)$$

where $Retailprice_{it}$ denotes the purchase price the consumer faces outside of the shipping costs[5], $Wholesale_{it}$ is the wholesale price that the seller pays for the product, $Shipping_{it}$ is the shipping cost that the seller faces, and $Pageviews_{it}$ and $Brand_{it}$ are the same as above. Monthly and product fixed effects are denoted by τ_t and ϵ_i, respectively. Note that besides just being the first stage in our estimation of demand, this regression also describes how the supplier's costs are passed through to the final retail price. The results can be seen in Table 3. In all of our specifications, the wholesale price has a positive association with the retail price, which suggests that there is a significant amount of pass-through to consumers. Additionally, we see that the brand being visible in the product photo is associated with a higher retail price.

Table 3. First stage: passthrough

Variable	(1)	(2)	(3)	(4)
Wholesale price	0.267*** (0.0608)	0.337*** (0.0599)	0.266*** (0.0609)	0.276*** (0.0606)
Shipping cost	–0.926*** (0.211)	–0.844*** (0.212)	–0.927*** (0.211)	–0.907*** (0.212)
Page views	0.0000287 (0.0000224)	0.0000299 (0.0000225)	0.0000287 (0.0000224)	0.0000295 (0.0000223)
Brand in picture	15.807*** (2.750)		15.899*** (2.807)	19.312*** (4.822)
Brand in name		–2.816 (2.861)	0.476 (2.906)	2.689 (3.845)
Brand pic*Brand name				–5.204 (5.856)
Product FE	Yes	Yes	Yes	Yes
Monthly FE	Yes	Yes	Yes	Yes
N	4,876	4,876	4,876	4,876
Adj R-Squared	0.9770	0.9763	0.9770	0.9770

Note: *** denotes significance at the 99% level, ** denotes significance at the 95% level, and * denotes significance at the 90% level.

[5] We do not include the shipping cost in the retail price as there is evidence that consumers consider "shrouded" attributes like shipping costs the same way as they do price when making online shopping decisions. See Hossain and Morgan (2006). We also assume shipping costs faced by sellers are exactly the shipping price charged to consumers, as we only have information on the former.

Next, we look at demand. Given the strong relationship between the wholesale price faced by the Amazon seller and the listed price for the consumer, we will use the wholesale price as an instrument in estimating demand. We estimate demand with the specification:

$$Quantitysold_{it} = \gamma_1 \widehat{Retailprice}_{it} + \gamma_2 Shipping_{it} + \gamma_3 Pageviews_{it} + \gamma_4 Brand_i + \tau_t + \omega_i + \varepsilon_{it} \quad (3)$$

where $Quantitysold_{it}$ are the number of units ordered by product and month, $\widehat{Retailprice}_{it}$ are the fitted values from the first stage, and all over variables are as before. The results are in Table 4. Page views seem to have a significant positive relationship with the quantity demanded, but brand indicators do not. Notably, the coefficients on retail price are not (significantly) negative in any of the regressions. This could reflect that fact that while consumers generally dislike higher prices, in the context of health goods, price might also be an important quality signal.

Table 4. Demand

Variable	IV (1)	IV (2)	IV (3)	IV (4)
Retail price	0.166 (1.015)	0.122 (0.813)	0.154 (1.018)	0.155 (1.020)
Shipping cost	–1.356 (1.259)	–1.418 (1.096)	–1.375 (1.264)	–1.383 (1.256)
Pageviews	0.000720*** (0.000108)	0.000721*** (0.000106)	0.000720*** (0.000108)	0.000720*** (0.000108)
Brand in picture	–4.048 (22.275)		–3.363 (22.648)	–4.719 (31.587)
Brand in product title		3.219 (13.218)	2.609 (13.463)	1.739 (18.190)
Brand pic*Brand title				2.009 (27.736)
Product FE	Yes	Yes	Yes	Yes
Monthly FE	Yes	Yes	Yes	Yes
N	4,876	4,876	4,876	4,876
R-Squared	0.0093	0.0226	0.0131	0.0140

Note: *** denotes significance at the 99% level, ** denotes significance at the 95% level, and * denotes significance at the 90% level.

3.1 Effects of Brand Information by Product Category

Next, we break down this framework by product category. We developed these product categories based on those developed by Amazon. The product categories include: Compression Socks and Medical Support Hose, Arm, Hand & Foot Supports, Leg & Foot Supports, Bandages & Dressings, Lumbar Supports & Pillows, and Ointments & Cleansers. To conserve space, we will just show the results of the second stage regressions of demand curves, yet the procedures are the same as what is described above (in the Column 3 specification), except that we omit the product fixed effects and instead use the sub-samples of goods that apply to each category. The results are below

in Tables 5a and 5b. We find that page views show a positive relationship with the quantity demanded as above. In addition, in the compression socks and bandages categories, the retail price is negatively associated with quantity demanded (as is traditionally the case with a demand curve, perhaps because consumers are able to better discern quality with these goods and do not use price as a quality signal to the same extent). Finally, in the bandages category, we see that having the brand pictured has a positive association with the quantity demanded.

Table 5a. Demand, by product category: compression socks; arm, hand & finger supports; leg & foot supports

Variable	Socks (1)	Arm (2)	Leg (3)
Retail price	–0.0517*** (0.0158)	–0.0187 (0.0286)	–0.00835 (0.0093)
Shipping cost	0.872 (0.870)	–0.765** (0.375)	–0.0924 (0.1753)
Pageviews	0.00862*** (0.000991)	0.0115*** (0.000714)	–0.004*** (0.0003)
Brand in picture	0.780 (0.585)	–0.380 (0.650)	–1.003 (0.917)
Monthly FE	Yes	Yes	Yes
N	831	471	858
R-Squared	0.2632	0.4319	0.2631

Table 5b. Demand, by product category: bandages & dressings; lumbar support and pillows; ointments and skin treatments

Variable	Bandages (4)	Lumbar (5)	Ointments (6)
Retail price	–.10*** (0.0371)	–.00830 (0.0076)	0.0232 (0.535)
Shipping cost	0.263* (0.136)	0.0215 (0.0198)	–1.498** (0.699)
Pageviews	0.0064*** (0.0009)	0.00186*** (0.000692)	0.000396 (0.0006946)
Brand in Picture	3.177** (1.235)	0.292 (0.575)	–2.350 (3.147)
Monthly FE	Yes	Yes	Yes
N	222	157	233
R-Squared	0.3708	0.1276	0.1743

Note: *** denotes significance at the 99% level, ** denotes significance at the 95% level, and * denotes significance at the 90% level.

4 Discussion

Overall, our results indicate that having the brand listed in the title of the product and in the product photo has a significant positive correlation with the number of page views a product gets in a month, which is a proxy for the number of consumers that consider a given good as part of their choice set. However, after controlling for the number of page views, we have little evidence that branded information for a product has a direct impact on the quantity demanded, except when considering the category of bandages and dressings separately. Given the limitations of our data, this is not particularly surprising. However, this work provides suggestive evidence that future research with

more complete data may find a relationship between branded information and quantity demanded. Moreover, this work still implies that it could be beneficial for managers of firms selling health goods to add brand information to their listings. First, having a product page viewed mechanically increases the probability it will be purchased. Second, when consumers view pages, it increases their information about the brand and the seller, such that they may feel more comfortable purchasing products from that brand and seller in the future. Additionally, given Amazon's search results algorithm, more page views today can result in products appearing earlier in search results in the future, which could increase product sales in the future.

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Author Index

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