

Springer Proceedings in Business and Economics

Francisco J. Martinez-Lopez  
Juan Carlos Gázquez-Abad  
Els Breugelmans *Editors*

# Advances in National Brand and Private Label Marketing

Seventh International Conference,  
2020

 Springer

# **Springer Proceedings in Business and Economics**

Springer Proceedings in Business and Economics brings the most current research presented at conferences and workshops to a global readership. The series features volumes (in electronic and print formats) of selected contributions from conferences in all areas of economics, business, management, and finance. In addition to an overall evaluation by the publisher of the topical interest, scientific quality, and timeliness of each volume, each contribution is refereed to standards comparable to those of leading journals, resulting in authoritative contributions to the respective fields. Springer's production and distribution infrastructure ensures rapid publication and wide circulation of the latest developments in the most compelling and promising areas of research today.

The editorial development of volumes may be managed using Springer's innovative Online Conference Service (OCS), a proven online manuscript management and review system. This system is designed to ensure an efficient timeline for your publication, making Springer Proceedings in Business and Economics the premier series to publish your workshop or conference volume.

More information about this series at <http://www.springer.com/series/11960>

Francisco J. Martinez-Lopez ·  
Juan Carlos Gázquez-Abad ·  
Els Breugelmans  
Editors

# Advances in National Brand and Private Label Marketing

Seventh International Conference, 2020

 Springer

*Editors*

Francisco J. Martínez-López  
Department of Business Administration 1  
University of Granada  
Granada, Spain

Juan Carlos Gázquez-Abad  
Department of Economics and Business  
University of Almería  
La Cañada de San Urbano, Almería, Spain

Els Breugelmans  
Department of Marketing  
KU Leuven  
Antwerp, Belgium

ISSN 2198-7246

ISSN 2198-7254 (electronic)

Springer Proceedings in Business and Economics

ISBN 978-3-030-47763-9

ISBN 978-3-030-47764-6 (eBook)

<https://doi.org/10.1007/978-3-030-47764-6>

© The Editor(s) (if applicable) and The Author(s), under exclusive license  
to Springer Nature Switzerland AG 2020

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG  
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

# Preface

Disruptive forces like digital and mobile technology as well as major trends in the composition of the population bring many opportunities but also multiple challenges to manufacturers and retailers that are operating in the current retail landscape. Strengthened by mobile technology, consumers nowadays have access to several channels that are used simultaneously and sometimes even interchangeably in their purchase decision process. Consumers are no longer shopping in the same way as they did a few years ago, and how they interact with manufacturers and retailers has changed fundamentally.

Manufacturers and retailers are being compelled to more frequently rethink and adapt their organizations, strategies and even business models to satisfy, retain as well as grow their customer bases. These adaptations oftentimes aim to optimize the customer's experience with the manufacturer's brand or the retailer's brand throughout the whole customer journey, thereby increasing the chances of the company to survive in the new retail landscape.

At the same time, some of these adaptations have significantly altered the relationship between retailers and manufacturers. A few decades ago, the purchase path of consumers was clear: Manufacturers produced products, and these products were sold via (offline) retailers to the end-consumer. Retailers and manufacturers were thus partners in the supply chain with each of the partners having its own strengths. Manufacturers are champion in producing and marketing strong brands that consumers desire, while retailers excel in bringing products at a place and time where consumers prefer to purchase (multiple) products (and categories). Via their private labels, retailers also gave consumers the option to sell a (high-quality) product at a low(er) price.

While retailers and manufacturers are still partners in many interactions, their relationship is put under pressure as a result of opportunities offered by the digital era. Manufacturers, for instance, have the possibility to directly sell to end-consumers, via manufacturer-owned webshops or platforms where manufacturers can offer (part of) their assortment on a third-party-owned Website. Such disintermediation acts, where retailers are excluded in the supply chain, have a

significant impact on manufacturer-retailer relationships: manufacturers that used to be partners all of sudden become competitors too. Also other technological innovations implemented by retailers or manufacturers can challenge manufacturer-retailer relationships. Think of voice-assisted techniques as Alexa, where companies (in casus Amazon) restrict the choice set of consumers to a very limited, if not only one brand (of their own). Or, initiatives like food boxes where for instance, a retailer decides which brands to (not) include, or subscription services where a manufacturer delivers (their) brands on a regular basis directly at a consumer's doorstep.

As companies continue to look for ways to adapt to the new retail landscape, it is essential to understand the impact of the digital era and the resulting transformations on manufacturer-retailer relationships as well as on the ability to build strong (manufacturer and retailer) brands that create market value. In keeping with its established objectives, this conference welcomes papers on topics related to any retailing, private label or national brand issues.

Looking at those aspects underlying this new marketing context offers exciting opportunities for researchers. It is with this goal in mind that this Seventh International Conference on Research on National Brand & Private Label Marketing (NB&PL 2020) has been launched and organized. After the success of the six previous editions, this seventh 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 2020 has gone through a stringent peer review process by members of the Program Committee, comprising 48 internationally renowned researchers from 14 countries.

A total of 20 papers have been accepted, and they address diverse areas of application such as branding strategies, innovation in private labels, market structure, store formats, consumer decision-making, assortment choice, CSR initiatives, online grocery retailing, among others. A wide variety of theoretical and methodological approaches have been used in these areas.

We believe that this seventh edition has continued with the same goals as the six previous editions: promote, stimulate and publish high-quality contributions on National brands and Private labels, which could help retailers and manufacturers deal with diversity of issues. Nevertheless, we hope to keep organizing this conference which is aimed to become an international reference for advancing this promising research field.

Finally, we wish to acknowledge the support of the sponsors: *Business School at the University of Barcelona*, *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 seventh edition of

NB&PL. Thanks for your generous contribution – IC-NB&PL 2020 would not have been possible without you all. It deserves to be mentioned, considering that the preparation of the 2020 edition was during the coronavirus disease (COVID-19) outbreak.

Francisco J. Martinez-Lopez  
Juan Carlos Gázquez-Abad  
Els Breugelmans



# Organization

## Conference Chairs

Francisco	University of Granada, Spain/EAE Business School,
J. Martínez-López	Barcelona, Spain
Juan Carlos	University of Almería, Spain
Gázquez-Abad	
Els Breugelmans	KU Leuven, Belgium

## Program Committee

Kusum L. Ailawadi	Tuck School of Business at Dartmouth, USA
Nawel Amrouche	Long Island University, USA
Chris Baumann	Macquarie University, Australia
José J. Beristain	University of the Basque Country, Spain
Enrique Bigné	University of Valencia, Spain
James Brown	West Virginia University, USA
Ioannis E. Chaniotakis	University of the Aegean, Greece
Liwen (Brandon) Chen	City University of Hong Kong, China
Alexander Chernev	Northwestern University, USA
Chan Choi	Rutgers Business School, USA
Gérard Cliquet	Université de Rennes 1, France
Giuseppe Colangelo	Catholic University of Milan, Italy
Ronald W. Cotterill	University of Connecticut, USA
Barbara Deleersnyder	Tilburg University, The Netherlands
John Dawes	University of South Australia, Australia
Els Gijsbrechts	Tilburg University, Netherlands
J. Tomas Gomez-Arias	Saint Mary's College of California, USA
Oscar González-Benito	University of Salamanca, Spain
Csilla Horváth	Radboud University, The Netherlands

Marco Ieva	University of Parma, Italy
Eugene Jones	The Ohio State University, USA
Robert Paul Jones	The University of Texas at Tyler, USA
Lien Lamey	Katholieke Universiteit Leuven, Belgium
Elisa Martinelli	University of Modena and Reggio Emilia, Italy
Mercedes Martos-Partal	University of Salamanca, Spain
Sebastián Molinillo Jiménez	University of Malaga, Spain
Dirk Morschett	University of Fribourg, Switzerland
Nenycz-Thiel	University of South Australia, Australia
Nicoletta Occhicupo	UIC-Barcelona, Spain / Oxford Brookes University, UK
William P. Putsis	University of North Carolina at Chapel Hill, USA
Anne L. Roggeveen	Babson College, USA
Natalia Rubio-Benito	Autonomous University of Madrid, Spain
Hanna Schramm-Klein	University of Siegen, Germany
Fiona Scott Morton	Yale University, USA
Raj Sethuraman	Southern Methodist University, USA
Randall Shannon	Mahidol University, Thailand
Ian Clark Sinapuelas	San Francisco State University, USA
Yaron Timmor	Arison School of Business, Israel
Rodolfo Vázquez-Casielles	University of Oviedo, Spain
Gianfranco Walsh	Friedrich Schiller University of Jena, Germany
María Jesús Yagüe-Guillén	Autonomous University of Madrid, Spain
Jie Zhang	University of Maryland, USA
Cristina Ziliani	University of Parma, Italy
Pilar Zorrilla	University of the Basque Country, Spain

## **Program Organizing Committee**

Alejandro Alegret	EAE Business School, Spain
Ana Argila Iruita	University of Barcelona, Spain
Javier Arroyo Cañada	University of Barcelona, Spain
Jordi Aymerich Martínez	University of Barcelona, Spain
Jordi Campo Fernández	University of Barcelona, Spain
Paz Carreira Gutiérrez	University of Barcelona, Spain
Irene Esteban-Millat	Open University of Catalonia, Spain
Santiago Forgas Coll	University of Barcelona, Spain

Ruben Huertas García	University of Barcelona, Spain
Jaime Gil Lafuente	University of Barcelona, Spain
José Luis Ruiz Real	University of Almería, Spain
María Luisa Solé Moro	University of Barcelona, Spain
Emilio Vizuete Luciano	University of Barcelona, Spain

# Contents

<b>Consumer Values: A Hidden Motivator of Private Label Consumption</b> .....	1
Atanas Nik Nikolov and Brandon Gustafson	
<b>Branding Strategies of European Retail Banks: A Linguistic Comparison Between Brand Names for Financial Products</b> .....	12
Erhard Lick, Holger Wochele, and Fiorenza Fischer	
<b>Handle with Care: Adoption of Drone Delivery Services</b> .....	22
Maya F. Farah, Mona Mrad, Zahy Ramadan, and Houssam Hamdane	
<b>Can Stock-Outs Act as Scarcity Cues? Impact of Scarcity Message Types and Their Disclosure Time on Number of Items Bought in an Online Fashion Setting</b> .....	30
Liliana Kowalczyk, Els Breugelmans, and Katia Campo	
<b>Competition Between National Brands and Private Labels: Determinants of the Market Share of National Brands</b> .....	39
Philipp Brüggemann, Rainer Olbrich, and Carsten D. Schultz	
<b>Markdown Optimization in Apparel Retail Sector</b> .....	50
Sevde Ceren Yıldız and Mustafa Hekimoğlu	
<b>Leveraging Sponsorship on Twitter: Insights from Tennis Grand Slams</b> .....	58
Kapil Kaushik and Abhishek Mishra	
<b>In-store Merchandisers – An Overlooked Strategic Asset for National Brand Manufacturers to Build Retailer Relationships and to Gain Product Visibility</b> .....	65
Jan-Hinrich Meyer, Eva Maria González Hernández, and Miguel Angel López Lomelí	

<b>The Impact of Rural and Urban Advertising and Brand Context on Attitude Towards the Brand</b> . . . . .	74
Anne Fota, Sascha Steinmann, Hanna Schramm-Klein, and Gerhard Wagner	
<b>Potentials and Boundaries in Frontline Service Encounters Through the Infusion of Technology</b> . . . . .	82
Tobias Rödning, Sascha Steinmann, Gerhard Wagner, and Hanna Schramm-Klein	
<b>The Vegan Revolution: Opportunities and Differences Across Countries</b> . . . . .	90
Belén Derqui, Hana Gendel Guterman, Mahsa Ghaffari, and Padmali Rodrigo	
<b>Assortment Mix Choice Within Shop and Drive: Customer Arbitrage on the Competition Between Private Label and National Brand</b> . . . . .	97
Léopold Lessassy and Patrick Georges	
<b>Influences of Juxtaposition, Coordination and Brand Type on Product Evaluation: An In-Store Experimental Approach</b> . . . . .	105
Léopold Lessassy and Alain Jolibert	
<b>Buying Veg Private Labels. Antecedents and Mediators</b> . . . . .	115
Elisa Martinelli, Francesca De Canio, and Emiro Endrighi	
<b>Impact of CSR Initiatives on Consumer’s Perceptions and Attitudes Towards Retailers</b> . . . . .	123
Rita Coelho do Vale, Pedro Verga Matos, and Vera Herédia-Colaço	
<b>“I’d like to, but I Can’t”. Store Brands’ Limited Exploitation of the Gluten-Free Opportunity</b> . . . . .	130
Edoardo Fornari, Alessandro Iuffmann Ghezzi, and Daniele Fornari	
<b>A View of Retailing Formats Based on the Assortment Dimension: An Analysis in the Spanish Context</b> . . . . .	137
José Luis Ruiz-Real, Juan Carlos Gázquez-Abad, and Francisco J. Martínez-López	
<b>Sorry, Your Order Has a Substitution: The Effects of Substitution Policy in Online Grocery Retailing</b> . . . . .	145
Dong Hoang and Els Breugelmans	
<b>Price or Quality? Comparing Consumers’ Perceptions of Competing Private Labels – An Illustrative Analysis in Food Retailing</b> . . . . .	156
Mika Yrjölä, Harri Hokkanen, Ella Määttänen, and Hannu Saarijärvi	

<b>Types of Retailers, Brand Choice and New Products Trial: Challenges for the E-commerce of Consumer Packaged Goods . . . . .</b>	<b>164</b>
María Puelles, Gonzalo Moreno Warleta, and Marta Moreno	
<b>Author Index. . . . .</b>	<b>177</b>



# Consumer Values: A Hidden Motivator of Private Label Consumption

Atanas Nik Nikolov<sup>1</sup>(✉) and Brandon Gustafson<sup>2</sup>

<sup>1</sup> Appalachian State University, Boone, USA  
nikolovan@appstate.edu

<sup>2</sup> Oakland University, Rochester, USA  
bgustafson@oakland.edu

**Abstract.** Private label purchases have become a mainstay of consumer shopping in the fast-moving consumer goods (FMCG) sector, with 98% of U.S. consumers purchasing private label brands (Market Force Information 2014). However, private label usage is not uniform across consumer groups. According to Store Brands (2017), 10% of shoppers are heavy users of private label brands, while 41% of shoppers are light users. Although work on the consumer private label purchasing decision exists, much of the research centers on consumer characteristics. The lens of consumer characteristics is limited in depth. We seek to extend the view of the consumer decision to purchase private label brands through the lens of personal values. Personal values relate to personal goals, which act as guiding principles of one's life. In marketing, Vinson et al. (1977) mentions the importance of personal values; examining values allows research to test beyond consumer demographic and even psychographic characteristics. Therefore, establishing the link between consumers' personal values and private label brands provides a much richer understanding of a consumer's motivation to purchase private label brands.

**Keywords:** Personal values · Private label · Branding · Retailing

## 1 Introduction

A personal value is defined as a “centrally held, enduring belief which guides actions and judgments across specific situations and beyond immediate goals to more ultimate end-states of existence” (Rokeach 1968, p. 161). Personal values act as mental schema that help individuals' define broad goals for which to achieve across a wide variety of situations (Rokeach 1973; Schwartz 1992). Personal values have a long philosophical history and are included in the teachings of Socrates, Plato, and Aristotle. Importantly, Rokeach (1968) posits that personal values are more important than attitudes, as values are a motivator of both attitudes and behavior. Additionally, Schiffman et al. (2003) notes that the consumers have fewer personal values than attitudes, allowing for a more parsimonious way to study consumer similarities and differences. Personal values are of critical importance when aiming to understand individuals' decision-making process, as personal values strongly influence consumer desires, needs, attitudes, and behaviors. Specifically,

Vinson et al. (1977) discusses the close relation of values to consumer needs. Within marketing, personal values are an important element of firm strategy (Schiffman et al. 2003). Both marketing and advertising practitioners lend credence to the benefits of understanding dominant consumer values of a target market when developing, delivering, and communicating products and services (Reynolds 1985). When consumers have demands, they rely on their values to guide their purchase decisions and their purchase decisions can be a reflection of the “end-state” they are trying to reach (Vinson et al. 1977). Extant research has demonstrated the role of personal values in various aspects of consumption behaviors and attitudes (e.g., Donthu and Cherian 1992; Vinson et al. 1977). Doran (2009) under the Schwartz values framework shows that different personal values vary a consumer’s decision to purchase fair trade products. More generally, a case has been made that advertising, within itself, focuses on how the purchase of a particular product aligns with a target market’s personal values (e.g., Sukhdial, Chakraborty, and Steger 1995).

### 1.1 Personal Values in Private Label Consumption

To study personal values in the context of private label decisions our research follows the personal values framework laid out by Schwartz (1994). Personal values are important to study in connection with private label brands for four major reasons. First, personal values relate to “desirable trans situational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity” (Schwartz 1994). This idea of values as goals is of central importance in our research. As consumers are looking to make purchase decisions, especially those related to FMCG, they are attempting to achieve a goal of purchasing necessities (i.e., food and personal care products) for themselves, families, friends, etc. Second, values can motivate action, by giving certain decisions direction and emotional intensity. This implication relates to the root of our theory that different values motivate different purchase decisions. Brands, in part, are built to motivate purchasing action with emotional intensity (Keller 1993). However, if values motivate action then different values relate to different brand purchase decisions (i.e., private label vs. national brand). Third, values help in judging and justifying action. When consumers purchase FMCG they need to judge each brand within a product set on a number of attributes and features (e.g., price, perceived quality, brand, etc.). Therefore, different values are likely to have varying effects on consumers’ judgement criteria and justification of FMCG purchases. To examine the effects of personal values on a consumers’ likelihood to purchase either private label brands or national brands, we measure and test the 10 personal values of power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security proposed by Schwartz (1994).

**Power.** The central goal of the personal value of power is to attain social status and prestige, and control or dominance over people and resources (Schwartz et al. 2014). Additionally, power relates to authority, wealth, social power, preserving ones public image, and social recognition (Schwartz 1992). On average, private label brands are less expensive than national brands and the vast majority of consumers recognize and understand this price difference (Sinha and Batra 1999). Much of the price difference



derives from the investment in a national brand's equity (Keller 1993). When consumers view brands as being a symbol and especially if there is the potential of others to see the brand in use the likelihood of purchasing private labels decreases (DeVecchio 2001). Therefore, a person high in the value of power will focus on persevering their image through brands and be less likely to purchase private label brands.

**H1.** The consumer value of power is negatively related to private label branded products purchasing in the FMCG category.

**Achievement.** The personal value of achievement relates to "personal success through demonstrating competence according to social standards" (Schwartz 1992). It emphasizes the demonstration of competence as opposed to authority or wealth. When consumers value achievement, they are in tune with social standards and understand that they themselves are being evaluated by these social standards. In relation to private label purchase decisions, research indicates that during economic down turns private label purchases increase and on economic upturns private label purchases decrease (Lamey et al. 2007). "Achievement oriented consumers" will likely relate to the value demonstrated by the "compared to leading ordinary brands" messaging, which is common among national brands and be more adapt to purchase national brand regardless of their current financial situation. Therefore,

**H2.** The consumer value of achievement is negatively related to private label branded products purchasing in the FMCG category.

**Hedonism.** The personal value of hedonism relates to "enjoyment" (Schwartz 1992). This value derives from the pleasure associated with satisfying personal needs and wants. Consumers that value hedonism desire to achieve pleasure, sensation and gratification (Schwartz 2010) and look for brands that convey hedonic values. When consumers do not sample the products they must rely on external cues including brand equity to make a purchase decision (Keller 1993; Sprott and Shimp 2004). FMCG national brands often communicate hedonic benefits. Therefore, consumers high in the personal value of hedonism are likely to be attracted to brands that demonstrate hedonic elements. We posit that:

**H3.** The consumer value of hedonism is negatively related to private label branded products purchasing in the FMCG category.

**Stimulation.** The personal value of stimulation relates to a motivation for variety and challenge in one's life. Consumers that value stimulation look for excitement, variation, are daring and more prone to risk (Schwartz 1994). National brands tend to act as a heuristic that reduces consumer risk or the degree of making a mistake in a purchase decision (Narasimhan and Wilcox 1998). In general, consumers are more familiar with the national brands compared to private label brands (Nowlis 1995). Following the driving purpose of a person whom values stimulation, private labels offer an unknown experience, which can add variation to one's life. Consumers that value stimulation are likely to try new and unknown brands and that includes private labels. Therefore, it is

likely that consumers ranked high in terms of the value of stimulation are more likely to purchase private label products.

**H4.** The consumer value of stimulation is positively related to private label branded products purchasing in the FMCG category.

**Self-direction.** The personal value of self-direction relates to independent thought and action, these consumers are creative, curious, and enjoy freedom. Consumers that value self-direction enjoy autonomy and independence (e.g., Morris 1956). Purchase incentives are common among FMCG national brands (e.g., product bundling offers, BOGO, price discounts, etc.) as a means to introduce consumers to a specific product or the breadth of the brand's product mix. Within an FMCG shopping trip self-directed consumers seeking creativity in their shopping trip will likely want brand variety and therefore be less swayed by these types of purchase incentives offered by national brands. In sum, we posit:

**H5.** The consumer value of self-direction is positively related to private label branded products purchasing in the FMCG category.

**Universalism.** Consumers that value universalism as an overarching value are motivated toward understanding, appreciation, tolerance, and protection for welfare of all people and for nature (Schwartz 1994). The importance of environmental and social performance was the most strongly related to universalism (Collins et al. 2007). In addition, environmental performance importance was related to purchasing ecologically responsible products. In sum, consumers that value universalism are likely to be drawn to the sorts of marketing activities that promote the welfare of people and nature. Therefore less likely to purchase private label brands, which they are likely to perceive as utilitarian, and geared towards only cost-saving (i.e. anti-universalistic) principles.

**H6.** The consumer value of universalism is negatively related to private label branded products purchasing in the FMCG category.

**Benevolence.** Consumers that value benevolence as a motivating factor focus on the welfare of people that they are close too and interact with regularly (Schwartz 1994). Preserving a close relationship and ensuring the relationship is in good standing is a critical motivating factor of benevolence. The brand relationship literature demonstrates that consumers form close relationships with brands and these relationships influence brand attitudes and purchase decisions (Aggarwal 2004). Private label brand customer-brand relationships are not as strong given the lack of brand relationship investment by retailers. When consumers are high in benevolence, strong relationship are an important driving factor and consumers are more likely to experience these strong relationship feelings with national brands than private label brands. Therefore,

**H7.** The consumer value of benevolence is negatively related to private label branded products purchasing in the FMCG category.

**Tradition.** Consumer traditional values center on a respect for tradition, humility, and accepting one's portion in life (Schwartz 1994). When consumers value tradition they are more likely to submit to life's circumstances (Schiffman et al. 2013) and this along with especially their humility can have an influence on consumer purchase decisions. As previously referred to national brand often attempt to build FMCG brands to demonstrate symbolic and hedonic product attributes, with the intent to relate and inspire. Therefore we posit:

**H8.** The consumer value of tradition is positively related to private label branded products purchasing in the FMCG category.

**Conformity.** Consumers motivated by conformity restrain from taking actions and especially impulses likely to upset or harm others and violate social expectations or norms (Schwartz 1992). Conformity drives consumers to focus on and take actions that minimize social disruption and help groups run smoothly, especially with close groups (e.g., family and friends). In the FMCG categories, national brands will cover the largest percent of a consumer's product set. In order to develop consideration sets for which to choose from, consumers rely on heuristics. Advertising is a way national brands attempt to improve the probability that their products are in consumer's consideration sets. Linking advertising's role in creating consideration sets with the value of conformity stemming "from a need to identify with others through the possession and use of products and brands", we posit national brands will be favored by conforming consumers. Hence:

**H9.** The consumer value of conformity is negatively related to private label branded products purchasing in the FMCG category.

**Security.** Consumers motivated by security strive to prevail over the uncertainty that arises with the self, relationships, and/or society (Schwarz 1992, 1994). Focuses of individual security include one's health and societal security include national security. Schwartz (1994) mentions the importance of family security and health as values that derive from a motivation for security. From a recent Store Brand (2017) survey, 30% of the light users preferred the quality of national brand products to private label brands and along with quality perceptions, national brands have been heavily promoting their products as "organic", "natural," and overall healthy. Furthermore, the price differentials between private and national brands may be construed as "risk premia" as consumer ranking high on the security value are willing to pay for the added perceptual safety of national brands. Thus, consumers motivated by security are less likely to purchase private label brands.

**H10.** The consumer value of security is negatively related to private label branded products purchasing in the FMCG category.

## 2 Methodology

To analyze how the personal values identified influence the purchase of private label brands, we focus on consumer-level purchasing within the FMCG category. Our empirical setting is all U.S. grocery retailers for the period between January 1, 2015, and January 1, 2016. The GfK MRI's sample consists of more than 48,000 respondents, representing the largest available national sample of U.S. consumers. The data is obtained by a combination of a self-administered survey instrument, as well as an in-depth, in-person interview in the respondent's home, after which it is verified by GfK MRI researchers for completeness and accuracy. This study uses all available private branded purchases that occurred in the sample in the "Groceries and household items" category, regardless of retailer; this condition provides a context-free study environment, an advantage over prior research which mostly focuses on a limited set of brands and one or very few retailers. For the purposes of the study, the sample yields excellent measures of the key dependent variable: private label share of household purchases in the FMCG category, calculated across all retail stores in which the household shops using actual purchases of PLs versus national brands (NBs). Thus we compute the dependent variable (i.e. Private label share of total consumer wallet) as the total share of wallet of each sample household dedicated to PL purchases, across all retail stores shopped, divided by total FMCG expenditures made by the household.

Next, we follow Schwartz's (1994) conceptualization of motivational types of values and focus on the following set of personal values: Power, Achievement, Hedonism, Stimulation, Self-Direction, Universalism, Benevolence, Tradition, Conformity, and Security. We obtained all values from an "opinions and attitudes" Survey of the American Consumer conducted by GfK MRI. We used questions that corresponded the closest to the values represented in our theoretical framework; items used seven-point Likert-type scales (1 = "strongly disagree," 7 = "strongly agree"), with others having five-item or two being single-item measures. The variability of the scales was an artefact of the data collection process by GfK MRI and out of the control of the researchers. Using these selected items, we performed a principal components factorial analysis in order to identify the specific dimensions of the values in the study. Ten factors emerged from the factor analysis and were consistent with the theoretical motivations derived in our conceptual framework. We then added sociodemographic information of the households derived from the GfK MRI's survey as control variables. The data retained all 48,000 households. All data was collected at the same time by the research company.

## 3 Analysis and Results

We rely on a fractional logit GLM model, and include robust standard errors. This model takes into account values of zero and 1 in the dependent variable as having resulted from the same process (i.e. value-based PL purchasing decisions of households) which produces all fractional values of PL share of household, non-linear effect of the explanatory variables and adjusts for variance issues (Papke and Wooldridge 2008). Table 1 contains the results.

**Table 1.** Proposed hypotheses and estimation results

Variables	Proposed hypotheses	Parameters
<i>Personal Values</i>		
Power	–	.0157 (.01)***
Achievement	–	.0156 (.01)***
Hedonism	–	.0123 (.01)
Stimulation	+	.0327 (.01)***
Self-direction	+	.0087 (.01)
Universalism	–	.0142 (.01)*
Benevolence	–	–.0429 (.01)***
Tradition	+	.0274 (.01)**
Conformity	–	–.01304 (.00)
Security	–	–.0381 (.01)***
<i>Socioeconomic variables</i>		
Female head of household		–.0957(.01)***
Children in household		.0484(.02)**
College education		.0336 (.01)***
High school education		–.0132 (.00)
Post-graduate education		.0216 (01)
Age (18–34)		.0443 (.01)***
Age (35–49)		.0297 (.01)**
Age (50–54)		.0988 (.01)***
Age (64 and above)		.0890 (.00)***
Employed (part-time (0) vs. full-time(1))		–.0041 (.02)
Unemployed		.0380 (.02)**
Income (20,000 USD and below)		.0817 (.02)***
Income (20–50)		–.0189 (.02)
Income (50–75)		–.0541 (.02)***
Income (75–100)		–.0749 (.02)***
Number of children (1)		–.0521 (.02)***
Number of children (2)		–.0254 (.02)
Number of children (3 and more)		–.0071 (.03)
Homeownership		–.0221 (.01)**
Race (Asian-American)		.1668 (.02)***
Race (African-American)		–.1784 (.02)***
Race (Caucasian)		–.0188 (.02)
Pets in the household		.0171 (.01)**
Landline phone only		.0804 (.02)***
<i>Number of Observations</i>		48,168
<i>Log pseudo likelihood</i>		–10889.57

Notes: +Positive effect, – negative effect \* $p < 0.1$ ; \*\* $p < .05$ ; \*\*\* $p < 0.01$

Considering the effect of the ten personal values on PL share of household, we find that the impact of power on PL share of household purchases is positive and significant, not supporting H1. The impact of achievement is positive and significant as well, not supporting H2. Stimulation is also positive, in support of H4, thus for every unit increase in the value of stimulation, we expect an almost 4% increase in the PL share of wallet. The value of universalism is also positive and significant, not supporting H6, as is the impact of tradition in support of H8. The value of benevolence and security are negative and significant, supporting H7, and supporting H10. If the value of benevolence increases by one unit, the PL share of wallet is expected to decrease 4.3%. If the value of security increases by one unit, the PL share of wallet is expected to decrease by 3.8%. The effects of hedonism, self-direction, and conformity are not statistically significant, thus we do not find support for H3, H5, and H9. Our study includes a large representative sample of 48,000 U.S. consumers across 44 stores, and 2,345 products, providing an excellent testing ground for the effects of personal values on private vs. national brand purchase decisions. Our results demonstrate that personal values do in fact have either a positive or negative effect on the likelihood of consumers to purchase private label brands. Thereby, demonstrating that personal values extend beyond demographic and psychographic information characteristics (Vinson et al. 1977), to project a more complete picture of private label decision making. Overall, our results forward that consumers that are motivated by power, achievement, stimulation, universalism, and tradition are more likely to purchase private label brands, while consumers motivated by benevolence and security are more likely to purchase national brands. Interestingly, we hypothesized that consumers motivated by power, achievement, and universalism would be less likely to purchase private label brands, however, our empirical results revealed the inverse effects. These results could be due, in part, to consumers motivated by power striving to control resources, attain social status and prestige, yet these motivations not extending to FMCG purchases.

## 4 Conclusions

While previous research has examined consumer profiles for purchasing private label brands vs. national label brands, research has yet to examine the effects of personal values as a driver of private label vs. national brand purchase decisions. Research in this space has primarily focused on consumer characteristics related to price or brand (Martos-Partal et al. 2015). However, our empirical study offers a deeper lens for which to view consumer private label purchase decisions. Yet, with private label brands and national brands consistently jockeying for shelf space and consumer attention, the role of personal values offers a nice lens to examine consumer action and to build either a national brand or private label brand strategy. For instance, by understanding how personal values influence the private label vs. national brand decision, private label brands can develop packaging that strengthens the communication of certain values (e.g., the curiosity facet of stimulation). On the contrary, national brands can use this study to introduce products at different tiers with a more value specific brand strategy.

Overall, this study contributes to the growing literature on how idiosyncratic consumer profiling elements (e.g., values and characteristics) influence private label purchase decisions. Personal values are an overarching driver of everyday consumer decisions, as they represent how consumers want to have “the good life” (Rescher 1969). When research examine solely consumer characteristics in the private label vs. national brand purchase decisions, the findings are limited to more temporal idiosyncratic consumer elements. Our research posits and demonstrates empirically the importance of understanding how consumer personal values relate to private label purchase decisions. With the knowledge that consumers motivated by different values are more or less prone to purchasing private labels, practitioners will be more adept at developing future product strategy. Understanding consumer motivations is a critical component of product success and our research helps marketers develop a more successful segmenting profile to target private label brands (or national brands) to certain consumers.

## References

- Aggarwal, P.: The effects of brand relationship norms on consumer attitudes and behavior. *J. Consum. Res.* **31**(1), 87–101 (2004)
- Ailawadi, K.L., Pauwels, K., Steenkamp, J.-B.E.: Private-label use and store loyalty. *J. Market.* **72**(6), 19–30 (2008)
- Carlson, D.S., Kacmar, K.M.: Work-family conflict in the organization: do life role values make a difference? *J. Manag.* **26**(5), 1031–1054 (2000)
- Coca-Cola: The Real Story of New Coke (2012). <http://www.coca-colacompany.com/stories/coke-lore-new-coke>
- Collins, C.M., Steg, L., Koning, M.A.: Customers’ values, beliefs on sustainable corporate performance, and buying behavior. *Psychol. Market.* **24**(6), 555–577 (2007)
- DelVecchio, D.: Consumer perceptions of private label quality: the role of product category characteristics and consumer use of heuristics. *J. Retail. Consum. Serv.* **8**(5), 239–249 (2001)
- Donthu, N., Cherian, J.: Hispanic coupon usage: the impact of strong and weak ethnic identification. *Psychol. Market.* **9**(6), 501–510 (1992)
- Doran, C.J.: The role of personal values in fair trade consumption. *J. Bus. Ethics* **84**(4), 549–563 (2009)
- Durgee, J.F., O’Connor, G.C., Veryzer, R.W.: Translating values into product wants. *J. Advert. Res.* **36**(6), 90–101 (1996)
- Dworski, B.: 4 Reasons Private Labels Are Booming. *CSP Industry News* (2018). <https://www.cspdailynews.com/category-news/general-merchandise/articles/4-reasons-private-label-brands-are-booming#page=0>
- Epley, N., Waytz, A., Cacioppo, J.T.: On seeing human: a three-factor theory of anthropomorphism. *Psychol. Rev.* **114**(4), 864 (2007)
- Ferrari, S., Cribari-Neto, F.: Beta regression for modeling rates and proportions. *Journal of Applied Statistics* **31**(7), 799–815 (2004)
- Forbes: Why Do People Believe Bottled Water Is Better? (2016). <https://www.forbes.com/sites/quora/2016/05/31/16460/#35b3c96835ec>
- Fornell, C., Larcker, D.F.: Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **18**(1), 39–50 (1981)
- Fournier, S., Alvarez, C.: Brands as relationship partners: warmth, competence, and in-between. *J. Consum. Psychol.* **22**(2), 177–185 (2012)

- Gürhan-Canli, Z., Batra, R.: When corporate image affects product evaluations: the moderating role of perceived risk. *J. Mark. Res.* **41**(2), 197–205 (2004)
- Jacoby, J., Matell, M.S.: Three-point Likert scales are good enough. *J. Mark. Res.* **8**(4), 495–500 (1971)
- Keller, K.L.: Conceptualizing, measuring, and managing customer-based brand equity. *J. Market.* **57**(1), 1–22 (1993)
- Lamey, L., Deleersnyder, B., Dekimpe, M.G., Steenkamp, J.-B.E.: How business cycles contribute to private-label success: evidence from the United States and Europe. *J. Market.* **71**(1), 1–15 (2007)
- Livesey, F., Lennon, P.: Factors affecting consumers' choice between manufacturer brands and retailer own labels. *Eur. J. Mark.* **12**(2), 158–170 (1978)
- Maarten, L.B.: FMLOGIT: stata module fitting a fractional multinomial logit model by quasi-maximum likelihood. Statistical Software Components S456976. Boston College Department of Economics (2008)
- Market Force Information: Private Label Groceries Growing in Popularity, According to Market Force Study (2014). <http://www.prweb.com/releases/2014/06/prweb11933083.htm>
- Martos-Partal, M., González-Benito, Ó.: Store brand and store loyalty: the moderating role of store brand positioning. *Market. Lett.* **22**(3), 297–313 (2011)
- Martos-Partal, M., González-Benito, O., Fustinoni-Venturini, M.: Motivational profiling of store brand shoppers: differences across quality tiers. *Market. Lett.* **26**(2), 187–200 (2015)
- Morris, C.: Varieties of human value. University of Chicago Press, Chicago (1956)
- Narasimhan, C., Wilcox, R.T.: Private labels and the channel relationship: a cross-category analysis. *J. Bus.* **71**(4), 573–600 (1998)
- Nowlis, S.M.: The effect of time pressure on the choice between brands that differ in quality, price, and product features. *Market. Lett.* **6**(4), 287–295 (1995)
- NPR: Why Dawn Is The Bird Cleaner Of Choice In Oil Spills (2010). <https://www.npr.org/templates/story/story.php?storyId=127999735>
- Olsen, M.C., Slotegraaf, R.J., Chandukala, S.R.: Green claims and message frames: how green new products change brand attitude. *J. Market.* **78**(5), 119–137 (2014)
- Papke, L.E., Wooldridge, J.M.: Panel data methods for fractional response variables with an application to test pass rates. *J. Econom.* **145**(1), 121–133 (2008)
- Rescher, N.: Introduction to value theory. Prentice-Hall, Englewood Cliffs (1969)
- Reynolds, T.J.: Implications for value research: a macro vs. micro perspective. *Psychol. Market.* **2**(4), 297–305 (1985)
- Rice, G.: Individual values, organizational context, and self-perceptions of employee creativity: evidence from Egyptian organizations. *J. Bus. Res.* **59**(2), 233–241 (2006)
- Rokeach, M.: Beliefs, attitudes, and values: a theory of organization and change (1968)
- Rokeach, M.: The Nature of Human Values. New York Free Press, New York (1973)
- Schiffman, L., O'Casey, A., Paladino, A., Carlson, J.: Consumer Behavior. Pearson Higher Education, Perth Australia (2013)
- Schiffman, L.G., Sherman, E., Long, M.M.: Toward a better understanding of the interplay of personal values and the internet. *Psychol. Market.* **20**(2), 169–186 (2003)
- Schwartz, S.H.: Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Adv. Exp. Soc. Psychol.* **25**, 1–65 (1992)
- Schwartz, S.H.: Are there universal aspects in the structure and contents of human values? *J. Soc. Issues* **50**(4), 19–45 (1994)
- Schwartz, S.H.: Basic values: how they motivate and inhibit prosocial behavior. In: Mikulincer, M., Shaver, P.R. (eds.) *Prosocial Motives, Emotions, and Behavior: The Better Angels of Our Nature*, pp. 221–241. American Psychological Association, Washington, DC (2010)
- Schwartz, S.H., et al.: Basic personal values underlie and give coherence to political values: a cross national study in 15 countries. *Polit. Behav.* **36**(4), 899–930 (2014)



- Sethuraman, R.: A meta-analysis of national brand and store brand cross-promotional price elasticities. *Market. Lett.* **6**(4), 275–286 (1995)
- Sharma, R., Jha, M.: Values influencing sustainable consumption behavior: exploring the contextual relationship. *J. Bus. Res.* **76**, 77–88 (2017)
- Sinha, I., Batra, R.: The effect of consumer price consciousness on private label purchase. *Int. J. Res. Mark.* **16**(3), 237–251 (1999)
- Skrovan, S.: Why most shoppers still choose brick-and-mortar stores over e-commerce (2017). <https://www.retaildive.com/news/why-most-shoppers-still-choose-brick-and-mortar-stores-over-e-commerce/436068/>
- Sprott, D.E., Shimp, T.A.: Using product sampling to augment the perceived quality of store brands. *J. Retail.* **80**(4), 305–315 (2004)
- Statista: Nestle: ad spend in the U.S. 2013–2017 (2018). <https://www.statista.com/statistics/331802/netsle-ad-spend-usa/>
- Store Brands: The Great Reformulation (2017). <http://www.storebrands.com/>
- Sukhdial, A.S., Chakraborty, G., Steger, E.K.: Measuring values can sharpen segmentation in the luxury auto market. *J. Advert. Res.* **35**, 9–22 (1995)
- Vinson, D.E., Scott, J.E., Lamont, L.M.: The role of personal values in marketing and consumer behavior. *J. Market.* **41**(2), 44–50 (1977)
- Voss, K.E., Spangenberg, E.R., Crowley, A.E.: Measuring the hedonic and utilitarian dimensions of attitude: a generally applicable scale. *ACR North American Advances* (1997)
- Walsh, G., Mitchell, V.-W.: Consumers' intention to buy private label brands revisited. *J. Gen. Manag.* **35**(3), 3–24 (2010)



# Branding Strategies of European Retail Banks: A Linguistic Comparison Between Brand Names for Financial Products

Erhard Lick<sup>1</sup>(✉), Holger Wochele<sup>2</sup>, and Fiorenza Fischer<sup>2</sup>

<sup>1</sup> Department of Marketing Communication and Business Sales,  
ESCE International Business School, INSEEC U Research Center, Paris, France  
erhard.lick@esce.fr

<sup>2</sup> Department of Romance Languages,  
Vienna University of Economics and Business, Vienna, Austria  
{Holger.Wochele, fiorenza.fischer}@wu.ac.at

**Abstract.** The aim of this exploratory research was to investigate the strategies European banks pursue in branding their financial products. For this purpose, we drew upon both onomastics, a sub-discipline of linguistics, and branding, and, hence, bridged the gap between linguistics and marketing. In particular, we selected a corpus of account names in Germany, Austria, Italy, France, Rumania, and Hungary for our qualitative analysis. The results reveal that in Germany, Austria, and France, parent brands (bank names) appear to be rarely used. In Italy some names seem to generate associations with slogans for fast-moving consumer goods. Whereas in Germany, Austria, Italy, and France, account names refer to different target groups, English elements appear to be employed to a lesser extent in France than in the other countries. Only German banks apply a co-branding strategy in cooperation with, especially, German sports clubs and teams. Generally, Rumanian and Hungarian account names show only few phonetic and graphic particularities. They seem to be rather descriptive and, hence, lack creative power. Our findings may help marketers in retail banking to create awareness of some linguistic features they may consider when branding their financial products.

**Keywords:** Retail banking · Financial products · Brand names · Linguistics · Onomastics

## 1 Introduction

The goal of this exploratory research is to investigate which branding strategies European retail banks pursue with respect to their financial products. To this end, this study adopts an interdisciplinary approach, i.e. it connects research in marketing and applied linguistics, especially, onomastics. In fact, there is scant research on the branding of financial products. For example, Turley and Moore (1995) have put forward a categorization of brand names in the service industry. We contribute to the body of research

in onomastics, which has been increasingly proven useful in answering questions in marketing communications.

The structure of this article is the following: first, we present the methodology we applied for our study; second, we point out the branding strategies of co-branding, line extension, and multi-branding; third, we outline the theoretical concept of onomastics. In the subsequent empirical part, we present the findings of our corpus analysis, according to the different countries we selected. Finally, we draw conclusions, put forward the limitations of our study and present directions for further research.

## 2 Methodology

We selected a corpus of both current and deposit account names from the websites of European banks in different language areas to ensure a large variety of linguistic productions: Germany and Austria (Germanic), Italy, France, and Rumania (Romance) as well as Hungary (Finno-Ugrian). The reason for choosing these two types of accounts was that they represent the most popular accounts in retail banking. Furthermore, in the countries mentioned above, we selected banks with the highest market share in the respective countries. The corpus consisted of the following number of account names per country: Germany and Austria (73), Italy (99), France (117), Rumania (72), and Hungary (82). The goal of our qualitative analysis was to reveal tendencies in the branding strategies adopted by European banks.

We applied a corpus linguistics approach. In particular, we collected a corpus through systematic research on the internet and analyzed the corpus based on the analytic grid proposed by Zilg (2006). We used the following criteria for our analysis: graphic-phonetic, morphological, syntactic, as well as the integration of linguistic materials from other languages. Our qualitative analysis of linguistic data, hence, represents the method we utilized in order to find an empirically-based answer to a question in applied onomastics and marketing, respectively (Cresti and Panuzzi 2013).

## 3 Branding

Customers regard a brand as an essential part of a product and brands potentially add value to a product. Moreover, customers attach meaning to brands and establish brand relationships. Hence, the marketer's goal is to build strong and profitable customer relationships, which are referred to as brand equity. To ensure high brand equity, marketers need to take brand management decisions. In view of retail banking, while, e.g. Kosiba et al. (2018) and Mukerjee (2018) investigated the specific role of brand loyalty, Loureiro and Sarmiento (2018) explored how brand equity can be increased through the provision of customer experiences.

Banks are required to position their brands on the market, where competition recently has become quite fierce due to the emergence of online banks. That is why it is crucial that the target group has a clear perception of the bank's positioning (Sultana 2020). In general, there are three levels of positioning. The lowest one is based on attributes, i.e. product performance in general terms, which can be easily copied by competitors. On the next level, a certain benefit can be highlighted, i.e. it tells the customer what it

can do for them. However, the strongest brands focus on strong beliefs and values and involve customers on a deep, emotional level (Kotler and Armstrong 2012). In relation to banking products, marketers' brand positioning may involve the following three levels: attributes (e.g. disposability of money, flexibility of payments, easy management of financial resources); benefits (e.g. cash withdrawals worldwide, opportunity to download electronic bank statements or making money transfers oneself); as well as beliefs and values (e.g. independence, security, satisfaction of social needs) The names 'Esprit Libre Référence' and 'Esprit Libre Initiative Premier' drawn from our French corpus seem to, particularly, address the third level of brand positioning, since the name 'Esprit Libre' ('free spirit') appeals to the target group's emotions.

### 3.1 Brand Sponsorship: Co-branding

Co-branding constitutes a branding strategy where two well-established brand names of different companies are shown on the same product. One advantage of this form of brand alliance is that, since each brand dominates in a different category, such a combination of two brands, generally, leads to a higher consumer appeal, added value, and an increase in brand equity for both partners (Wang and Farquhar 2018). In view of the resulting brand equity of the co-branded product, Chen and Lien (2018) revealed that the combination of equally strong brands, i.e. where both brands show a similar brand equity, generates more favorable consumer evaluations than any major-minor juxtaposition, i.e. where one brand has a lower equity than the other. Co-branding may give a company the opportunity to enter with its brand into a category it may otherwise find it difficult to get access to Kotler and Armstrong 2012. Certain factors usually ensure the success of this strategy: long-term agreement, visibility of both partners, match of brand identities (Xiao and Lee 2014), launch of new products (Besharat 2010), and the country-of-origin effect (Lee et al. 2013). Co-branding has become very popular not only in retailing, but also in the service industry, like restaurants (Lee et al. 2006), hotels (Guillet and Tasci 2012), higher education programs (Wilkins et al. 2018), and banking, especially in view of co-branded credit cards (Bliss 1996; Liu et al. 2012; Wang and Farquhar 2018; Chen and Lien 2018).

### 3.2 Brand Development

The strategies of line extension and multi-brands may be adopted in developing brands. Line extensions refer to situations where companies extend their existing brand names to new forms, colors, sizes, ingredients, or flavors within the same product category. This type of line extension is defined as horizontal line extension (Kirmani et al. 1999). An example would be the sub-brands of Coca-Cola (parent brand), like Diet Coke, Coke Zero, cherry Diet-Coke, Diet Coke with lime, or vanilla Coke Zero (Kotler and Armstrong 2012). In contrast, a vertical line extension occurs when the parent company launches brands for products with a different price and quality level, either upward or downward (Xie 2008). For example, whereas the hotel chains Marriott and Hilton offer more affordable brands with Courtyard (Marriott) and DoubleTree (Hilton), banks, like HSBC and Citibank, target a very wealthy clientele with Premier (HSBC) and Citigold

(Citibank). Such an upward vertical extension in relation to bank brands was analyzed by Boisvert (2016).

In the case of a multi-brand strategy, companies offer different brands in a given product category. For instance, in the US, P&G markets six brands of laundry detergent (Tide, Cheer, Gain, Era, Dreft, and Ivory), five brands of shampoo (Pantene, Head & Shoulders, Aussie, Herbal Essences, and Infusium 23), and four brands of dishwashing detergent (Dawn, Ivory, Joy, and Cascade). The advantage is that a company can put emphasis on different product features and, hence, address different customer segments (Kotler and Armstrong 2012).

## 4 Onomastics

In linguistics, onomastics deals with the analysis of proper names. This discipline has been increasingly concentrating on the naming strategies of products and places of production, such as HeidelbergCement AG or Infineon Technologies AG (Nübling et al. 2015; Fischer et al. 2017). The exploration of such names is highly relevant for marketers, when, e.g. creating brand names and developing a brand architecture (Eckkrammer and Thaler 2013). For a long time, onomastics was primarily focusing on the two prototypical classes of names: personal names (anthroponyms, i.e. first names and family names) and names of places (toponyms: names of settlements, rivers, lakes, countries, etc.), especially from an etymological perspective. However, today's onomastics takes an interdisciplinary perspective and is also interested in the analysis of names for products and places of production. Onomastics not only reveals typical patterns for the creation of names (morphology of names and their graphic and phonetic particularities), but also shows which linguistic elements from the lexicon and the onomasticon (name pool) are used in building such names (semantics). For more details, refer to Fischer et al. (2017).

Many studies on product names refer to tangible products. For example, Zilg (2006) and Muselmann (2010) analyzed the names of Italian grocery products. But research on product names may also be applied to intangible products (services). Nübling et al. (2015: 102) have shown that the probability for objects and human beings to receive a proper name increases, the more they are, besides other criteria, agentive, man-made, and relevant for people. Bank accounts are man-made and relevant for people. Moreover, bank accounts are, to a certain extent, agentive, in view of the variability of the interest rates involved. The reason is that, from a customer's perspective, interest rates show uncontrollable dynamics, which have an important economic impact.

Nübling et al. (2015) argue that, in contrast to prototypical proper names, like personal names or place names, ergonyms, which are defined as names for man-made objects, companies, and institutions, such as names for products and banks, show a higher tendency towards transparency and translatability, as well as, generally, consist of complex constructions. Moreover, ergonyms are rather 'young' and there does not exist any onomasticon (like in the case of first names); they are usually based on common names, which are descriptive and designative (appellatives), like perfume, bread, and loan. All these characteristics apply to the names of bank accounts.

Besides, the main functions of names are the identification and differentiation of human beings and objects. Both functions are important for onomastics and marketing. Another requirement for determining an effective name for bank accounts, from

a marketing perspective, is based on the fact that financial products are usually high involvement products and, therefore, customers attach high importance to their product choice (Maier 1999). Similarly, from an onomastic point of view, as mentioned above, normally what people regard as relevant and important is more likely to receive a name (Nübling et al. 2015: 102). In contrast, there is a lower need for a name in the case of low involvement services, which are of lesser importance to customers, such as shoeshine services.

## 5 Corpus Analysis

### 5.1 Germany and Austria

In many cases, the bank does not appear in the account name. Moreover, several names refer to the specific target group characterized by age: *Scout Schüler-Sparkonto*; *HIPP Mein Baby Sparbuch*; *HVB Aktiv Rente*; *HVB FondsRente pro*; *Studentenkonto*; *Studenten KontoBox*; *sBankCard StudentID*; *Komfort Babykarenz-Konto*; *Taschengeld-Konto*. It needs to be mentioned that the name “Studentenkonto” is no more politically correct, as today in German it is common practice not to speak about ‘Studenten’, but ‘StudentInnen’ or ‘Studierende’, to use the politically correct form, which includes both genders.

We have found many English names in the German and Austrian corpus: *Scout Schüler-Sparkonto*; *SparCard direct*; *HERTHA BSC BankCard*; *CleverCard*; *Sparda4free*; *Spark7 Konto*; *BankCard mit Airbag-Kartenversicherung*; *BankCard Brailleprägung*; *BankCard StudentID*. Moreover, while some brand names include figures, like *Sparda4free*; *Spark7 Konto*; and *B4-19 KontoBox*, in some rare cases, possessive pronouns are used: *Mein Raiffeisen Konto*; *Meine Raiffeisen Karte*.

Some banks have applied a co-branding strategy: Berliner Volksbank issues the following cards: *HERTHA BSC BankCard* (soccer club); *Eisern Union BankCard* (soccer club); *Eisbären BankCard* (eishockey team); *ALBA BankCard* (basketball club); *Füchse BankCard* (handball team). The suffixes represent the names of famous German sports clubs, or teams, which are used in combination with the word BankCard. A co-branding strategy has also been employed in the following examples: *HIPP Mein Baby Sparbuch* issued by Commerzbank (HIPP is the brand name for baby and infant food, baby skin care, as well as food and skin care for pregnant women) and *FC Bayern SparKarte* (Hypovereinsbank).

Some banks have horizontally extended their brands in creating sub-brands: *HVB KomfortSparen* (HVB = Hypovereinsbank); *Sparda4free* (Sparda-Bank Südwest); or *Livret AXA Banque* (AXA bank).

### 5.2 Italy

The main function of proper names is their identification and distinction, as outlined above. Italian account names usually identify both the type of financial product and the bank: *Conto corrente* (‘current account’) *WeBank*, *Conto Corrente Banco Posta*. Many new account names maintain this structure, like *Conto Corrente Carige Stile Brillante*

*Gruppo Banca Carige*. However, there are names which have discarded the adjective ‘corrente’: *Conto IWBANK*, *Conto BancoPosta Più* (‘more’). In some cases, banks have even refrained from including their names in their account names: *Conto Armonia 2.0 Giovane* (‘young’), *Conto italiano Senza Frontiere* (‘unlimited’).

There are Italian account names which even do not mention the word ‘conto’ (‘account’) at all. Hence, here it is not obvious for the customer whether the brand name refers to a bank account: *Liberio Turbo*, *Hello! Money*, *Feel Free*. Such names would rather point to deodorants, detergents or sports equipment. The purpose of identification and differentiation completely disappears in such examples. The product name gives rather the impression of a slogan. This strategy becomes clearly evident in the following two examples: *Conto wow! For students only (Banca Carim)* and *Conto Rendi Tuo* (‘make it yours’).

The latter example is representative of Italian account names which include personal and possessive pronouns, particularly, in the second person singular. They aim at involving the customer and they imply affective closeness to the customer: *Conto Tuo Click*, *Conto Tuo Famiglia*, *Conto My 18/30*. These examples illustrate the fact that many Italian account names contain English elements. These elements do not seem to activate a foreign cultural schema or to establish an emotional relationship with, e.g. the British or American way of life, but they draw customers’ attention to the product and generate associations with internationality, modernity, youth, openness, progress, technology, success, mobility, etc. (Friedrich 2002; Piller 2003; Kelly-Holmes 2000). For more details on Italian account names, refer to Fischer and Wochele (2018).

### 5.3 France

In the large majority of cases, the name of the bank is not mentioned. Furthermore, in France many accounts do not mention the term ‘compte’ at all. Instead, we have found, e.g., the music genre ‘jazz’ in *Jazz*; *Jazz Option Internationale* or tree names for deposit accounts: *Érable Evolutions* (‘maple’); *Séquoia* (‘sequoia’); *Ebène* (‘ebony’); and *PERP Epicéa* (‘spruce’) (*Plan d’Epargne Retraite Populaire, pension plan*). Other examples, which do not show the name of the bank, are the following ones: *Esprit Libre Référence*; *Esprit Libre Référence Premier/Infinite*; *Esprit Libre Découverte*; *Esprit Libre Initiative*; and *Esprit Libre Initiative Premier*.

Brand names often refer to the different age groups banks want to appeal to, as illustrated by the following examples: *Génération 12–15 by Société Générale*; *Livret Jeune* (‘young’); *Livret A baby*; *PNB Paribas Avenir Retraite* (‘pension’); *Livret Jeune Mozaïc*; *FCP Parcours Retraite*; *Offre Bancaire Jeunes*; *Offre Epargne Jeunes*.

Foreign languages have been used to a relatively small extent. We have only found one Latin example: *Prêt in fine Optis* and two examples where an English lexeme forms part of a composite noun: *Génération 12–15 by Société Générale*; *Livret A baby*; *Caution Logement Good Loc* (‘Loc’ = Location, ‘rental’, support for young tenants who search for an apartment). Finally, in some cases, figures and punctuations have been included in the brand name: *Potentiels 1.2.3. ans*; *Génération 12–15 by Société Générale*; *PNB Paribas Multiplacements 2*; *Predissime 9*; *Espace Liberté 2*.

In our French corpus, we found some examples of multibrands: *Groupama* offers different current accounts under different names: *Compte Astréa*; *Offre Bancaire Jeunes*.

The same holds true for *Crédit Agricole*, which has chosen different names for different deposit accounts: *Predissime 9*; *Floriane*; and *Espace Liberté 2*.

#### 5.4 Rumania and Hungary

In Rumania and Hungary the banking system has been underdeveloped in comparison to Western European countries. Before the EU adopted a law, which granted every EU citizen the right to have an account with a bank as of 2016, every second Rumanian citizen did not have any bank account (“EU beschliesst das Girokonto für alle”). Thus, on many homepages of Rumanian banks, didactic texts can be found, which explain to prospective customers what current accounts are and how they can be used (Viktoriabank 2020).

Many account names are rather traditional and can be hardly viewed as proper names: 18 from the 72 Rumanian accounts analyzed are referred to as simply *cont curent* (‘current account’) on the banks’ webpages. From both a phonetic and graphic perspective, for these two countries we have found only few particularities. Examples from the Rumanian corpus are: *Pachetul* (‘package’) *YourBank2GO* (an allusion to the language of texting) or a play with words: *Pachetul FUNtastic* (the capital letters serve as an eye catcher). In view of the morphology of the account names analysed, many Hungarian names show the following pattern: < bank name [optional] + lexical addition (noun/adjective) [one or two] + ‘account’/‘account package’ + target group >, like: *Junior számlacsomag* (OTP bank; *számlacsomag* ‘account package’). The names are often asyndetic, i.e. lexemes are not morphologically or syntactically connected, but appear one after the other. The Rumanian names follow the pattern of postdetermination, which is common in Romance languages, i.e. the determinatum (head) refers to the type of financial product (*cont curent*) followed by defining adjectives or nouns: *Cont Curent – Pachet Esential*, *Cont Curent – Pachet Premium*.

Referring to the semantic structure of the Rumanian and Hungarian account names, there is an array of transparent names, i.e. names which are very descriptive, because of the lexical material used. Hence, these names are rather traditional and show little innovative power. Moreover, in order to increase the attractiveness of financial products, they are frequently graded up through high-value words, primarily with adjectives or nouns, which refer to, e.g. ‘activity’: *FHB Aktív bankszámla* (‘FHB active bank account’). The lexical material used for the creation of account names in Rumania and Hungary includes English words, which has led to hybrid, i.e. bilingual names (English-Rumanian or English-Hungarian); Rumania: *Cont Curent – Pachet Select* (BRD), Hungary: *Net Számlacsomag* (‘Net account package’). In contrast, offers for seniors are mainly marketed in the language of the corresponding country.

The Hungarian corpus often employs lexemes which are of Latin and Greek origin and, thus, represent the use of a sophisticated language style in Hungarian. However, genuinely Hungarian words are avoided: *Raiffeisen Bázis Számlacsomag* – ‘Raiffeisen basic account-package’ (*bázis* instead of *alap* für ‘basic’) or “*VITALITÁS*” *termécsomag* – ‘vitality product-package’ (*vitalitás* in lieu of *eleveenség*). Nevertheless, the Hungarian corpus also consists of accounts whose target group is the youth. Such account names are often made up of lexemes which are part of the slang or youth language: “*SULLI-MIX*” *termécsomag* (‘School-Mix product package’; *suli* slang for *iskola* ‘school’),



“*STUDI-MIX*” termékcsomag (‘Studi-Mix product package’; studi slang for ‘student’). For more details on Rumanian and Hungarian account names, refer to Fischer and Wochele (Fischer and Wochele 2018).

## 6 Conclusion

It can be concluded that, especially, in Germany, Austria, and France, parent brands (bank names), seem to be rarely used. In some cases, even the word ‘account’ is missing. Instead, while in France the music genre ‘jazz’ (*Jazz; Jazz Option Internationale*) or tree names (*Érable Evolutions; Séquoia; Ebène; PERP Epicéa*) have been employed, in Italy some names evoke associations with slogans for fast-moving consumer goods (*Conto wow! For students only and Conto Rendi Tuo; ‘make it yours’*). These are examples of multi-brands, since the banks involved offer different brand names in the same product category, i.e. banking products, without mentioning the parent brand, i.e. bank name (Kotler and Armstrong 2012). The fact that these brand names refer to accounts can be only deduced from the pragmatic context, i.e. promotional activities (e.g. sales talk and sales literature).

In Germany, Austria, Italy and France, account names point to different target groups, especially young and retired people. Furthermore, in relation to the use of foreign languages, English elements are used in all the countries analyzed, though, apparently, to a relatively lesser extent in France than in the other countries: Germany/Austria (e.g. BankCard mit Airbag-Kartenversicherung), Italy (e.g. Conto My 18/30), France (e.g. Génération 12–15 by Société Générale), Rumania (e.g. *YourBank2GO*), and Hungary (e.g. Net Számlacsomag). This may reflect the banks’ aim to arouse connotations of, e.g. internationality, modernity, youth, openness, progress, technology, success, mobility, etc. (Friedrich 2002; Piller 2003; Kelly-Holmes 2000).

Only German banks have applied a co-branding strategy in cooperation with, in particular, German sports clubs and teams (e.g. FC Bayern SparKarte). These brand alliances may increase consumer appeal, added value, and the brand equity for both the bank as well as the sports clubs and teams (Wang and Farquhar 2018). Their choice of German partners may enhance the country-of-origin effect, which, in turn, may ensure the success of their brand alliance (Lee et al. 2013).

In contrast to the other countries of our corpus, some Rumanian and Hungarian account names may not be recognized as proper names. Moreover, they show only few phonetic and graphic particularities and appear to be rather descriptive; they, generally, seem to lack creativity. This may be due to their relatively new wide-spread use of financial products among the population, and, hence, their low bank account density, compared to Western Europe.

Our findings may help marketers in retail banking to become aware of some linguistic parameters, which they may consider in creating brand names for their financial products. A limitation of our article is that we only analyzed a selection of European language areas. It would be a viable option to extend the research on account names, e.g. to Slavic language areas in Europe, like the Czech Republic or Poland. Another avenue for further research would be the investigation of customers’ perceptions of brand names, according to the linguistic features we have found.

## References

- Besharat, A.: How co-branding versus brand extensions drive consumers' evaluations of new products: a brand equity approach. *Ind. Mark. Manage.* **39**(8), 1240–1249 (2010)
- Bliss, M.: Co-branding in Europe. *Int. J. Bank Mark.* **14**(6), 36–40 (1996)
- Boisvert, J.: Reciprocal transfer of brand associations between service parent brands and upward line extensions. *J. Serv. Theor. Pract.* **26**(2), 222–243 (2016)
- Chen, C.W., Lien, N.H.: Consumer evaluations of service co-branding. *Serv. Ind. J.* **38**(13–14), 995–1016 (2018)
- Cresti, E., Panuzzi, A.: *Introduzione ai corpora d'italiano*. Il Mulin, Bologna (2013)
- Eckkrammer, E.M., Thaler, V.: Die Ergonmyie als namenkundliche Subdisziplin. In: Eckkrammer, E.M., Thaler, V. (eds.) *Kontrastive Ergonymie. Romanistische Studien zu Produkt- und Warenamen*, pp. 7–53. Frank & Timme, Berlin (2013)
- EU beschliesst das Girokonto für alle: *Wirtschaftswoche*. <https://www.wiwo.de/politik/europa/neuregelung-ab-2016-eu-beschliesst-das-girokonto-fuer-alle/9766630.html>. Accessed 9 Mar 2003
- Fischer, F., Hoffmann, E., Wochele, H.: Proper names in business. In: Mautner, G., Rainer, F., Ross (red.), C. (eds.) *Handbook of Business Communication. Linguistic Approaches*, pp. 537–559. De Gruyter, Boston/Berlin (2017)
- Fischer, F., Wochele, H.: Strategien zur Benennung von Finanzprodukten: Ein Vergleich. In: Heuser, R., Schmuck, M. (eds.) *Sonstige Namenarten. Stiefkinder der Onomastik*, pp. 153–173. De Gruyter, Berlin/Boston (2018)
- Friedrich, P.: English in advertising and brand naming: sociolinguistic considerations and the case of Brazil. *Engl. Today* **71**(18), 21–28 (2002)
- Guillet, B.D., Tasci, A.D.: Chinese hoteliers' take on hotel co-branding in China. *Tourism Rev.* **67**(4), 3–11 (2012)
- Kelly-Holmes, H.: Bier, parfum, kaas: language fetish in European advertising. *Eur. J. Cult. Stud.* **3**(1), 67–82 (2000)
- Kirmani, A., Sood, S., Bridges, S.: The ownership effect in consumer responses to brand line stretches. *J. Mark.* **63**(1), 88–101 (1999)
- Kosiba, J.P.B., Boateng, H., Amartey, A.F.O., Boakye, R.O., Hinson, R.: Examining customer engagement and brand loyalty in retail banking: the trustworthiness influence. *Int. J. Retail Distrib. Manage.* **46**(8), 764–779 (2018)
- Kotler, P., Armstrong, G.: *Principles of Marketing*. Global edn, 14th edn. Pearson, Boston (2012)
- Lee, J.K., Lee, B.K., Lee, W.N.: Country-of-origin fit's effect on consumer product evaluation in cross-border strategic brand alliance. *J. Bus. Res.* **66**(3), 354–363 (2013)
- Lee, S., Kim, W.G., Kim, H.J.: The impact of co-branding on post-purchase behaviors in family restaurants. *Int. J. Hosp. Manag.* **25**(2), 245–261 (2006)
- Liu, M.T., Chu, R., Wong, I.A., Zúñiga, M.A., Meng, Y., Pang, C.: Exploring the relationship among affective loyalty, perceived benefits, attitude, and intention to use co-branded products. *Asia Pac. J. Mark. Logis.* **24**(4), 561–582 (2012)
- Loureiro, S.M.C., Sarmiento, E.M.: Enhancing brand equity through emotions and experience: the banking sector. *Int. J. Bank Mark.* **36**(5), 868–883 (2018)
- Maier, M.: *Markenmanagement bei Kreditinstituten*. FGM-Verlag, München (1999)
- Mukerjee, K.: The impact of brand experience, service quality and perceived value on word of mouth of retail bank customers: investigating the mediating effect of loyalty. *J. Financ. Serv. Mark.* **23**(1), 12–24 (2018)
- Muselmann, S.: *Lebensmittelmarken in Italien. Eine sprachwissenschaftliche Untersuchung unter Berücksichtigung wirtschaftspsychologischer Aspekte*. Egert, Wilhelmsfeld (2010)

- Nübling, D., Fahlbusch, F., Heuser, R.: *Namen. Eine Einführung in die Onomastik*. Narr Francke Attempto, Tübingen (2015)
- Piller, I.: Advertising as a site of language contact. *Annu. Rev. Appl. Linguist.* **23**, 170–183 (2003)
- Sultana, N.: Brand positioning practices in services sector: a study of banking brands. In: *Global Branding: Breakthroughs in Research and Practice*, pp. 270–290. IGI Global (2020)
- Turley, L.W., Moore, P.A.: Brand name strategies in the service sector. *J. Consum. Market.* **12**(4), 42–50 (1995)
- Victoriabank, Cont Curent. <https://www.victoriabank.md/ro/details-retail-current-account?category=retail-deposit>. Accessed 10 March 2020
- Wang, S.W., Farquhar, J.: Co-branded services: perceived benefits and involvement of co-branded credit cards. *Int. J. Bank Market.* **36**(5), 969–987 (2018)
- Wilkins, S., Butt, M.M., Heffernan, T.: International brand alliances and co-branding: antecedents of cognitive dissonance and student satisfaction with co-branded higher education programs. *J. Market. High. Educ.* **28**(1), 32–50 (2018)
- Xiao, N., Lee, S.H.: Brand identity fit in co-branding: the moderating role of C-B identification and consumer coping. *Eur. J. Mark.* **48**(7–8), 1239–1254 (2014)
- Xie, Y.H.: Consumer innovativeness and consumer acceptance of brand extensions. *J. Prod. Brand Manage.* **17**(4), 235–243 (2008)
- Zilg, A.: *Markennamen im italienischen Lebensmittelmarkt*. Egert, Wilhelmsfeld (2006)



# Handle with Care: Adoption of Drone Delivery Services

Maya F. Farah<sup>(✉)</sup>, Mona Mrad, Zahy Ramadan, and Houssam Hamdane

Adnan Kassar School of Business, Lebanese American University, Beirut, Lebanon  
mfarah@lau.edu.lb

**Abstract.** The purpose of this study is to evaluate consumers' reactions toward drone delivery service. Qualitative data was collected based on comments posted following a YouTube video. A thematic inductive analysis was used in order to analyze the data based on YouTube participants' comments. The results of this study revealed that similarly to any other forms of innovation, consumers' expressed their resistance to this form of delivery in two forms: cognitive and affective. Taking into account that drone delivery service is still under the testing phase, this study was limited to finding sufficient and actual users who can contribute to the study with real and concrete concerns. This limitation restricts our understanding of consumers' reactions to drone delivery service to theoretical assumptions. Commercial companies and retailers may benefit from this research to get a deeper understanding about the main consumers' concerns and perceived risks towards the drone delivery service. Thus, this research may guide companies with ideas on how to better serve customers to increase the chances of adoption. Previous literature has largely explored the concept of technological innovations. However, no research to date has studied consumers' reactions towards this new form of delivery service.

**Keywords:** Drones · Amazon · SST · Technology acceptance

## 1 Introduction

In 2016, Amazon launched the first PrimeAir delivery service in the UK. DHL also completed a delivery test using its third generation of Parcelcopter, while Google tested food delivery drones through its Project Wing in Australia. The competition to deliver parcels in a reduced time and cost is becoming more intense. Indeed, Amazon's US PrimeAir is able to deliver a small parcel within 30 min at a cost of \$1 compared to FedEx's \$8.32 and UPS's \$12.92 for a next day delivery and for the same distance (Chang and Lee 2018). With the rise of online shopping, consumers have the option to choose from several e-commerce players in the market. Global e-commerce is expected to reach \$4.5 trillion by 2021. The expanding online market will induce a growth in the delivery market, specifically in parcel delivery methods (Yoo and Jung 2018). Over the next 10 years, annual parcel delivery volume is expected to double and reach 25 billion in the US. Nowadays, consumers demand several delivery options and high quality delivery

services. In fact, there is a growing segment of consumers who demand faster delivery but are price sensitive. According to McKinsey & Company, a small niche of consumers (20%) requires same day delivery services and is willing to pay a premium price for the service, mainly groceries and medication. The majority of consumers (70%) are unwilling to pay for one-day service and prefer a cheaper option, while the remaining 10% prefer a time – window delivery and a reliable service (Joerss et al. 2016).

Today, with the rapid growth of technology, retailers are progressively implementing a variety of self-service technologies (SSTs) (Orel and Kara 2014). The consumer interaction with the retailer changed, while the traditional cycle that extends from the manufacturer to the consumer became very different. Nowadays, retailers are always seeking new opportunities to implement SSTs, taking into account that technology is facilitating the transactions and increasing customer satisfaction (Cho and Fiorito 2010). SSTs are ‘technological interfaces that enable customers to produce a service independent of direct service employee involvement’ such as vending machines, ATMs, package tracking... (Meuter et al. 2000, p. 50).

One new form of SST implemented by Amazon and SF express, China’s largest mail carrier, is drone delivery (Engelking 2015). Researchers argued that the implementation of SSTs had a major impact on the change of “the consumer–brand relationship from a customer co-created value (e.g. ATMs) to a customer–technology relationship (e.g. drones)” (Ramadan et al. 2017, p. 818). A drone is a robot plane, controlled either autonomously or via remote control (Ramadan et al. 2017). As drone usage is currently being conceived for commercial intent, drones are gradually proliferating into our world and, more precisely, into shoppers’ lives. Drones are unmanned aerial vehicles (UAVs); their usage is becoming closer and much more realistic than ever before. A delivery drone has the following specifications: capacity of 5 kg, flying distance of 50 km, flying altitude of 120 m and a speed of 65 km/h. A drawback to drone deliveries is its maximum weight capacity of 5 kg, yet new drone technologies are emerging.

In line with the commercialization of this new form of service technology, some papers have examined consumers’ attitude and potential adoption of this innovation, while limited research to date has examined consumers’ reactions to the emergence of drones’ service in retailing. Given that any inconvenience caused by the service could affect the consumer-brand relationship (Ramadan et al. 2017), the objective of this paper is to further examine consumers’ reactions to drone deliveries.

## 2 Literature Review

In a competitive world, innovation becomes the only way for companies to survive; yet, consumers are often resistant to change. Therefore, at early stages of any new technology or even during the launch of any new product/service, the consumer is always confused as to whether he should adopt or resist the technology. Unfortunately, this dilemma limits the success of technological advancements (Woodside 1996). Despite the astronomical pace of technological improvements and innovation, consumer acceptance and use of these inventions is not proportional (Venkatesh et al. 2000). In general, consumers believe that adopting a new technology will disturb their psychological equilibrium (Talke and Heidenreich 2014). Furthermore, whenever a new innovation is launched, consumers

prefer to use proven and tried product/service, taking into account that the trial of any new invention will certainly engage several implications and potential risks that they naturally prefer to avoid (Talke and Heidenreich 2014). The same case applies to consumers, who are actually satisfied from the performance of the current product/service; they will feel that the innovation presented is irrelevant, as it does not fill any existing need. This might be another reason for people to reject adoption since they will feel that they are invaded with useless innovation; this feeling of oversaturation will result in inhibiting the adoption intention (Reinders 2010). Consumers utilizing cognitive thinking usually try to avoid innovation because they do not want to risk their stability. Indeed it is a bit complicated for them to switch behaviours or change their routine (Heidenreich and Handrich 2015). As a result, understanding the factors that affect the consumer's acceptance is a main concern for researchers, practitioners and companies (Venkatesh et al. 2000).

Moreover, it is essential to understand the consumer's psychology of resistance in order to predict the adoption behaviour or intention of potential users (Heidenreich and Handrich 2015). Hence, analysing the consumer's reactions toward innovation shall be made using the resistance approach (Bartels and Reinders 2011). Numerous previous literatures discussed the concept of resistance to innovation (e.g., Patsiotis et al. 2013). However, there is a lack of research on the innovation resistance causes and consequences (Kleijnen et al. 2009). On the contrary, the majority of research conducted focus on rewarding outcomes and motivating factors that encourage trial (e.g., Speier and Venkatesh 2002). What is needed to get a better understanding of consumers' implications and concerns are factors that influence or prevent consumers from using or accepting technology (e.g., Bradley and Stewart 2002). Using this approach, companies and developers will be able to create a better version of the product/service. According to studies, the concept of resistance is explained as the individual's intention to avoid change. Based on this, most of the present literature illustrates resistance in a negative disadvantageous way. However, if we take a deeper look at the outcomes and feedbacks received from resistant people, we realize that organizations are getting potential insights from their target market. So they can identify chances of success or failure of the product/service developed. Having done so, they will be able to shape an enhanced version according to the consumer's needs and expectations (Hartmann and Fischer 2009).

There are several risks barriers that face the consumer, preventing him/her from adopting a certain technology. These risks are classified under three main categories: cognitive, behavioural and affective. Several studies related the concept of consumer's resistance to cognition (Marakas and Hornik 1996) while other studies linked it to behavioural factors and characteristics (Cenfetelli 2004). Therefore, it is imperative to understand consumer's reactions toward drone delivery in order to know all the implications, concerns and perceived risks from a consumer's perspective. No research to date has been conducted on actual users, simply because that the device is still in the testing phase. Therefore, this literature aims to address the gap associated with companies that have intentions of adopting this new technology, especially Amazon. The goal is to assist them in planning and designing this potential innovation for delivery service.

### 3 Methodology

The research approach of this study is qualitative, with an inductive thematic analysis utilized to identify and analyze themes in the data collected. To collect the data, a video uploaded by Amazon related to the launch of the commercial drone delivery was selected. This video was chosen based on the number of comments and level of consumer engagement. The researcher data collected from the chosen video was thoroughly read and summarized using NVivo 9. Since the analysis was inductive thematic, the codes were inspired from the data collected. In other words, themes reflected the consumer's opinions. The coding process was done after a deep analysis of the whole data set in order to identify the key themes (Braun and Clarke 2006). The codes were collected, sorted and transformed into potential themes. Two coders reviewed the data to ensure a high degree of reliability and transparency. The first coder read and studied the collected data three times before creating the nodes. The second and third readers also collaborated on the coding process, during which themes were restructured. The inter-codes differences were revised and amended accordingly.

### 4 Findings

Previous literature confirmed that all innovations are beneficial and should be used to facilitate our daily lives. Nonetheless, not all forms of innovation result in adoption. A big number of consumers in general do not reveal the desire for change, resulting in a resistance for the innovation. The results of this study indicate that, like other forms of innovation, the drone delivery service is also faced by rejection due to cognitive and affective factors.

#### 4.1 Cognitive Resistance

When a new product is launched in a market, consumers usually have little access to information about the invention and its features. Customers regularly delay and postpone the adoption process until they can get a sense of the benefits associated with an invention. As such, this is the main reason for the failure of so many products in the market (Ram and Sheth 1989). Uncertainty and innovation are strongly related to each other, resulting in the perceived risks that consumers may encounter in relation to innovation (Ram and Sheth 1989). The analysis of the comments resulted in the following perceived risks:

##### 4.1.1 Functional Risk

Performance risk or functional risk exists when consumers are concerned as to whether the new technology has been fully tested, allowing it to operate accurately (Ram and Sheth 1989). Some stated that they do prefer to wait until the product is experimented by a large number of people before using it. Few people are risk taker and willing to try something new. Given that this device is still under the testing phase, people expressed their fears in relation to the landing process. Accordingly, some thought that the location where people live is likely to prohibit or allow the consumer to access this form of

delivery. Comments were related to the form of housing. People thought that this device would be practical for houses with backyards; however, they questioned the landing process to flats and apartments.

*“If you live in an apartment building, chances are you won’t be given the option to order packages by drone.”*

*“It’s only ideal for houses with backyards, not for flats downtown”*

People were also concerned about the infrastructure readiness for this form of delivery. Thus, being faced with some environmental threats, few concerns were raised. Comments were focused on whether the drone will be capable of reaching the person’s home without hitting some trees or birds on its way. This mental process led people to worry about the damaged items that they will receive. “What if we receive a damaged package?” That was a concern that most people pointed to, wanting to ensure an adequate delivery of their products. Some comments were as follows:

*“If a bird hits it, your package is damaged. I hope it is made bird proof”*

*“I don’t mind my deliveries being made by drone as long as they don’t get damaged.”*

In addition to this, concerns were raised in relation to weather conditions. Accordingly, some people questioned whether drones could perform during bad weather conditions.

*“What if weather conditions are bad?”*

*“What about customers ordering items during inclement weather?”*

Furthermore, the flight regulations and the legal side related to the functionality of this invention also embody the concerns of people. Given the non-existence of laws and flight regulations for commercial drones, people still doubted whether this form of delivery would be approved by authorities. Thus, the main addressed points were related to how the drone will function in relation to laws issued by the government.

*“They also don’t account for flight regulation laws, as well as other obstructions such as tall-standings antennae and other constructs”*

Some comments on the available video stated that some issues might arise in relation to the commercialization of drones. They considered that this form of device would develop a new type of noise pollution, causing a stressful environment especially at night as follows:

*“That’s positive. Now when I go outside at night, I cannot enjoy the stars because there is a constant stream of airplanes. That’s very troubling.”*



### 4.1.2 Physical Risk

Some respondents were afraid of this weird device entering their property, since it can be easily imitated and used for terrorist attacks, especially with an unstable environment around the world. In line with Ram and Sheth (1989), this risk is considered a physical risk taking into account the possible harm that might occur to the property and people as follows:

*“What if the drone is actually part of ISIS and bombs your house”*

From another perspective, some people went beyond the device itself and explored the side effects that will be caused by sudden changes in the delivery system, such as the layoff of many employees in this sector, resulting in a resistance to accept the innovation. In addition to job eliminations in the delivery sectors, some respondents thought that this innovation has many drawbacks on small shops and retailers. Hence, explicit changes will occur on the economic cycle.

*“This will kill rural mom and pop stores if it really takes off”*

*“We don’t need this... I don’t mind waiting a few extra days if it means letting people keep their jobs.”*

## 4.2 Affective

Consumers can form positive and negative emotional relationships with emerging technologies. Affect is a major aspect into human’s life and it plays an essential role in motivating the consumer towards the acceptance and adoption of the launched product (Reeve 2005). This includes feelings, emotions and moods (Russell 2003). Several studies in the fields of marketing, social psychology and many others confirmed that affect is an important element affecting the decision-making behavior (Mittal and Ross 1998). Typically, the final decision making, when it comes to innovation adoption, is based on cognition and affection. This may lead participants to reflect mixed feelings about drones. Accordingly, some of the reviews revealed a state of hate towards Amazon and its emerging technologies that could negatively affect people’s well-being and their jobs:

*“I hate Amazon technology”*

*“Job killer, please boycott. Buy local.”*

## 5 Discussion, Managerial Implications and Limitations

Commercial drone delivery is becoming a booming business in today’s business world. The majority of businesses and retailers are considering this new form of delivery in order to increase efficiency. Therefore, lots of research have been conducted lately by companies to better understand and analyze consumer’s reactions to this updated delivery service. Despite all the research made by major companies to consolidate and position the device adequately in the consumer’s mind, the majority of people are still skeptical of

this innovation. Few respondents in this study showed keen interest or eagerness to adopt this form of service delivery. Taking into account that people do not like change (Ram and Sheth 1989), Amazon consumers were still finding it hard to accept a completely new technology that may create a radical change into their life. Indeed, the analysis of potential users' opinions revealed a strong resistance towards this form of technology. Consumers' resistance has been classified in this study into cognitive and affective. The analyzed comments reflected consumers' various forms of reaction. Some were concerned about functionality, privacy and safety; others were more focused on emotional resistance."

Respondents, respondents did not mention anything related to the differential advantage that this new form of delivery service would bring to the market. Therefore, they did not believe that this form of technology could support their adoption of drones. In general, people expect technology innovation to improve their daily routine. According to the comments on the video, the device did not offer any added value over the normal delivery system. On the contrary, traditional delivery systems were believed to be safer and more practical. However, some of the respondents were trying to defend and encourage the launch of this new system by replying and reassuring hesitant people that it is going to work. The defenders of this invention were committed and encouraged to use these drones, given their high regards and trust in Amazon. Although none of them have had a chance to try the service, they believe that Amazon's credibility, reliability and expertise are positive attributes that will help with the acceptance of this new service."

Despite all the advantages that Amazon attributes to this system, consumers are cautious when it comes to accepting it. Much of this hesitancy revolves around the numerous perceived risks and concerns that were highlighted in the video. For instance, safety, privacy and functionality developed a huge barrier between the retailer and the consumer who is trying to detect the beneficial part of this system. None of the consumers is willing to adopt drones; unless there is an improvement and a perceived competitive advantage over the old delivery system. This strong resistance reflected in the video comments assist Amazon and other companies to take the potential risks and concerns expressed by the consumers more seriously. Companies are therefore advised to increase trials of this form of delivery in order to justify the advantages of this service to all the resistant participants and to highlight the differential advantage of this service compared to the traditional delivery system. As such, consumers should feel safe and perceive this service as efficient with an added value to their daily lives.

Despite the numerous researches made about drones and taking into account that the service is not active yet, understanding peoples' reactions toward this invention remains challenging due to the lack of users. This form of technology is still under the testing phase, which makes it much more challenging on the companies and researcher to evaluate and understand the reaction of the consumer. Future research could investigate the reactions of actual users after trying the service and experience all its features in details.

## References

- Bartels, J., Reinders, M.J.: Consumer innovativeness and its correlates: a propositional inventory for future research. *J. Bus. Res.* **64**(6), 601–609 (2011)

- Bradley, L., Stewart, K.: A Delphi study of the drivers and inhibitors of Internet banking. *Int. J. Bank Mark.* **20**(6), 250–260 (2002)
- Braun, V., Clarke, V.: Using thematic analysis in psychology. *Qual. Res. Psychol.* **3**(2), 77–101 (2006)
- Cenfetelli, R.T.: Inhibitors and enablers as dual factor concepts in technology usage. *J. Assoc. Inf. Syst.* **5**(11), 16 (2004)
- Chang, Y.S., Lee, H.J.: Optimal delivery routing with wider drone-delivery areas along a shorter truck-route. *Expert Syst. Appl.* **104**, 307–317 (2018)
- Cho, H., Fiorito, S.S.: Self-service technology in retailing. The case of retail kiosks. *Symphonya* **1**, 43–45 (2010)
- Engelking, C.: Drone Delivery Services are Booming in China (2015). <http://blogs.discovermagazine.com/drone360/2015/03/27/drone-delivery-china/#.WuXTapdRXIU>
- Hartmann, T., Fischer, M.: A process view on end-user resistance during construction IT implementations. *J. Inf. Technol. Constr. (ITcon)* **14**(23), 353–365 (2009)
- Heidenreich, S., Handrich, M.: What about passive innovation resistance? Investigating adoption-related behavior from a resistance perspective. *J. Prod. Innov. Manag.* **32**(6), 878–903 (2015)
- Joerss, M., Schröder, J., Neuhaus, F., Klink, C., Mann, F.: Parcel delivery: The future of last mile. McKinsey & Company (2016). <https://www.mckinsey.com/industries/travel-transport-and-logistics/our-insights/how-customer-demands-are-reshaping-last-mile-delivery>
- Kleijnen, M., Lee, N., Wetzels, M.: An exploration of consumer resistance to innovation and its antecedents. *J. Econ. Psychol.* **30**(3), 344–357 (2009)
- Marakas, G.M., Hornik, S.: Passive resistance misuse: overt support and covert recalcitrance in IS implementation. *Eur. J. Inf. Syst.* **5**(3), 208–219 (1996)
- Mittal, V., Ross Jr., W.T.: The impact of positive and negative affect and issue framing on issue interpretation and risk taking. *Organ. Behav. Hum. Decis. Process.* **76**(3), 298–324 (1998)
- Meuter, M.L., Ostrom, A.L., Roundtree, R.I., Bitner, M.J.: Self-service technologies: understanding customer satisfaction with technology-based service encounters. *J. Mark.* **64**(3), 50–64 (2000)
- Orel, F.D., Kara, A.: Supermarket self-checkout service quality, customer satisfaction, and loyalty: empirical evidence from an emerging market. *J. Retail. Consum. Serv.* **21**(2), 118–129 (2014)
- Patsiotis, A.G., Hughes, T., Webber, D.J.: An examination of consumers' resistance to computer-based technologies. *J. Serv. Mark.* **27**(4), 294–311 (2013)
- Ram, S., Sheth, J.N.: Consumer resistance to innovations: the marketing problem and its solutions. *J. Consum. Mark.* **6**(2), 5–14 (1989)
- Ramadan, Z.B., Farah, M.F., Mrad, M.: An adapted TPB approach to consumers' acceptance of service-delivery drones. *Technol. Anal. Strateg. Manag.* **29**(7), 817–828 (2017)
- Reeve, J.: *Understanding Motivation and Emotion*. Wiley, Hoboken (2005)
- Reinders, M.J.: *Managing consumer resistance to innovations* (No. 475). Rozenberg Publishers (2010)
- Russell, J.A.: Core affect and the psychological construction of emotion. *Psychol. Rev.* **110**(1), 145–172 (2003)
- Speier, C., Venkatesh, V.: The hidden minefields in the adoption of sales force automation technologies. *J. Mark.* **66**(3), 98–111 (2002)
- Talke, K., Heidenreich, S.: How to overcome pro-change bias: incorporating passive and active innovation resistance in innovation decision models. *J. Prod. Innov. Manag.* **31**(5), 894–907 (2014)
- Venkatesh, V., Davis, F.D.: A theoretical extension of the technology acceptance model: four longitudinal field studies. *Manage. Sci.* **46**(2), 186–204 (2000)
- Woodside, A.G.: Theory of rejecting superior, new technologies. *J. Bus. Ind. Mark.* **11**(3/4), 25–43 (1996)
- Yoo, W., Yu, E., Jung, J.: Drone delivery: Factors affecting the public's attitude and intention to adopt. *Telematics Inform.* **35**(6), 1687–1700 (2018)



# Can Stock-Outs Act as Scarcity Cues? Impact of Scarcity Message Types and Their Disclosure Time on Number of Items Bought in an Online Fashion Setting

Liliana Kowalczyk<sup>(✉)</sup>, Els Breugelmans, and Katia Campo

Faculty of Economics and Business, KU Leuven, Korte Nieuwstraat 33, 2000 Antwerp, Belgium  
liliana.kowalczyk@kuleuven.be

## 1 Introduction

Fashion is one of the most popular retail categories (PwC 2016), and has enjoyed a high growth rate in the recent years, especially in the online channel (PwC 2016). The (online) fashion sector is characterized by: fast offer turnaround, a big number of unique SKUs having to account for multiple colors and sizes, as well as demand uncertainty due to dynamically changing fashion trends. Because of these characteristics, consumers are often confronted with huge variations in assortment and tend to regularly face stock-outs or messages suggesting there are only a few items left of certain SKUs. Massive differences in items' stock levels are indeed reported to be one of the key issues in the sector (e.g. Contalog 2016).

Due to the ease of implementation, online fashion retailers regularly use textual limited quantity cues such as 'only a few items left' in order to signal scarcity of particular items or sizes of an item. These cues have been shown to encourage purchases by triggering feelings of popularity for a cued product (e.g. Aggarwal et al. 2011). However, encountering these messages more frequently, consumers may start to doubt their legitimacy, perceiving them just as another sales tactic (Lee et al. 2014). The effectiveness of these cues could be further diminished when they are perceived as a restriction of freedom or flexibility to choose (Fitzsimons and Lehmann 2004). Therefore, it is interesting to investigate whether other, perhaps more subtle, indicators of scarcity could also affect consumers' behavior. Prior stock-out research (Huang and Zhang 2016; Ge et al. 2009) hints that certain kinds of product unavailability can act as indicators of assortment desirability as well, and hence might serve as a similar scarcity cue as the more explicit limited quantity messages.

In this study, we compare the impact of two types of scarcity messages (limited quantity cue on the focal size of an item vs. stock-out of non-focal sizes of an item) on number of items bought in an online fashion setting. We define the focal size (non-focal size) of an item as the clothing size that fits (does not fit) the consumer's buying size. In addition, following previous stock-out research (Breugelmans et al. 2006; Pizzi and

---

K. Campo—Deceased 7th March 2018.

Scarpi 2013), we examine how performance of these messages is moderated by their disclosure time on a retailer's website (ex post: on the product page vs. ex ante: on the multiple items page where different products are visible).

We contribute to both the scarcity cue literature as well as the stock-out literature. First, prior research on textual scarcity cues (e.g. Aggarwal et al. 2011) focused on consumer reactions to the focal cued item only. We extend this by allowing for spill-over effects to other items in the store via the use of the number of items bought as the dependent variable and by comparing the effectiveness of the scarcity cue on the focal item with an unavailability message on a non-focal item. Second, the bulk of stock-out literature assumed stock-outs to be a negative phenomenon (e.g. Campo et al. 2000), with only a limited body of research (Huang and Zhang 2016; Ge et al. 2009) acknowledging that unavailability may trigger positive perceptions too. Yet, this research did not explicitly compare the different types of partial unavailability that we consider. In addition, we include disclosure time, an aspect that has not been investigated before in scarcity research and appeared in the stock-out literature only in a limited way (Breugelmans et al. 2006; Pizzi and Scarpi 2013).

Our insights can be interesting for managers of the fashion sector and other categories, where fostering consumers' perception of scarcity would be useful, and where stock-outs of non-focal 'sizes' occur in a regular way, think of footwear (non-focal shoe size) or books (non-mastered languages). Our results will be instrumental in showing whether it is worthwhile to use stock-outs of non-focal items as scarcity cues and how to communicate them to encourage consumers to buy more.

## 2 Conceptual Framework and Hypotheses

### 2.1 Comparing Limited Quantity Cues on Focal Size and Stock-Outs of Non-focal Sizes

In what follows, we discuss four ways in how the two messages differ.

- **Attention.** A stock-out of non-focal sizes concerns items that are out of a consumer's choice set by definition (they do not correspond to a consumer's physical needs), while a limited quantity cue is tied to items that might fall in the choice set. Prior research observes that items that do not belong to the choice set receive less attention (e.g. Shocker et al. 1991). Therefore, we assume that a message tied to non-focal sizes will receive less attention than a message tied to a focal sized item.
- **Directness.** A limited quantity cue contains an explicit message ('only a few items left'), while a stock-out of non-focal sizes does not (the number of available focal-sized items is unknown). Research suggests that marketing message explicitness may influence purchase response, in particular for apparel (e.g. Yan et al. 2012). As a limited quantity cue involves a textual message, we consider it to be more direct than a stock-out. By being more direct, we assume that the limited quantity cue is more likely to activate scarcity preference mechanisms.
- **Authenticity.** Consumers encounter limited quantity messages more frequently than stock-out messages, because quantity cues can be easily implemented by retailers even if low stock does not in fact occur. This frequent (maybe even dishonest use)

may lower the authenticity in the eyes of consumers (Lee et al. 2014). In contrast, stock-outs messages are more likely to be perceived as authentic because they are not as easy to implement and are less ‘manageable’ by retailers as a marketing tool (consumers cannot buy the product if retailers would state it is unavailable).

- Choice freedom restriction. Finally, limited quantity cues can be sometimes perceived as an ‘intrusion’ to the decision making process (Lee et al. 2014). More than for stock-outs, consumer might feel compelled to choose the scarce focal sized item. Marketing actions that limit the freedom or flexibility to choose have been shown to provoke a negative consumer response (e.g. Fitzsimons and Lehmann 2004).

## 2.2 Performance of Different Scarcity Messages, When Announced Ex Post

We first compare the effectiveness of the two messages in a setting where they are shown after a consumer clicks on the item (ex post) which is the most common practice among online fashion retailers, using the four differences mentioned in Sect. 2.1.

On the one hand, following the difference in attention and directness, we speculate that the limited quantity cue on the focal size may have a stronger impact on the number of items bought than the stock-out of the non-focal size. Indeed, stock-outs of non-focal sizes are less noticeable (consumers pay less attention to items that are out of their choice set; Shocker et al. 1991), and they are less direct and explicit (no textual message attached that draws attention). Based on this, we expect that consumers are more likely to experience a stronger sense of an urgency to buy the focal item, and make stronger scarcity inferences about the whole assortment when confronted with a limited quantity cue on the focal size versus a stock-out of non-focal sizes. On the other hand, following the difference in authenticity and the perception of the choice freedom limitation, we speculate that the higher relative performance of a limited quantity cue on the focal size (versus a stock-out of non-focal sizes) might weaken. Still, we speculate that the explicit character and the heightened attention for the limited quantity cue will compensate for its possible disadvantages. We support our expectation, following numerous studies (e.g. Aggarwal et al. 2011) that point to the overall strong positive effect of limited quantity cues, while only limited research hints towards its possible disadvantages (Lee et al. 2014). Hence:

- H1.** When scarcity messages are announced ex post, consumers buy more items when confronted with a limited quantity cue on the focal size than when confronted with a stock-out of non-focal sizes.

## 2.3 Change in Performance of Scarcity Cues, When Announced Ex Ante

Prior stock-out research (e.g. Pizzi and Scarpi 2013) observes that an earlier timing of a stock-out message positively influences consumer response. We speculate that showing the stock-out of non-focal sizes upfront (when a consumer still trades off products at the multiple items page) may alleviate some of its disadvantages. By priming consumers upfront, the lower attention as well as the subtleness might disappear. This is expected to

result in a higher value associated with the focal item, and a higher chance of purchase spill-over to other items in the store (also because the scarcity perception is activated already on the item overview page).

**H2.** Consumers buy more items when confronted with a stock-out of non-focal sizes announced ex ante versus ex post.

We expect that an ex ante announcement may improve the effectiveness of the limited quantity cue on the focal size (compared to an ex post disclosure) following similar mechanisms as we discussed for the stock-out of non-focal sizes. On the other hand, this ex ante communication may also prime the disadvantages of authenticity concerns and feelings of choice freedom restriction, especially if multiple items receive the same explicit limited quantity communication.

**H3.** Consumers buy a) more or b) less items when confronted with a limited quantity cue on the focal size announced ex ante versus ex post.

An ex ante announcement of a scarcity message is expected to strengthen the positive effects for both message types. As the stock-out of the non-focal sizes is more subtle and less direct, we expect this condition to more likely benefit from an ex ante announcement. What is more, and as argued before, being informed upfront may result in certain disadvantages too, especially for the limited quantity cue where such ex ante disclosure may lead to questioning of its authenticity and an increased feeling of choice restriction. The above point to an improved comparison between the stock-out of non-focal sizes and the limited quantity cue on the focal size.

**H4.** The positive impact of ex ante vs. ex post announcement on number of items bought is smaller for a limited quantity cue on focal size than for a stock-out of non-focal sizes.

## 3 Method

### 3.1 Survey on Differences Between the Two Scarcity Messages

To verify whether respondents indeed perceive the two scarcity messages differently on the characteristics of directness, authenticity and choice freedom restriction, we conducted a pre-test survey<sup>1</sup>. We used a convenience sampling procedure where master students of a European university were asked to rate two scarcity messages (presented via online webshop screenshots) of a gender neutral T-shirt. Respondents rated the limited quantity cue on the focal size and the stock-out of some non-focal sizes on measures that capture differences in directness, authenticity and choice freedom restriction. We instructed respondents to imagine that their T-shirt size was 'M' so that we could use the same screenshots in the whole experiment. In total, 45 students (51% women) filled in

<sup>1</sup> We did not question awareness, as attention differences are more unconscious.

the questionnaire. Results show that a stock-out of non-focal sizes scored significantly lower on annoyance ( $p = .014$ ), and significantly higher on authenticity ( $p = .046$ ), whereas a limited quantity cue scored significantly higher on the mechanisms capturing the directness of the scarcity cue ( $p = .000$  for all three mechanisms), confirming our assumptions.

### 3.2 Online Store Experiment

To test our hypotheses, we conducted a  $2 \times 2$  (scarcity message type: limited quantity cue on focal size vs. stock-out of non-focal sizes  $\times$  disclosure time: ex ante vs. ex post) experimental study using a simulated but realistically looking online fashion store with a survey. Participants could browse through different pages of the simulated store, receive detailed information about a product, and add products to a virtual shopping basket. The assortment of the simulated store consisted of twenty different tops, chosen through a series of pre-tests. Prior to entering the online store, participants encountered a demographics survey (where they answered questions on age, education, online fashion buying experience, focal clothing size). Next, they were presented with pictures of the twenty tops, from which they were asked to indicate three items that they would consider buying. Respondents were also asked how they perceived the attractiveness of the presented assortment.

In the online fashion store, participants were asked to perform a shopping task, imitating their normal shopping behavior as closely as possible. Participants were assigned to one of four experimental conditions. Per condition, there were two items that received the same scarcity message: one randomly chosen item out of the three indicated by consumers in the pre-experimental task, so as to increase the chance of respondents noticing the cue, and one additional randomly chosen item out of those not indicated in the pre-experimental task, in order to decrease the probability that respondents associate the experimental manipulations with the pre-experimental task. In the stock-out condition, two randomly chosen non-focal sizes (as mentioned in the pre-experimental survey) were made unavailable (crossed out), whereas in the limited quantity cue condition, focal sizes (as mentioned in the pre-experimental survey) received a textual message of 'only 2 items left'. In the ex post condition, the message was visible only on the item's page, after clicking on the item on the multiple items page while in the ex ante condition, unavailability was announced prior to clicking on the item, with the item marked with an explicit label on the multiple item page. The dependent variable (number of items 'bought' so added to the virtual shopping basket) was recorded throughout the shopping task. After exiting the online store, respondents got a survey to measure context-relevant consumer characteristics that were used as control variables.

## 4 Results of Simulated Shopping Experiment

461 Amazon MTurk users participated in the study in exchange for 1.5 dollars. As our simulated fashion store only offered a female-oriented assortment, we only have female participants. Participants were evenly distributed among experimental conditions (approximately 115 per group) and demographics (age, education, etc.).



## 4.1 Hypotheses Testing

In order to test our hypotheses, we employed an ANCOVA analysis on the number of items bought, using two factors (scarcity message type and disclosure time), followed by multiple pairwise comparisons (with Sidak adjustment). Due to space limitations, we only focus on the key findings and do not discuss the results of the covariates in detail, but when significant they are in the expected direction. The results for the factors of ANCOVA are as follows: scarcity message type ( $F = .984, p = .322$ ), disclosure time ( $F = .574, p = .449$ ), interaction ( $F = 4.588, p = .033$ ).

To test H1, we compared the scarcity message types (stock-out of non-focal sizes vs. limited quantity cue on the focal size) for the ex post announcement. Results indicate that, in the ex post condition, number of items bought is significantly lower for the stock-out of non-focal sizes than for the limited quantity cue on the focal size (1.763 vs. 2.100;  $p = .027$ ), confirming H1.

To test H2, we compared the marginal means of a stock-out of non-focal sizes across the two disclosure times. Results show that when respondents were confronted with stock-outs of non-focal sizes announced ex ante vs. ex post, they bought significantly more (2.076 vs. 1.763;  $p = .039$ ), which supports H2.

To test H3, we did the same as in H2 but now for the limited quantity cue. Results show no significant differences between the marginal means of a limited quantity cue announced ex ante vs. ex post (1.952 vs. 2.100;  $p = .337$ ). We therefore do not confirm H3a, nor H3b.

Combining the results of the tests of H2 and H3, we find that the impact of ex ante disclosure time is larger for a stock-out of non-focal sizes than for a limited quantity cue on the focal size. In line with our expectations in H4, this means that an ex ante disclosure is more (and in fact only) effective for the more 'subtle' scarcity message of the stock-out of non-focal sizes, where increasing attention and explicitness might be necessary.

We conducted an additional check to see whether the increase in performance of an ex ante announcement of the stock-out exceeds the limited quantity cue effect when announced ex post. No significant differences were found (2.076 vs. 2.100;  $p = .636$ ). So, stock-outs of the non-focal sizes can be as (but not more) effective as limited quantity cues on the focal size, if communicated ex ante.

## 4.2 Basket Analysis

In order to see which purchases in particular are driving the differences observed on the number of items bought in our main analysis, we conducted a posterior analysis of the basket composition. Results are presented in Table 1.

As for the higher number of items for limited quantity cue vs. stock-out when announced ex post (H1), results show that a limited quantity cue on the focal size is more effective in stimulating the purchase of non-manipulated items than a stock-out of non-focal sizes (1.52 vs. 1.22;  $p = .017$ ). This difference in effectiveness comes mainly from respondents buying more of the non-manipulated items that were indicated in the pre-experimental task (1.10 vs. .84;  $p = .006$ ). There are no significant differences between the two messages announced ex post for items not indicated in the

**Table 1.** Basket analysis

	Stock-out of non-focal sizes		Limited quantity cue on the focal size	
	Ex post	Ex ante	Ex post	Ex ante
<b>Manipulated items bought</b>	<b>.65<sup>a</sup></b>	<b>.76<sup>a, b</sup></b>	<b>.59<sup>b</sup></b>	<b>.65</b>
Items indicated in the pre-experimental task	.61	.68 <sup>a</sup>	.56 <sup>a</sup>	.59
Items not indicated in the pre-experimental task	.04 <sup>a, b</sup>	.08 <sup>a</sup>	.03	.06 <sup>b</sup>
<b>Non-manipulated items bought</b>	<b>1.22<sup>a</sup></b>	<b>1.30</b>	<b>1.52<sup>a</sup></b>	<b>1.31</b>
Items indicated in the pre-experimental task	.84 <sup>a</sup>	.89 <sup>b</sup>	1.10 <sup>a, b, c</sup>	.91 <sup>c</sup>
Items not indicated in the pre-experimental task	.37	.42	.43	.40

Note: Pairs marked with a similar superscript in a row are statistically different at the 10% level. Significance was tested using the same set of control variables as used in the hypotheses testing analysis.

pre-experimental task or for the manipulated items. This suggests that – for a limited quantity cue on the focal size disclosed ex post – there is a spill-over effect to non-cued items of preference.

Results also show that the ex ante (vs. ex post) announcement of the stock-out (H2) is particularly effective in convincing respondents to buy the ‘primed’ (manipulated) items (.76 vs. .65;  $p = .051$ ). The difference comes mainly from items manipulated but not indicated in the pre-experimental task (.08 vs. .04,  $p = .009$ ). Hence, increasing the salience of the stock-out message by communicating it ex ante made respondents buy cued items that would have not been considered otherwise.

## 5 Discussion, Managerial Implications, and Limitations

Previous research showed that limited quantity cues are an effective marketing tool (e.g. Aggarwal et al. 2011). We extend this finding by showing that limited quantity cues on focal size items are also more effective in triggering consumers to buy than stock-outs of non-focal sizes, when both messages are disclosed ex post (on the product page of an item). The disadvantages of limited quantity cues that were confirmed by our pre-experiment survey of the higher choice freedom limiting and lower authenticity are thus more than compensated by the positive effects that come via the higher directness and increased attention. What is more, this effect spills over to non-cued items in the store (items without a scarcity message), which could be explained by consumers inferring that the store’s default strategy is to keep a low inventory of all SKUs (especially of their focal size).

Results also show that a stock-out of non-focal sizes can be as effective (but not more effective) as a limited quantity cue on the focal size when announced ex ante. By more prominently flagging the message (adding a label), the attention that is drawn to the message as well as its explicitness increases, which seems to lead to an increase in the urge to act now (Yan et al. 2012). Results of the basket analysis reveal that this ex

ante communication makes consumers buy cued items that are not their ‘first choice’ in terms of preference.

An ex ante announcement does not have a similar positive effect for an already explicit message of the limited quantity cue on the focal size, where upfront communication may bring potential disadvantages of lower authenticity and higher choice freedom restrictions to the forefront.

Our findings can be useful for managers of sectors where it is worthwhile to underline the scarcity of products and where stock-outs can occur for non-focal items such as apparel, footwear, jewelry, books, etc. A summary of our recommendations for different scarcity messages is presented in Table 2.

**Table 2.** Managerial summary of advantages and disadvantages of scarcity messages.

	Stock-out non-focal sizes		Limited quantity cue focal size	
	Ex post	Ex ante	Ex post	Ex ante
Advantages	<ul style="list-style-type: none"> <li>– more authentic<sup>a</sup></li> <li>– perceived less as a limitation of choice freedom<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>– more authentic<sup>a</sup></li> <li>– perceived less as a limitation of choice freedom<sup>a</sup></li> <li>– more noticeable</li> <li>– ‘targets’ cued items better</li> </ul>	<ul style="list-style-type: none"> <li>– more salient<sup>b</sup></li> <li>– more noticeable<sup>b</sup></li> <li>– signals scarcity of whole assortment</li> <li>– encourages browsing in store</li> </ul>	<ul style="list-style-type: none"> <li>– more salient<sup>b</sup></li> <li>– more noticeable<sup>b</sup></li> <li>– signals scarcity of whole assortment</li> </ul>
Dis-advantages	<ul style="list-style-type: none"> <li>– less noticeable<sup>a</sup></li> <li>– less salient<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>– less effective in encouraging consumers to explore the store</li> </ul>	<ul style="list-style-type: none"> <li>– less authentic<sup>b</sup></li> <li>– perceived more as a limitation of choice freedom<sup>b</sup></li> </ul>	<ul style="list-style-type: none"> <li>– less authentic<sup>b</sup></li> <li>– perceived more as a limitation of choice freedom<sup>b</sup></li> <li>– discourages browsing in store</li> </ul>
Use (yes/no)	No	Yes	Yes	No

Note: <sup>a</sup>than/as limited quantity cue on the focal size; <sup>b</sup>than a stock-out of non-focal sizes.

Our research has certain limitations. First, the sample of our main online shopping experiment consisted only of females, which could limit the generalizability of our results. Second, in the pre-experimental task participants were asked to indicate three items, even though they might have considered more or less than three items in reality. Third, we did not measure variables that would allow us to examine the underlying process behind the measured effects. Fourth, our study focused only on certain types of scarcity messages that are most frequently used by fashion retailers. Future research could examine other types of scarcity messages (e.g. limited-time, limited-edition), as well as a limited quantity cue on a non-focal size. Fifth, we focused on the online fashion sector. It would be interesting to apply our investigation in other sectors.

## References

- Aggarwal, P., Jun, S.J., Huh, J.H.: Scarcity messages. *J. Advert.* **40**(3), 19–30 (2011)
- Breugelmans, E., Campo, K., Gijbrecchts, E.: Opportunities for active stock-out management in online stores: the impact of the stock-out policy on online stock-out reactions. *J. Retail.* **82**(3), 215–228 (2006)

- Campo, K., Gijsbrechts, E., Nisol, P.: Towards understanding consumer response to stock-outs. *J. Retail.* **76**(2), 219–242 (2000)
- Contalog. Inventory management techniques for retailers in apparel industry (2016). <https://www.contalog.com/blog/inventory-management-practices-in-apparel-industry>. Accessed 12th July 2019
- Fitzsimons, G., Lehmann, D.: Reactance to recommendations: when unsolicited advice yields contrary responses. *Market. Sci.* **23**(1), 82–94 (2004)
- Ge, X., Messinger, P.R., Li, J.: Influence of soldout products on consumer choice. *J. Retail.* **85**(3), 274–287 (2009)
- Huang, Y., Zhang, Y.C.: The out-of-stock (OOS) effect on choice shares of available options. *J. Retail.* **92**(1), 13–24 (2016)
- Lee, S., Oh, S., Jung, S.: The effects of scarcity appeal on product evaluation: consumers' cognitive resources and company reputation. *Soc. Behav. Pers. Int. J.* **42**(5), 743–756 (2014)
- Pizzi, G., Scarpi, D.: When out-of-stock products DO backfire: managing disclosure time and justification wording. *J. Retail.* **89**(3), 352–359 (2013)
- PwC. Total retail survey (2016). <https://www.pwc.es/es/publicaciones/retail-y-consumo/assets/total-retail-2016.pdf>. Accessed 17 July 2018
- Shocker, A., Ben-Akiva, M., Boccara, B., Nedungadi, P.: Consideration set influences on consumer decision-making and choice: issues, models, and suggestions. *Mark. Lett.* **2**(3), 181–197 (1991)
- Yan, R., Hyllegard, K.H., Blaesi, L.F.: Marketing eco-fashion: the influence of brand name and message explicitness. *J. Mark. Commun.* **18**(2), 151–168 (2012)



# Competition Between National Brands and Private Labels: Determinants of the Market Share of National Brands

Philipp Brüggemann, Rainer Olbrich<sup>(✉)</sup>, and Carsten D. Schultz<sup>(✉)</sup>

FernUniversität in Hagen, Hagen, Germany  
{philipp.brueggemann, lehrstuhl.marketing,  
carsten.schultz}@fernuni-hagen.de

**Abstract.** Against the background of increasing proliferation of private labels (PLs), the present study analyses determinants for the manufacturer brand industry to influence the market share of national brands (NBs). The analysis is based on 7,211,154 purchases by 98,326 households over a period of ten years. All purchases come from four product categories; chocolate, coffee, hair shampoo, and laundry detergent. The analysis distinguishes between discounter and non-discounter, which show significantly different results. The considered determinants are the prices of NBs and PLs, the shares of NB and PL price promotions, NB and PL variety, and brand preference. In particular, the changes in these determinants and in the market share are considered by calculating intertemporal differences. Increasing (decreasing) the price of NBs leads to a decreasing (increasing) market share of NBs. Extending the shares of NB (PL) price promotions has a positive (negative) influence on the market share of NBs. An increase in NB variety (increase in PL variety) slightly increases (decreases) the market share of NBs. Furthermore, the manufacturer brand industry can positively affect households' brand preferences to increase their market share in discount store settings.

**Keywords:** FMCG · Household panel data · Market share · National brand (NB) · Private label (PL) · Retailing

## 1 Introduction

The market share of national brands (NBs) has decreased over the past decades, in part due to the proliferation of private labels (PLs) (Olbrich et al. 2016; Olbrich and Grewe 2013; Hyman 2010). Cuneo et al. (2015) explicitly state that the development of PLs negatively impacts the market share of NBs in many countries. Consequently, the proliferation of PLs increases the competitive pressure and the need to develop strategies to withstand this competition, in particular considering the manufacturer brand industry (Cuneo et al. 2019; Kumar and Steenkamp 2007; Verhoef et al. 2002; Mills 1999; Quelch and Harding 1996). From the NB perspective, the question arises how to react to these competitive challenges and create corresponding strategies. The present study addresses this question by analyzing the determinants of the NBs' market share.

Some previous research has addressed the influence of determinants on market shares in retail. For example, Rubio and Yagüe (2009) examine determinants of PLs' market share and find that the price and the brand differentiation influence PLs' market share. In addition, the authors argue that intrinsic attributes affect consumers' purchase decisions. In a meta-analysis of PLs' determinants, Sethuraman and Gielens (2014) identify a strong negative effect of the number of NBs on the market share of PLs. Special offers, in contrast, only had a moderate effect. Focusing on the cannibalization of NBs by PLs, a central driver of PLs' market share development is the price differential between NBs and PLs (Fornari et al. 2016). While research addresses the determinants of PLs' market share, knowledge about the determinants of NBs is lacking. The present study integrates the effects of prices, special offers, brand variety, and brand preference on NBs' market share while considering the comparative differences between NBs and PLs. Furthermore, this study distinguishes between retail types and four product categories.

The aim of this study is to develop retail recommendations for strengthening the competitive position of the manufacturer brand industry. Whereas previous publications focus on PLs, we study determinants of the market share of NBs. Determinants of NBs' market shares are derived from the literature. The empirical analysis is based on household panel data over a period of ten years. The analysis includes four product categories; chocolate, coffee, hair shampoo, and laundry detergent, and distinguishes between two retail types; non-discounter and discounter.

## 2 Theoretical Background and Hypotheses Development

### 2.1 Product Prices of NBs and PLs

Both prices of NBs and PLs are relevant factors of market shares. Fornari et al. (2016) not only point out the importance of both prices but also of the corresponding price differential. Sethuraman and Gielens (2014) have identified a negative effect of the price differential between NBs and PLs on the market share of PLs. Price differentials, however, have the disadvantage that the cause can lie both, in the price of NBs and in the price of PLs. Thus, the present study does not calculate price differentials but considers both prices separately. Following Putsis (1997) and Pesendorfer (2002), an intertemporal dependence of the price is assumed. According to Cotterill and Putsis (2000), the relationship between NBs' price and their sales is negative (traditional demand function). However, an increase in PL prices positively affect the market share of NBs (Cotterill and Putsis 2000). Based on this, we assume that pricing of NBs and PLs affect the changes in market share of NBs. The following hypotheses are derived:

**H1a:** An increase (decrease) in the price of NBs leads to a decrease (increase) in the market share of NBs.

**H1b:** An increase (decrease) in the price of PLs leads to an increase (decrease) in the market share of NBs.

## 2.2 Shares of NB and PL Price Promotions

Blattberg et al. (1995) define ‘price promotions’ as temporary price reductions. These temporary price reductions can significantly increase sales in retail (Nijs et al. 2001). The effect of such special offers on sales is generally found to be short-term (Nijs et al. 2001; Srinivasan et al. 2004). As part of a meta-analysis, Sethuraman and Gielens (2014) examine the impact of special offers of NBs and PLs on the market share of PLs. The authors conclude that special offers of PLs exert a significantly positive effect on the market share of PLs. Similarly, special offers of NBs exert a significantly negative effect on the market share of PLs. An empirical investigation suggests that the share of special offers has a significant positive (negative) impact on the market share of NBs (PLs) (Olbrich et al. 2017). Accordingly, we consider the changes in shares of price promotions as a further determinant of NBs’ market share. In line with Sethuraman and Gielens (2014), we integrate both NBs’ and PLs’ shares of price promotions to derive the following two hypotheses:

**H2a:** An increase (decrease) in the share of NB price promotions leads to an increase (decrease) in the market share of NBs.

**H2b:** An increase (decrease) in the share of PL price promotions leads to a decrease (increase) in the market share of NBs.

## 2.3 NB and PL Variety

With an increasing number of NBs, the market share of PLs decreases (Raju et al. 1995). If the market share of PLs decreases, the market share of NBs must increase. Baker et al. (2006) analyse the branding behaviour in the Danish food industry with both absolute and intertemporal variables. Their “results indicate that future increases in firms’ sales’ share of retailers’ own-label brands are likely to be associated with reductions in the numbers of brands owned by processors” (NBs) (Baker et al. 2006, p. 45). Another indication of a connection between variety and market share is provided by Olbrich et al. (2009). They point out that the variety of articles and the sales of NBs decreased from 2000 to 2005, whereas the variety of articles and the sales of PLs increased. Following this line of thought, brand variety of NBs and PLs correlates with the market share of NBs. Accordingly, a decrease in the number of listed NBs reduces the market share of NBs. In line with these previous results, we assume that there is a positive (negative) connection between changes in brand variety of NBs (PLs) and changes in market share of NBs. Thus, hypotheses 3a and 3b are:

**H3a:** An increase (decrease) in NB variety leads to an increase (decrease) in the market share of NBs.

**H3b:** An increase (decrease) in PL variety leads to a decrease (increase) in the market share of NBs.

## 2.4 Brand Preference

Customers in retail regularly face buying decisions regarding either a NB or a PL. According to Rubio and Yagüe (2009, p. 514), “in mass consumer products, intrinsic attributes have considerable weight in the purchase choice”. One such attribute is consumers’ brand preference. Brand preference can be defined “as a behavioural tendency that reflects the consumer’s attitude towards a brand” (Ebrahim et al. 2016, p. 1232). Early results indicate a good fit between brand preference and the share of brand purchases (Banks 1950; Sriram et al. 2006). According to Padberg et al. (1967), consumers with a higher brand preference tend to buy NBs. Following this line of research, the present study considers brand preference as determinant. An increase in brand preference leads to an increase in market share of NBs, as consumers generally perceive NBs’ value as higher. Thus, consumers with a higher preference for branded goods buy more products from NBs. The following hypothesis is derived:

**H4:** An increase (decrease) in brand preference leads to an increase (decrease) in the market share of NBs.

## 3 Empirical Analysis

### 3.1 Data Collection and Operationalization

For the empirical analysis, we use German consumer panel data from 2006 to 2015. The purchase data is based on 98,326 households and consists of 7,211,154 records for the product categories chocolate, coffee, hair shampoo, and laundry detergent. As usual for panel data, not all households reported for the entire data period. This panel data set provides information on daily purchases from grocery retailers, including the number of purchased products, the price, the type of price (normal price or special offer price), the type of brand (NB or PL), and the company type (discounter or non-discounter). In addition, we use survey data to measure the brand preference of the households.

The raw data is aggregated into 522 weeks. For all variables, the change from the previous week is calculated. Following Putsis (1997) and Kelton and Weiss (1989), we consider the change from the previous period to derive recommendations on influencing the market share of NBs. The intertemporal change can be calculated for all weeks, except for the first week of the observation period. The empirical analysis thus uses 521 lines of weekly changes. For example, formula (1) describes the calculation of the rates of change of NBs’ market share:

$$\Delta \text{ market share of NBs} = \frac{\text{sales of NBs}_t}{\text{total sales}_t} - \frac{\text{sales of NBs}_{t-1}}{\text{total sales}_{t-1}} \quad (1)$$

The market share is measured based on the volume of the purchases. The change of NBs’ market share is calculated through the difference in market share between the current and the previous week. Accordingly, the changes in average product price, shares of price promotions, and average brand variety are calculated for NBs and PLs. The price



is standardized to 100 grams and adjusted for inflation.<sup>1</sup> The share of NB (PL) price promotions is calculated by the different NB (PL) price promotions in relation to all different NBs (PLs) purchased in one period. NB (PL) variety is represented by the quantity of different NBs (PLs) in one period. By calculation, shares of NB and PL price promotions are independent of one another. Brand preference is measured using a latent construct. This is based on a confirmatory factor analysis (CFA) consisting of three questions from the associated questionnaire: “Food from well-known brands is better than products with unknown names” (brand preference 1), “Branded articles are better than products with unknown names” (brand preference 2), “I have no real trust in foods without a brand name” (brand preference 3). The change in brand preference is determined in the same way. Please note that weekly changes are calculated based on the average number of active households in both weeks.

### 3.2 Research Model

The empirical analysis includes seven determinants affecting the market share of NBs. On the basis of the hypotheses, the price of NBs and PLs, the shares of NB and PL price promotions, NB and PL variety, and brand preference act as independent variables. The empirical analysis focuses the impact of these seven variables on the quantitative market share of NBs (dependent variable). The conceptual research design is shown in Fig. 1.

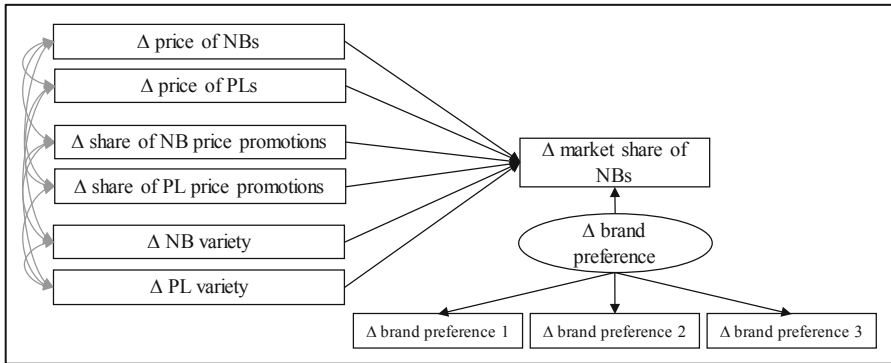


Fig. 1. Research model

First, the data was checked for normal distribution. We examined kurtosis and skewness of the variables following Cain et al. (2017). The univariate results indicate normally distributed variables, kurtosis < 7 and skewness < 2. With regard to multivariate kurtosis, some results indicate nonnormality according to Mardia (1970), as some product groups are significantly different from zero. Based on these results, robust maximum likelihood estimation is used for the covariance structural equation model. The empirical calculations are performed with Mplus 6.

<sup>1</sup> Inflation was adjusted based on the consumer price index (CPI) for Germany.

### 3.3 Results

The results of the CFA demonstrate a good measurement for the latent factor brand preference. All factor loadings are highly significant ( $p < .001$ ) and most of the loadings are above the threshold value of 0.7. Only four loadings of the item brand preference 2 are below this threshold; chocolate in discounters (.649), hair shampoo in discounters (.607), laundry detergent in non-discounters (.694), and laundry detergent in discounters (.698). We retain this item due to content consideration and it is above an acceptable value of 0.6. As the model includes only one latent construct, we can access a valid measurement model. We also find an overall acceptable to good model fit based on the typical goodness of fit measures (Hair et al. 2014). Table 1 reports these measures before Table 2 presents the results on the path coefficients and coefficients of determination.

**Table 1.** Model Fit

	Chocolate		Coffee		Hair shampoo		Laundry detergent	
	Non-discounter	Discounter	Non-discounter	Discounter	Non-discounter	Discounter	Non-discounter	Discounter
$\chi^2$	62.323	71.283	34.205	53.847	33.408	43.483	51.126	44.836
df	26	26	26	26	26	26	26	26
$\chi^2/df$	2.397	2.742	1.316	2.071	1.285	1.672	1.966	1.724
TLI	0.959	0.922	0.991	0.971	0.989	0.976	0.966	0.972
CFI	0.965	0.932	0.992	0.975	0.990	0.979	0.971	0.976
RMSEA	0.052	0.058	0.025	0.045	0.023	0.036	0.043	0.037
SRMR	0.043	0.043	0.026	0.047	0.027	0.038	0.036	0.035

**Table 2.** Empirical results for the research model

	Chocolate		Coffee		Hair shampoo		Laundry detergent	
	Non-discounter	Discounter	Non-discounter	Discounter	Non-discounter	Discounter	Non-discounter	Discounter
weeks	521	521	521	521	521	521	521	521
R <sup>2</sup>	.155	.146	.041	.212	.208	.202	.110	.162
Standardized estimate (estimate)								
Price of NBs	-.026 (-.016)	<b>-.201***</b> ( <b>-.878</b> )	<b>-.081*</b> ( <b>-.041</b> )	-.066 (-.119)	<b>-.179***</b> ( <b>-.160</b> )	<b>-.241***</b> ( <b>-.605</b> )	<b>-.169***</b> ( <b>-.473</b> )	<b>-.100*</b> ( <b>-.820</b> )
Price of PLs	.067 (.025)	.034 (.407)	.080 (.054)	<b>.112**</b> ( <b>.380</b> )	.039 (.052)	.021 (.101)	<b>.170*** (.851)</b>	.043 (1.117)
Share of NB price promotions	<b>.156** (.150)</b>	<b>.184*** (.508)</b>	<b>.086* (.089)</b>	<b>.204*** (.558)</b>	<b>.289*** (.233)</b>	<b>.242*** (.382)</b>	.049 (.034)	.070 (.147)
Share of PL price promotions	<b>-.148*** (-.047)</b>	-.015 (-.052)	-.057 (-.024)	-.026 (-.071)	<b>-.145*</b> ( <b>-.078</b> )	<b>-.126** (-.355)</b>	<b>-.121* (-.044)</b>	<b>-.138** (-.415)</b>
NB variety	.076 (.000)	.004 (.000)	.073 (.001)	<b>.092*</b> ( <b>.005</b> )	-.035 (.000)	-.002 (.000)	.058 (.001)	<b>.130** (.012)</b>
PL variety	-.067 (-.001)	.046 (.003)	<b>-.096*</b> ( <b>-.001</b> )	.032 (.002)	<b>-.178*** (-.005)</b>	-.029 (-.002)	<b>-.122** (-.003)</b>	-.058 (-.008)
Brand preference	<b>-.316*** (-.271)</b>	<b>.211*** (1.47)</b>	.041 (.037)	<b>.379*** (1.733)</b>	.021 (.017)	<b>.184*** (.449)</b>	<b>.090* (.051)</b>	<b>.317*** (.983)</b>

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

An intertemporal price increase of NBs leads to a corresponding increase in the market share of NBs for hair shampoo and laundry detergent in discounters and non-discounters. In addition, there are differences between discounters and non-discounters for chocolate and for coffee. For chocolate, the price of NBs has a significant influence on the market share of NBs only in discounter settings. For coffee, the relationship shows a weak but significant result for non-discounters. Regarding the price of PLs, a significant negative impact on the change in market share of NBs can be found in the product groups coffee for discounters and laundry detergent for non-discounters. Therefore, hypothesis 1a is partly supported. Hypothesis 1b is only supported for coffee in discounters and for laundry detergent in non-discounters.

Adjusting the share of NB price promotions only shows insignificant correlations for laundry detergent. For all other product categories, there is a positive significant correlation, both for discounters and for non-discounters. The adjustment of the share of PL price promotions shows significant negative correlations to the change in market share of NBs for hair shampoo and laundry detergent. For chocolate, this relationship is only confirmed for non-discounters. For coffee, modifying the share of NB price promotions does not appear to have a significant impact on the change in market share of NBs. In view of these results, hypotheses 2a and 2b are partly supported.

The adjustment of NB variety only has a significantly positive influence on the market share of NBs for coffee and for chocolate in discounters. However, an increase in PL variety for coffee, hair shampoo, and laundry detergent has a negative impact on the corresponding change in market share of NBs in non-discounters. Based on these results, hypothesis 3a is partly supported. Hypothesis 3b is partly supported for non-discounters.

Regarding brand preference, the results indicate a positive influence on the change in market share of NBs for all product categories in the case of discounters. For non-discounters, the correlation is weak but significant for laundry detergent. Furthermore, the results show a negative connection between the change in brand preference and the change in market share of NBs for chocolate in non-discounters. Hypothesis 4 is supported for all product categories in discounter types.

## 4 Discussion

In contrast to the change in price of PLs, the change in price of NBs has a predominantly significant negative influence on the change of NBs' market share. This is a reasonable result due to the tendency towards higher prices for NBs. By reducing their price (e.g., as part of special offers), the price differential to PLs can be reduced and consumers will increasingly choose NBs. In addition, the results show differences between the product groups and between non-discounter and discounter. The change in price of NBs for chocolate and laundry detergent in discounters, thus, appears to have greater impact on the market share of NBs than for the other product groups. Regarding the results for the price change of PLs, the actionable price range may be lower due to the tendency of a lower price level in comparison to NBs. This would result in PLs reducing their prices less often and less drastically which potentially explains the mainly insignificant results of the price of PLs. However, the change in price of PLs for coffee in discounters and laundry detergent in non-discounters has a significant negative impact on the market

share of NBs. This result indicates a high degree of product substitutability and price sensitivity of consumers as well as a strong presence of private labels. The comparison between discounters and non-discounters also reveals that the change in price of NBs in discounters has a much stronger effect on the change in market share of NBs than in the non-discounter settings. Although this study shows an effect of the price of NBs on the market share of NBs, this is subject to competition policy restrictions. For example, the manufacturer brand industry is not allowed to fix prices in agreement with retailers (Olbrich and Buhr 2005). The price of NBs can, thus, only be influenced indirectly by the manufacturer brand industry through the selling price to the retailer.

Similar to the price effect, a change in shares of NB and PL price promotions shows differences between non-discounter and discounter. Comparing the (not standardized) estimates, the effect of change in share of NB price promotions for all four product categories in discount stores is stronger than the influence in the non-discounter group. The manufacturer brand industry should consequently pay special attention to the share of NB price promotions in discounter retailing. However, an increase in share of PL price promotions in discounters has a partly significant (negative) effect on the market share of NBs, which is also higher than for non-discounters. Comparing the shares of NB and PL price promotions, there is a risk that, for example, the effect of a targeted expansion of the share of NB price promotions can be weakened or even eliminated by an expansion of the share of PL price promotions. With regard to the manufacturer brand industry, cooperative agreements with retailers could be a way to indirectly influence the shares of NB and PL price promotions.

The change in NB variety is surprisingly insignificant in nearly all product categories. Only for coffee and laundry detergent, there is a significant but weak influence of NB variety on the market share of NBs. Thus, the empirical results show a comparatively weak effect of NB variety on NBs market share. One reason could be that the fluctuation of listed NBs is low. In addition, NB and PL variety is restricted by the limited shelf space. From the perspective of the manufacturer brand industry, both low brand fluctuation and limited shelf space limit the possibilities for influencing NB variety. The change in PL variety tends to have a weak negative impact on the change in market share of NBs for non-discounters. In the discounter group, the change in PL variety shows only a minor effect on the change in market share of NBs. Based on these results, an expansion of NB variety needs to be carefully considered for the product categories examined. The expansion of PL variety damages the market share of NBs in non-discounter retailing but the influence of the manufacturer brand industry is also very limited here.

An extension in brand preference has a positive effect on the market share of NBs in the case of discounters. The manufacturer brand industry can increase brand preference, for example, with the help of marketing communication strategies. Thus, a demand-pull could provide the manufacturer brand industry with an improved negotiating position towards the retailers. Interestingly, this variable does not affect the market share of NBs in non-discounter retailing. Accordingly, brand-savvy customers do not buy more NBs in non-discounters. Here, the manufacturer brand industry's efforts to influence the market share should be examined with regard to their effect and if necessary revised. According to this, advertising activities may not sufficiently increase brand preference and, thus, the market share of NBs in non-discount retailing. Therefore, other determinants such as

the price of NBs or the share of NB price promotions can be more effective to increase the market share. For chocolate, an extension of brand preference even has a negative impact on the market share of NBs. One reason for this result could be that, even though customers generally have a high brand preference, the price overrides this affinity in the case of chocolate. This could lead to customers resorting to the PL in spite of their basic brand preference. This is an opportunity for the manufacturer brand industry to communicate the advantages of the NBs. An explanation is that customers are unaware of buying PLs. In this case, the manufacturer brand industry should clearly communicate differences between its NBs and the PLs.

## 5 Implications, Limitations and Further Research

Regarding the manufacturer brand industry, the market share of NBs can be affected by the analysed determinants. There are, however, certain obstacles, such as the prohibition of resale price maintenance. The manufacturer brand industry can choose several approaches to overcoming these obstacles. The manufacturer brand industry may, e.g., exert indirect influence on retailers by expanding the degree of cooperation. Another possibility can be direct retailing. Here, trading via own online shops could avoid the dependency on retail and the direct competitive situation with PLs. To ensure customer loyalty in the online shop, the attractiveness of direct retailing for the consumer could be increased by individualising brand products with consumer preferences, for example names. Cooperation with other manufacturers of NBs and the establishment of an online shop for high-quality NBs is another option. Coupons or cashback campaigns initiated by the manufacturer, i.e. via own apps, could also have a positive influence on the manufacturer's competitive situation. By discounting through cashback campaigns or coupons, the manufacturer can indirectly influence the perceived product price or the price-quantity ratio.

The presented results contribute to theory by identifying determinants of the market share of NBs that need to be considered in a differentiated way. The shares of NB and PL price promotions must be considered with respect to the category group. This is due to the different frequency and effectiveness of NB and PL price promotions. In contrast to NB variety, PL variety affects the market share of NBs, especially in non-discount retailing. In non-discount retailing, high NB variety seems to be expected by the consumers. A change in NB variety thus showed no effect on the market share of NBs. In contrast, expanding the PL variety may lead to a conscious or subconscious consumer purchase decision for PLs, thus, reducing the market share of NBs. A change in brand variety primarily affects the market share of NBs in discounters. In non-discounter retailing, brand preference is high in most cases. An increase in brand preference, thus, cannot increase the market share of NBs. In contrast, an increase in brand preference leads to an increase in the market share of NBs in the case of discounters. Here, consumer brand preference tends to be lower and, therefore, an increase in brand preference has a potentially stronger leverage effect on the market share of NBs.

With regard to limitations, the independent variables are averaged on a weekly basis. Naturally, aggregation reduces variances in the data and, thus, the amount of information. The time scope and aggregation can, thus, average out some interesting results – an

avenue for further research. Furthermore, the relationship between the market shares of NBs and the market share of retailers is not part of this study. Supposedly, from the retailer perspective, increasing the market share of NBs is particularly attractive if it increases the market share of the retailer. In turn, the manufacturer brand industry can use this as an argument as the market share of NBs positively affects the retailer's market share.

As already mentioned, future research may also analyse the determinants of the market share of NBs at the retailer level. The market share of retailers could be an additional dependent variable to reveal the retailers' benefits of increasing the market share of NBs. Thus, further research may investigate the effect of NBs market share on the market share of the retailer brand. Of course, other determinants such as socio-demographic influences, geographical differences, and macroeconomic indicators can further augment the explanatory power as this study focused on actionable determinants. In addition, further research could analyse the impact of different types of brands, studying, for example, different price segments. The present study also considered the exact product prices. However, consumers may act differently on perceived price ranges.

## References

- Baker, D., Baltzer, K., Møller, A.S.: Branding behavior in the danish food industry. *Agribus. Int. J.* **22**(1), 31–49 (2006)
- Banks, S.: The relationships between preference and purchase of brands. *J. Mark.* **15**(2), 145–157 (1950)
- Blattberg, R.C., Briesch, R., Fox, E.J.: How promotions work. *Mark. Sci.* **14**(3), G122–G132 (1995)
- Cain, M.K., Zhang, Z., Yuan, K.H.: Univariate and multivariate skewness and kurtosis for measuring nonnormality: prevalence, influence and estimation. *Behav. Res. Methods* **49**(5), 1716–1735 (2017)
- Cotterill, R.W., Putsis, W.P.: Market share and price setting behavior for private labels and national brands. *Rev. Ind. Organ.* **17**(1), 17–39 (2000)
- Cuneo, A., Milberg, S.J., del Carmen Alarcon-del-Amo, M., Lopez-Belbeze, P.: Private label and manufacturer brand choice in a new competitive reality: strategic directions and the future of brands. *Eur. Manag. J.* **37**(1), 117–128 (2019)
- Cuneo, A., Milberg, S.J., Benavente, J.M., Palacios-Fenech, J.: The growth of private label brands: a worldwide phenomenon? *J. Int. Mark.* **23**(1), 72–79 (2015)
- Ebrahim, R., Ghoneim, A., Irani, Z., Fan, Y.: A brand preference and repurchase intention model: the role of consumer experience. *J. Mark. Manag.* **32**(13–14), 1230–1259 (2016)
- Fornari, D., Fornari, E., Grandi, S., Menegatti, M.: Leading national brands facing store brands competition: Is price competitiveness the only thing that matters? *J. Retail. Consum. Serv.* **30**, 234–241 (2016)
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., Tatham, R.L.: *Multivariate Data Analysis*. Prentice Hall, Upper Saddle River (2014)
- Hyman, M.R., Kopf, D.A., Lee, D.: Review of literature – future research suggestions: private label brands: benefits, success factors and future research. *J. Brand Manag.* **17**(5), 368–389 (2010)
- Kelton, C., Weiss, L.: Change in concentration, change in cost, change in demand, and change in price. *Conc. Price* **4** (1989)
- Kumar, N., Steenkamp, J.B.E.: Brand versus brand. *Int. Commer. Rev. ECR J.* **7**(1), 46–53 (2007)

- Mardia, K.V.: Measures of multivariate skewness and kurtosis with applications. *Biometrika* **57**(3), 519–530 (1970)
- Mills, D.E.: Private labels and manufacturer counterstrategies. *Eur. Rev. Agric. Econ.* **26**(2), 125–145 (1999)
- Nijs, V.R., Dekimpe, M.G., Steenkamps, J.B.E., Hanssens, D.M.: The category-demand effects of price promotions. *Mark. Sci.* **20**(1), 1–22 (2001)
- Olbrich, R., Buhr, C.-C.: Who benefits from the prohibition of resale price maintenance in European competition law? – the case of food retailing. *Eur. Compet. Law Rev.* **26**(12), 705–713 (2005)
- Olbrich, R., Grewe, G.: Proliferation of private labels in the groceries sector: the impact on category performance. *J. Retail. Consum. Serv.* **20**(2), 147–153 (2013)
- Olbrich, R., Grewe, G., Orenstrat, R.: Private labels, product variety, and price competition – lessons from the German grocery sector. In: Ezrachi, A., Bernitz, U. (eds.) *Private Labels, Brands and Competition Policy*, pp. 235–257. Oxford University Press, Oxford (2009)
- Olbrich, R., Hundt, M., Jansen, H.C.: Proliferation of private labels in food retailing: a literature overview. *Int. J. Mark. Stud.* **8**(8), 63–76 (2016)
- Olbrich, R., Jansen, H.C., Hundt, M.: Effects of pricing strategies and product quality on private label and national brand performance. *J. Retail. Consum. Serv.* **34**, 294–301 (2017)
- Padberg, D.I., Walker, F.E., Kepner, K.W.: Measuring consumer brand preference. *J. Farm Econ.* **49**(3), 723–733 (1967)
- Pesendorfer, M.: Retail sales: a study of pricing behavior in supermarkets. *J. Bus.* **75**(1), 33–66 (2002)
- Putsis, W.P.: An empirical study of the effect of brand proliferation on private label – national brand pricing behavior. *Rev. Ind. Organ.* **12**(3), 355–371 (1997)
- Quelch, J., Harding, D.: Brands versus private labels: fighting to win. *Harv. Bus. Rev.* **74**(1), 99–109 (1996)
- Raju, J.S., Sethuraman, R., Dhar, S.K.: The introduction and performance of store brands. *Manag. Sci.* **41**(6), 957–978 (1995)
- Rubio, N., Yagüe, M.J.: The determinants of store brand market share – a temporal and cross-sectional analysis. *Int. J. Mark. Res.* **51**(4), 1–15 (2009)
- Sethuraman, R., Gielens, K.: Determinants of store brand share. *J. Retail.* **90**(2), 141–153 (2014)
- Srinivasan, S., Pauwels, K., Hanssens, D.M., Dekimpe, M.G.: Do promotions benefit manufacturers, retailers, or both? *Manag. Sci.* **50**(5), 617–629 (2004)
- Sriram, S., Chintagunta, P.K., Neelamegham, R.: Effects of brand preference, product attributes, and marketing mix variables in technology product markets. *Mark. Sci.* **25**(5), 440–456 (2006)
- Verhoef, P.C., Nijssen, E.J., Sloot, L.M.: Strategic reactions of national brand manufacturers towards private labels: an empirical study in The Netherlands. *Eur. J. Mark.* **36**(11/12), 1309–1326 (2002)



# Markdown Optimization in Apparel Retail Sector

Sevde Ceren Yıldız<sup>1</sup>(✉) and Mustafa Hekimoğlu<sup>2</sup>

<sup>1</sup> Department of Industrial Engineering, Doğuş University, Istanbul, Turkey  
syildiz@dogus.edu.tr

<sup>2</sup> Department of Industrial Engineering, Kadir Has University, Istanbul, Turkey  
mustafa.hekimoglu@khas.edu.tr

**Abstract.** Price discounts, known as markdowns, are important for fast fashion retailers to utilize inventory in a distribution channel using demand management. Estimating future demand for a given discount level requires the evaluation of historical sales data. In this evaluation recent observations might be more important than the older ones as majority of price discounts take place at the end of a selling season and that time period provides more accurate estimations. In this study, we consider a weighted least squares method for the parameter estimation of an empirical demand model used in a markdown optimization system. We suggest a heuristic procedure for the implementation of weighted least squares in a markdown optimization utilizing a generic weight function from the literature. We tested the suggested system using empirical data from a Turkish apparel retailer. Our results indicate that the weighted least squares method is more proper than the ordinary least squares for the fast fashion sales data as it captures price sensitivity of demand at the end of a selling season more accurately .

**Keywords:** Markdown optimization · Demand forecasting · Weighted least squares · Approximate dynamic programming

## 1 Introduction

Fast fashion is a steadily growing sector that have impacts all over the world. The leading companies of fast fashion, e.g. Zara, H&M, and Mango etc., change their apparel collections in a short time period. Due to unpredictable nature of products in the fashion industry, demand and supply mismatches frequently occur and dynamic pricing is frequently used by retailers to control demand for products. Dynamic pricing aims to maximize revenue or profit of retailers while reducing remaining amount of products at the end of a selling season.

Price management is a significant research topic since last decades. Bitran and Caldentey (2003) and Elmaghraby and Keskinocak (2003) provides general overview about this study area. Gallego and Van Ryzin (1994) consider a single product on a continuous time period with Poison demand and they aim to determine the optimal prices of the product. Feng and Gallego (1995) constructed a Markov process depending on



a stochastic demand model to determine optimal time and duration of one-time markdown in a selling season. Smith and Achabal (1998) used a deterministic demand model to study markdown optimization in order to determine the optimal price and inventory level. Talluri and Van Ryzin (2006) provides an in-depth overview of demand models for multiple products which are widely used in price optimization. Ferreira et al. (2015) use machine learning approaches to estimate lost sales and predict future demand for multiproduct price optimization. Caro and Gallien (2012) use logarithmic regression for customer demand and developed markdown optimization model for a fast-fashion retailer, Zara.

In this study, weighted least squares method (WLS) is considered is to estimate parameters of several demand models to predict the customer demand. The motivation behind considering weighted least squares is that price sensitivity of product demand changes over time in a selling season and it might be beneficial to give more importance to some parts of the selling season rather than treating all sales instances equally. To test this idea, we obtain dataset from a famous fast fashion company in Turkey and build a demand model that is utilized in a dynamic markdown optimization system. The optimization algorithm sets discount levels of each product using an approximate dynamic programming approach, known as certainty equivalent, to maximize total revenue at the end of a selling season. To the best of our knowledge, this is the first study considering weighted least squares approach in a markdown optimization problem, which is the main contribution of our study.

## 2 Demand Prediction Model

In order to predict the customer demand, a dataset is obtained from a store of a well-known apparel retailer. The obtained dataset includes sales quantities of products with date of sales and information about products such as identity number, collection, selling year, selling season, gender, sales price, list price etc. The products in the dataset had sold between 2011 and 2015. There are 2750 products in total.

Within the whole dataset, ten products are chosen randomly from the dataset for the sample dataset in order to prove the effectiveness of the weighted least squares. The reason for making the sample dataset is because this study is not a full-scale application. We just want to make an application of weighted least squares method whether this method more proper than others for demand estimation for this study. Chosen products are basic products from different collections, but each product has a different aspect in order to represent the whole dataset such as belonging to different collections, different season, different gender etc. Selected products have various selling years among each other, i.e. product 1 is sold for 4 years, product 2 is sold for 2 years etc. In total, the sample dataset includes 856 rows and 6 variables.

### 2.1 Multiple Nonlinear Regression Model with Weighted Least Squares Method

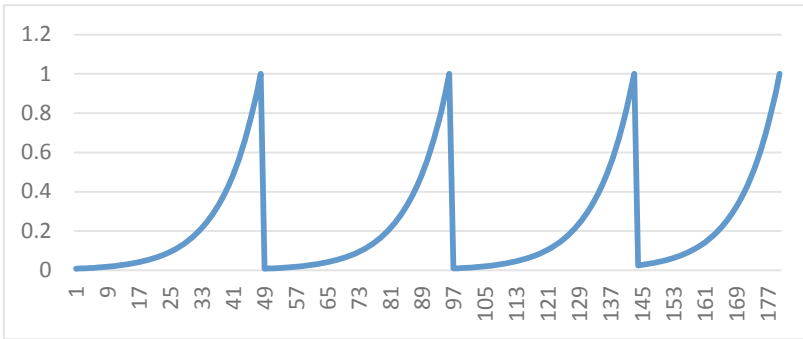
In order to estimate customer demand, we use multiple nonlinear regression with weighted least squares method as a regression model by using the sample dataset. The nonlinear regression is conducted by taking the squares root of the dependent variable.

The advantage of this transformation method is to reduce variance among sales quantity data that used to estimate dependent variable as customer demand. Because, like fashion sector, it can be a large difference among sales quantity from the beginning to end of the season. Customers generally are not willing to buy a product when it is first released to the market. At the beginning of the season sales are very low but, at the end of the season, sales are very high. This may cause the fluctuation of the variance in sales quantity data. For this reason, this nonlinear regression model is more relevant than other models.

In addition to the regression equation, the weighted least squares estimation method is applied. The reason for choosing this method is to lay emphasis on the end of the season of the fashion sector. The increasing rank of weights is given to end of the season rather than at the beginning of the season for markdown prices, due to the fact that markdowns are usually implemented at the end of the season. Weight's formula is from forecasting literature (Smith et al. 1994). Formula is given as follows.

$$w = ((1 - \alpha)^{(t-t_c)})^2 \tag{1}$$

where  $t$  is the total sales weeks,  $t_c$  is the current sales week. The  $\alpha$  value is selected as 0.1. Graphical representation of the weight is given in Fig. 1.



**Fig. 1.** Graphical representation of the weight of Product 1.

Figure 1 represents the weight of the product 1 from the sample data for four selling years. As can be shown in Fig. 1, at the end of each selling year are emphasized by giving higher value.

The multiple nonlinear regression with weighted least squares equation is given as below.

$$\sqrt{D_{t,p}} = \beta_0 + \beta_1 t + \beta_2 m_t + \beta_3 y + \beta_4 I_t + \beta_5 pno + \beta_6 D_{t-1} + \beta_7 (t - t^*)^2 + \beta_8 EndofSeasonEffect, weight \tag{2}$$

where  $\beta_0$  is the constant,  $\beta_i, i \in \{1, 2, \dots, I\}$  are the regression coefficient,  $\varepsilon$  is the error term and the explanatory variables are selling weeks ( $t$ ), markdown ( $m_t$ ), selling year ( $y$ ), inventory ( $I_t$ ), product number ( $pno$ ), previous week sales ( $D_{t-1}$ ),  $(t - t^*)^2$  where  $t^*$  is the current week and categorical variable ( $EndofSeasonEffect$ ). The variables, selling weeks, selling year and product number are directly come from the

dataset. Markdown is calculated by dividing list price by sales price. List price and sales price are from the dataset. Initial inventory is assumed as a total amount of sales at the beginning. *EndofSeasonEffect* is a categorical variable which is 1 if the product p is sold more than 30 weeks, 0 otherwise.

### 2.2 Results of the Regression Model

The regression coefficients of weighted least squares regression model given in Table 1.

**Table 1.** Regression Coefficients

Coefficient	Estimate	Standard Error	t value	Pr(>  t )
$\beta_0$	1.7841861	0.4207196	4.241	2.58e-05
$\beta_1$	0.0427548	0.0102747	4.161	3.63e-05
$\beta_2$	-0.8325065	0.3562872	-2.337	0.01979
$\beta_3$	0.1712724	0.0572424	2.992	0.00288
$\beta_4$	1.6200338	0.2989813	5.419	8.71e-08
$\beta_5$	-0.0093466	0.0160728	-0.582	0.56111
$\beta_6$	0.0678460	0.0028210	24.050	< 2e-16
$\beta_7$	-0.0037318	0.0007722	-4.832	1.72e-06
$\beta_8$	-0.0274241	0.1750877	-0.157	0.87559

Table 1 shows the regression coefficients of the weighted least squares model. As we expected markdown coefficient ( $\beta_2$ ) is negative. It decreases over time. In other words, discount is applied through the end of the selling season.

The results of weighted least squares regression model given in Table 2.

**Table 2.** Regression results

Multiple R-squared	Adjusted R-squared	F-statistic	P-value
0.6258	0.6208	125.4	2.2e-16

According to Table 2 result of weighted least squares model is significant in terms of multiple R-squared, Adjusted R-squared, F-statistic and P-value. Hence, model has good fit (Hair et al. 2006).

### 3 Markdown Optimization Problem

In recent years, markdown optimization becomes important for fashion retailers. Fashion sector grows increasingly. Therefore, there is a big competition between retailers.

Hereby, markdown plan plays a significant role for any retailer in order to handle tough competition in the market. Markdown plan is an application of discount at a specific time period during selling season. Discounts should be non-decreasing. It cannot be less than previous time period that applied any discount. The well implemented markdown optimization plan provides many advantages to retailers such as increasing sales, inventory control, improving total revenue etc. Consequently, the aim of the markdown optimization is to provide benefit to retailers.

In this section, we represent the development and the formulation of a markdown optimization problem. We implemented the markdown optimization model to a store of the apparel retailer for revenue maximization considering inventory goals.

### 3.1 Mathematical Model Development

An optimization model is developed to determine optimal markdown levels by maximizing the revenue of the retailer. Mathematical model as markdown optimization is given as below.

$$Max \sum_{t=T} \sum_{p=P} m_{t,p} S_{t,p} - \sum_{p=P} I_{T,p} h \quad (3)$$

*Subjecto*

$$\sqrt{D_{t,p}} = \beta_0 + \beta_1 t + \beta_2 m_{t,p} + \beta_3 y + \beta_4 I_{t,p} + \beta_5 pno + \beta_6 D_{t-1,p} + \beta_7 (t - t^*)^2 + \beta_8 EndofSeasonEffect, weight$$

$$\forall t = 0, 1, \dots, 37 \forall p = 0, 1, \dots, 10 \quad (4)$$

$$I_{t,p} = I_{t-1,p} + S_{t,p} \quad \forall t = 0, 1, \dots, 37 \quad \forall p = 0, 1, \dots, 10 \quad (5)$$

$$m_{t,p} = m_{t-1,p} \quad \forall t = 0, 1, \dots, 37 \quad \forall p = 0, 1, \dots, 10 \quad (6)$$

$$S_{t,p} \leq D_{t,p} \quad \forall t = 0, 1, \dots, 37 \quad \forall p = 0, 1, \dots, 10 \quad (7)$$

$$m_{t,p}, I_{t,p}, D_{t,p}, S_{t,p} \geq 0 \quad (8)$$

Objective function (3) maximizes total revenue of a store of the apparel retail company where  $m_{t,p}$  represents the markdowns as decision variable for all weeks  $t$  and all products  $p$ ,  $S_{t,p}$  represents sales of all products  $p$  for all weeks  $t$  as decision variable. It shows that remaining inventory level at last week as parameter and  $h$  is the holding cost as parameter. Constraint 4 is the demand equation,  $D_{t,p}$ , which is conducted as weighted least squares estimation method where regression coefficients and independent variables in regression equation are parameters. Constraint 5 represents the definition of inventory, where  $I_{t,p}$  inventory level for all weeks  $t$  and all products  $p$ . Constraint 6 ensures that previous week markdown level cannot be smaller than current week markdown level. Constraint 7 ensures that sales,  $S_{t,p}$ , have to be equal or less than demand,  $D_{t,p}$ . Constraint 8 shows that all decision variables should be equal or greater than zero.

### 3.2 Solution Approach

The markdown optimization model is a dynamic problem. As demand changes in every week and inventory level should be updated according to demand. For this reason, the solution approach of markdown pricing requires a dynamic programming model which suffers from curse of dimensionality (Talluri and Van Ryzin 2006). In this study, we developed an approximate dynamic programming approach for all products in the sample dataset by updating inventory in every week according to predicted customer demand.

The mathematical model is run for 37 weeks with updating inventory levels for each product on weekly basis by predicted demand and random residuals, and initial inventory level is assumed 1000. Normally the initial inventory should be calculated for each product, but it is beyond scope for this study. So, the initial inventory assumed as 1000 which is the value of average sales quantity of the products in the sample dataset. Also, number of weeks is selected as 37 because it is the value of the longest duration of product sales in the sample dataset.

### 3.3 Simulation Study

Mathematical model is simulated by running 37 week of time interval 100 times with random residuals. In every run, residuals change. Residuals follow a normal distribution. In this study residuals are generated by a normal distribution with mean value 0.0721 and standard deviation value 1.2617. These values of mean and standard deviation are calculated by residuals of the demand function. Since the residuals are random and inventory of a week depends on predicted demand and random residuals, markdown predictions of distinct runs differ. Markdown levels and inventory levels are calculated for each run. Figure 2 and 3 shows markdown and inventory levels of average of 100 runs respectively.

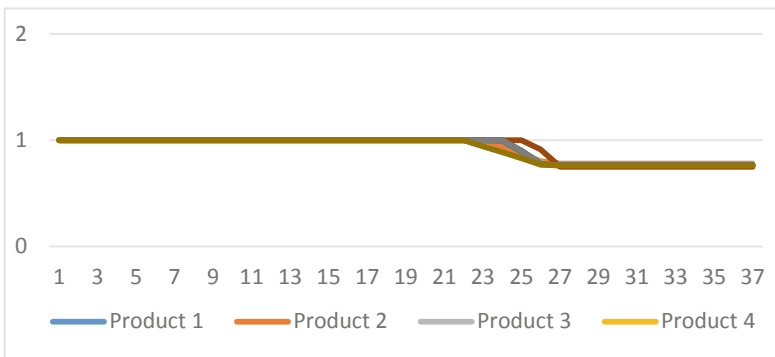
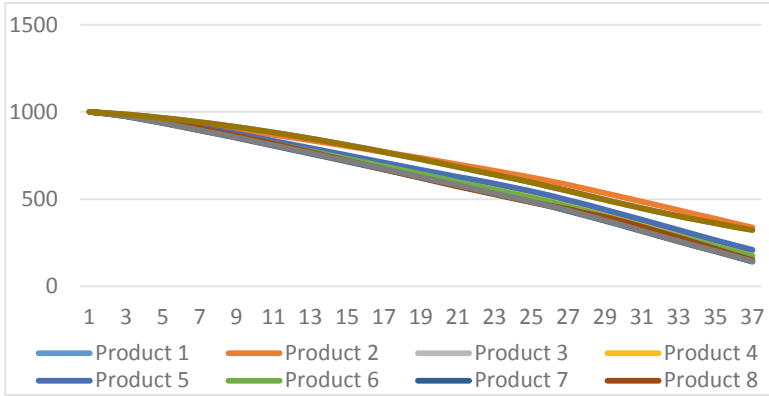


Fig. 2. Markdown level of selected products

Figure 2 shows markdown level of products in the sample dataset as a result of the optimization model.



**Fig. 3.** Inventory level of selected products

Figure 3 shows the inventory level of products in the sample dataset as a result of the optimization model.

## 4 Conclusion

Markdown optimization is important for fast fashion retailers to maximize their profit using effective demand management, which is crucial to handle tough competition in the retail market. Dynamic application of markdowns allows retailers to increase sales and reduce the cost of handling and transportation cost of unsold products.

In this study, we consider weighted least squares method for parameter estimation of demand models that are utilized in a dynamic markdown optimization system. As an application of the system, we obtained the dataset from a well-known Turkish fast fashion company. In our application, we devise a weight family assigning larger weights to the sales at the end of the selling season. This application is motivated by the fact that majority of markdown sales occur at the end of a selling season.

Using the markdown optimization system, we conduct an empirical study with ordinary least squares method and compare different weights in our another study. For further technical details, we refer Yıldız (2018). Our results indicate that weighted least squares method is more proper than ordinary least squares which is often considered in markdown optimization applications. To the best of our knowledge ours is the first study considering weighted least squares for markdown optimization which signifies a great application potential.

## References

- Bitran, G., Caldentey, R.: An overview of pricing models for revenue management. *Manufact. Serv. Oper. Manag.* **5**(3), 203–229 (2003)
- Caro, F., Gallien, J.: Clearance pricing optimization for a fast-fashion retailer. *Oper. Res.* **60**(6), 1404–1422 (2012)

- Elmaghraby, W., Keskinocak, P.: Dynamic pricing in the presence of inventory considerations: research overview, current practices, and future directions. *Manag. Sci.* **49**(10), 1287–1309 (2003)
- Feng, Y., Gallego, G.: Optimal starting times for end-of-season sales and optimal stopping times for promotional fares. *Manag. Sci.* **41**(8), 1371–1391 (1995)
- Ferreira, K.J., Lee, B.H., Simchi-Levi, D.: Analytics for an online retailer: demand forecasting and price optimization. *Manufact. Serv. Oper. Manag.* **18**(1), 69–88 (2015)
- Gallego, G., Van Ryzin, G.: Optimal dynamic pricing of inventories with stochastic demand over finite horizons. *Manag. Sci.* **40**(8), 999–1020 (1994)
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., Tatham, R.L.: *Multivariate Data Analysis*. Pearson, Upper Saddle River (2006)
- Smith, S.A., Achabal, D.D.: Clearance pricing and inventory policies for retail chains. *Manag. Sci.* **44**(3), 285–300 (1998)
- Smith, S.A., McIntyre, S.H., Achabal, D.D.: A two-stage sales forecasting procedure using discounted least squares. *J. Mark. Res.* **31**(1), 44–56 (1994)
- Talluri, K.T., Van Ryzin, G.J.: *The Theory and Practice of Revenue Management*, vol. 68. Springer Science & Business Media (2006)
- Yıldız, S.C.: *Markdown optimization in apparel retail sector*. (Master's thesis, Işık Üniversitesi) (2018)



# Leveraging Sponsorship on Twitter: Insights from Tennis Grand Slams

Kapil Kaushik<sup>1</sup>(✉) and Abhishek Mishra<sup>2</sup>

<sup>1</sup> Indian Institute of Management Nagpur, Nagpur, India  
kapilk@iimnagpur.ac.in

<sup>2</sup> Indian Institute of Management Indore, Indore, India  
abhishek@iimidr.ac.in

**Abstract.** The sponsorship of events, a below-the-line (BTL) activity, where one brand supports a property financially, or otherwise, enables it to create behavioural consequences like positive sentiment and word of mouth, as well as enhanced brand associations, trust and loyalty. While there are numerous works substantiating positive and negative effects of sponsorship, and intervening variables, that create long term stable brand attitudes, there are limited works that suggest ways for sponsors to communicate about sponsorship investments on social media, and their immediate behavioural outcomes. This work, using Twitter as social media platform, proposes one important dimension of a sponsor's online communications, namely articulation, with sentiment and electronic word of mouth (e-WOM) as behavioural effects. Analysis of user tweet data of four grand slam tennis events for two years suggests that components of articulation (product-focused/event-focused) have mixed effects on positive sentiment and e-WOM respectively.

**Keywords:** Articulation · Sentiment · e-WOM · Twitter-LDA · Sponsorship

## 1 Introduction

Sport sponsorship is considered as a strategic investment that helps in generating and enhancing brand awareness (Walraven et al. 2012), brand image (Kelly et al. 2016), brand reputation (D'Astous and Blitz 1999), brand credibility (Pham and Johar 2001) and customer goodwill (Henseler et al. 2011) for the sponsor brands. While traditional media remains the primary value driver for sponsors, when all media platforms are considered, social media accounts for 5–20% of total value generated for sponsors (Hurst and Plastiras 2017). For example, as per Nielsen-Sports' data, one soccer match between FC Barcelona and Real Madrid in December of 2016 generated US\$42.5 million in media value for sponsors, of which social media contributed 12% or, approximately, US\$5.1 million (Hurst and Plastiras 2017). Emerging platforms, like Nielsen's Social24, provide data for approximate media value for specific brands through brand exposure and user engagement on social media. However, computing the impact of sponsorship on social media user behaviour remains a challenge with no robust frameworks available



to operationalize sponsor content on social media platforms or their specific effects on users (Jensen and Cobbs 2014).

Because it has redefined consumer–brand interaction, social media is considered an important customer activation tool by businesses across the globe (Gensler and Völckner 2013; Kujur and Singh 2017). Social media has recently become an effective tool that can be utilized by marketers for tapping shared interests of their customers and stimulating engagement to create positive attitudinal and behavioural outcomes, especially in the sponsorship domain. This is because social media is extremely popular with sports fans, and acts as a great outlet for discussions related to sport and sport-related issues, which sometimes spill over to conversations about associated brands (Cleland 2014). Though there is scholarly focus on consumer engagement in online platforms (e.g. Hollebeek et al. 2014), there are scant studies on the use of social media by sponsors, and on how social media can act as a tool for achieving marketing objectives (Abeza et al. 2015; Gillooly and Anagnostopoulos 2017). This work offers insights into how sponsorship articulation by sponsor influence the sponsorship leverage on social media. Articulation refers to the strategy where a brand is able to explain its association, using figurative language, with an event to draw maximum user response (Skard and Thorbjornsen 2017). Effect of articulation is proposed to create positive user behavioural outcomes in form of positive sentiment (in related user tweets) and e-WOM. Data to measure each of these variables, through actual Twitter’s tweet corpus using a metric that runs on Latent Dirichlet Allocation (LDA) application programming interface, is a methodological novelty of this work (Zhao et al. 2011; Goh et al. 2013).

## 2 Related Literature

Before the advent of digital media, and more specifically social media, brand managers had full control over brand-related communications being sent to the public, which resulted in greater control over the perceived brand image (Gensler and Völckner 2013). The surge in the number of users and the usage of social media has taken large amount of that control away from brand managers, and it is now customers, along with other stakeholders, that actively co-create the brand image, which may sometimes be polar opposite to what the brand manager desires (Hennig-Thurau 2013). Unlike traditional media, digital media, and especially social media, present an interesting environment (Gillooly and Anagnostopoulos 2017). This helps firms to better integrate and leverage their marketing investments by creating and reinforcing an image that is strongly consistent with local user needs (Whitelock and Cadogan 2013). There are series of works that investigate social media communications by brands and its effects on e-WOM, brand communities, online reviews, brand pages and user-generated content (e.g. Brodie et al. 2013; Smith et al. 2012). Yet, there is little clarity on how firm-created and user-generated social media communications, especially those about sponsorship, influence consumer perceptions of brands and resultant behaviour. Sponsors of sporting events are actively looking to take advantage of branding possibilities through social media, which gives users a new platform for expressing their feelings and opinions about the sporting event and the sponsor itself (Hollebeek et al. 2014). Responses to brand-generated content during such sporting events provide a good opportunity for marketers to measure the

effectiveness of such sponsorship, as well as its short- and long-term consequences for the brand (Meenaghan 2013). Prior studies, on how sponsors can leverage that association on social media, have used various social media platforms, especially Twitter, in a variety of ways to study consumer response and attitude towards the sponsored team (Watanabe and Yan 2016), sport event (Blaszka et al. 2012), athletes (Browning and Sanderson 2012), and other sport-related social issues (Cleland 2014). However, researchers have only recently started to examine consumers' responses towards the sponsor of a sport event. Major, and probably the only effort to address this gap was made by Delia and Armstrong (2015), who examined the impact of French Open, the tennis grand slam, sponsorship on the sentiment towards the sponsor and social media buzz regarding the sponsor. The number and valence of sponsor mentions through tweets were used as a proxy for buzz and sentiment, respectively.

### 3 Message Articulation and Sentiment/E-Word-of-Mouth

Message articulation refers to the way in which a sponsor communicates its relationship with the event. Sponsors convey its sponsorship motives while promoting its association with the event (Weeks et al. 2008). Sponsor conveys commercial motives when it shows more concern for promotion of its products/services/company/brand. Such articulation is referred as product focused articulation. Articulation is referred as event focused articulation when sponsors' communication shows more concern for event/attendees/sport/society. If there is no clear communication about motives of sponsor, such articulation is classified as no-articulation.

A clear message articulation, compared to no-articulation is helpful in creating event-sponsor link among sports fans and consumers (Coppetti et al. 2009). Hence, product-focused or event-focused articulations should generate more positive influence than no-articulation, leading to more favourable response from end-consumers. While comparing the product-focused and event-focused articulations, past research suggests that commercial motives, reflected by product-focused articulation, are perceived as self-promotion and thus, is likely to create less positive impact for the sponsor (Speed and Thompson 2000; Weeks et al. 2008). On the other hand, good motives, reflected by event-focused articulation, are likely to generate more favourable response from the users (Weeks et al. 2008). Hence, we hypothesize:

**H1a/H2a.** A sponsor message with event-focused articulation will induce more POS/e-WOM, than one with no-articulation

**H1b/H2b.** A sponsor message with product-focused articulation will induce more POS/e-WOM, than one with no-articulation.

**H1c/H2c.** A sponsor message with event-focused articulation will induce more POS/e-WOM, than one with product-focused articulation.

### 4 Data Collection, Data Analysis and Results

Data collection for this work was carried out using Twitter as the social media platform. Tweets related to sponsors of tennis grand slams were collected – namely the

US Open 2016, US Open 2017, French Open 2016, French Open 2017, Wimbledon 2016, Wimbledon 2017, Australian Open 2017, using the Twitter-R Application Package Interface (API). For controlling the influence of the game, data collection was restricted to tennis events. From all the aforementioned events, there were 131 events–sponsor pairs for analysis. Next, authors started to collect tweets for all the sponsors of the aforementioned events and captured variables of interest from those. For each sponsor, sentiment, eWOM, and articulation was computed from the user-generated tweets and sponsor-generated tweets. Emotional lexicon was used to capture net positive sentiment from user generated tweets of sponsors. Number of unique users who posted about the sponsor were taken as proxy of eWOM. Articulation was classified for each sponsor with the help of experts. If sponsors' tweets communicated commercial motive then it was classified as product focused articulation. If sponsor' tweets communicated good-will motives and no commercial motives, then it was classified as event-focused articulation. Sponsors with no clear articulation were classified as no-articulation.

As both the outcome variables, POS and e-WOM are likely to be correlated, because both are outcome of consumer's activity on social media. Hence, seemingly unrelated regression (SUR) models were more suitable because it allows running multiple regression equations simultaneously. Natural log of POS and e-WOM were fed as dependent variables in the regression equations to control for high variance of POS and eWOM. It was found that sponsors which use product-focused articulation has significantly higher positive sentiment as compared to sponsors that have no articulation. Similar results were found for sponsors with event focused articulation. Sponsors with event-focused articulation are likely to have significantly more positive sentiment than sponsors with no articulation. The effects of event-focused articulation and product-focused articulation on POS are, however, not significantly different. Thus, hypotheses H1A and H1B are supported, whereas H1C is not supported.

Further, it was found that the sponsors which use product-focused articulation are likely to have higher e-WOM than sponsors with no-articulation. The result is the same for sponsors with event-focused articulation. Though sponsors using event-focused articulation has higher word of mouth than sponsors using product focused articulation, but it is not statistically significant. Thus, hypotheses H2A and H2B are supported, whereas H2C is not.

## 5 General Discussion and Implications

In the light of ever-increasing importance of social media platforms being leveraged to gain maximum benefit out of sponsorship investments by various brands, this work examines the effect of message articulation on user sentiment and e-WOM. Findings suggest that articulation of message by sponsors is important to have a positive impact on emotional sentiment in user-generated tweets and eWOM on social media. Though previous literature on sponsorship articulation (e.g. Na and Kim 2013; Weeks et al. 2008) suggests the superiority of event-focused articulation in generating positive emotional sentiment in social media conversations than product-focused articulation. Our study does not provide any such evidence. It suggests that both event-focused and product

focused articulation are equally effective and better than no-articulation in generating positive sentiment and eWOM on social media.

The study makes key theoretical contributions to extant literature. This study proposes a novel way of defining and measuring message articulation on a social media platform. Past studies in sponsorship domain have broadly commercial and non-commercial aspects of articulation, with little or no application to digital media. This work adopted and modified Slåtten et al.'s (2017) framework for message articulation, It proposed new articulation types i.e. product-focused and event-focused using sponsor generated tweets. It provides richer insights into message articulation by sponsors.

This work can guide practitioners in leveraging their sponsorship on digital platforms. Sponsorship managers should note that articulation is very crucial in generating favourable word of mouth on social media. Sponsors should clearly communication their motives and relationship with event in order to create memorable and favourable link with the event.

## 6 Limitations and Future Directions

Despite its contributions, this work has some limitations. First, the sponsored events considered in the study are limited to tennis grand slams in 2016 and 2017, which may limit generalizability of our findings. Future studies can analyse the bigger events like the FIFA world cup, ICC cricket world cup, Olympics, Oscars etc. As this study only collected data from Twitter platform, future studies can also examine the other popular social media platforms such as Facebook, Instagram etc.

Second, sponsors' articulation was classified subjectively by the experts with classification clearly explained to them. Further, it was validated by practitioners as well. Though it was robust process, but some subjectivity was involved because of involvement of human experts. Future, research can work on developing more objective method of coding the sponsor's articulation. Third, this study has only examined limited factors that are related to sponsorship. Future studies may also look into event-sponsor congruence in leveraging the sponsorship on social media platforms.

## References

- Abeza, G., O'Reilly, N., Séguin, B.: Social media scholarship in sport management research: a critical review. *J. Sport Manag.* **29**(6), 601–618 (2015). <http://journals.humankinetics.com/doi/abs/10.1123/JSM.2014-0296>
- Blaszka, M., Burch, L., Frederick, E.: #WorldSeries: an empirical examination of a Twitter hashtag during a major sporting event. *J. Sport Manag.* **5**(4), 435–453 (2012). <http://journals.humankinetics.com/doi/abs/10.1123/ijsc.5.4.435>
- Brodie, R.J., Ilic, A., Juric, B., Hollebeck, L.: Consumer engagement in a virtual brand community: an exploratory analysis. *J. Bus. Res.* **66**(1), 105–114 (2013)
- Browning, B., Sanderson, J.: The positives and negatives of Twitter: exploring how student-athletes use Twitter and respond to critical tweets. *Int. J. Sport Commun.* **5**(4), 503–521 (2012). <http://journals.humankinetics.com/doi/abs/10.1123/ijsc.5.4.503>
- Cleland, J.: Racism, football fans, and online message boards: how social media has added a new dimension to racist discourse in English football. *J. Sport Soc. Issues* **38**(5), 415–431 (2014). <http://journals.sagepub.com/doi/abs/10.1177/0193723513499922>

- Coppetti, C., Wentzel, D., Tomczak, T.: Improving incongruent sponsorships through articulation of the sponsorship and audience participation. *J. Mark.* **15**(1), 17–34 (2009). <http://www.tandfonline.com/doi/abs/10.1080/13527260802012788>
- D'Astous, A., Seguin, N.: Consumer reactions to product placement strategies in television sponsorship. *Eur. J. Mark.* **33**, 898 (1999)
- Delia, E., Armstrong, C.: #Sponsoring the #FrenchOpen: an examination of social media buzz and sentiment. *J. Sport Manag.* **29**(2), 184–199 (2015). <http://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=08884773&AN=102015191&h=AiclSTjEdda5%252BxBgdHly0oIXWXqAZnNL%252FYF1oOud6wBtSoGG0qVAwHmFtFHSYvcYi7syLauXsR62FySSd64UwQ%253D%253D&crl=c>
- Gensler, S., Völckner, F.: Managing brands in the social media environment. *J. Interact. Mark.* **27**(4), 242–256 (2013). <http://www.sciencedirect.com/science/article/pii/S109499681300039X>
- Gillooly, L., Anagnostopoulos, C.: Social media based sponsorship activation—a typology of content. *Sport Bus. Manag. Int. J.* **7**(3), 293–314 (2017). <http://www.emeraldinsight.com/doi/abs/10.1108/SBM-04-2016-0016>
- Goh, K., Heng, C., Lin, Z.: Social media brand community and consumer behavior: quantifying the relative impact of user- and marketer-generated content. *Inf. Syst. Res.* **24**(2014), 88–107 (2013)
- Hennig-Thurau, T.: Marketing the pinball way: understanding how social media change the generation of value for consumers and companies. *J. Interact. Mark.* **27**(4), 237–241 (2013). [https://www.wiwi.uni-muenster.de/lmm/research/publications/download/Hennig-Thurau-Hofacker-Bloching\\_2013\\_JIM\\_Marketing\\_the\\_Pinball\\_Way.pdf](https://www.wiwi.uni-muenster.de/lmm/research/publications/download/Hennig-Thurau-Hofacker-Bloching_2013_JIM_Marketing_the_Pinball_Way.pdf)
- Henseler, J., Wilson, B., Westberg, K.: Managers' perceptions of the impact of sport sponsorship on brand equity: which aspects of the sponsorship matter most? *Sport Mark. Q.* **20**(1), 7 (2011)
- Hollebeek, L., Glynn, M., Brodie, R.: Consumer brand engagement in social media: conceptualization, scale development and validation. *J. Interact. Mark.* **28**(2), 149–165 (2014). <http://www.sciencedirect.com/science/article/pii/S1094996813000649>
- Hurst, C. Plastiras, A.: The rising importance of social media for football clubs. Nielsen Sports (2017). <http://niensports.com/rising-importance-social-media-football-clubs/>
- Jensen, J.A., Cobbs, J.B.: Predicting return on investment in sport sponsorship: modeling brand exposure, price, and ROI in Formula One automotive competition. *J. Advert. Res.* **54**(4), 435–447 (2014)
- Kelly, S.J., Ireland, M., Mangan, J., Williamson, H.: It works two ways: impacts of sponsorship alliance upon sport and sponsor image. *Sport Mark. Q.* **25**(4), 541 (2016)
- Kujur, F., Singh, S.: Engaging customers through online participation in social networking sites. *Asia Pac. Manag. Rev.* **22**(1), 16–24 (2017). <http://www.sciencedirect.com/science/article/pii/S1029313215301780>
- Meenaghan, T.: New challenges in sponsorship evaluation actors, new media, and the context of praxis. *Psychol. Mark.* **30**(5), 444–460 (2013). <http://onlinelibrary.wiley.com/doi/10.1002/mar.20618/full>
- Na, J., Kim, J.: Does 'Articulation' matter in sponsorship? The type of articulation and the degree of congruence as determinants of corporate sponsorship effects. *Asian J. Commun.* **23**(3), 268–283 (2013). <http://www.tandfonline.com/doi/abs/10.1080/01292986.2012.731606>
- Pham, M.T., Johar, G.V.: Market prominence biases in sponsor identification: processes and consequentiality. *Psychol. Mark.* **18**(2), 123–143 (2001)
- Skard, S., Thorbjørnsen, H.: Closed-ended and open-ended fit articulation: communication strategies for incongruent sponsorships. *Eur. J. Mark.* **51**(7/8), 1414–1439 (2017)

- Slåtten, T., Svensson, G., Connolley, S.: The sponsorship motive matrix (SMM): a framework for categorising firms' motives for sponsoring sports events. *Eur. J. Tour. Res.* **15**, 143 (2017). <http://search.proquest.com/openview/7fc29314cac123ae7fa45a98ea8a7716/1?pq-origsite=gscholar&cbl=55001>
- Smith, A.N., Fischer, E., Yongjian, C.: How does brand-related user-generated content differ across YouTube, Facebook, and Twitter? *J. Interact. Mark.* **26**(2), 102–113 (2012)
- Speed, R., Thompson, P.: Determinants of sports sponsorship response. *J. Acad. Mark. Sci.* **28**(2), 226–238 (2000). <http://jam.sagepub.com/content/28/2/226.short>
- Walraven, M., Koning, R.H., van Bottenburg, M.: The effects of sports sponsorship: a review and research agenda. *Mark. Rev.* **12**(1), 17–38 (2012)
- Watanabe, N., Yan, G.: Consumer interest in major league baseball: an analytical modeling of Twitter. *J. Sport Manag.* **30**(2), 207–220 (2016). <http://journals.humankinetics.com/doi/abs/10.1123/jsm.2015-0121>
- Weeks, C.S., Cornwell, T.B., Drennan, J.C.: Leveraging sponsorships on the Internet: activation, congruence, and articulation. *Psychol. Mark.* **25**(7), 637–654 (2008). <https://doi.org/10.1002/mar.20229>
- Whitelock, J., Cadogan, J.: Social media and international advertising: theoretical challenges and future directions. *Int. Mark. Rev.* **30**(1), 56–71 (2013). <http://www.emeraldinsight.com/doi/abs/10.1108/02651331311298573>
- Zhao, W.X., Jiang, J., Weng, J., He, J., Lim, E.-P., Yan, H., Li, X.: Comparing Twitter and traditional media using topic models. In: *Proceedings of the 33rd European Conference on Advances in Information Retrieval (ECIR 2011)*, pp. 338–349 (2011)



# In-store Merchandisers – An Overlooked Strategic Asset for National Brand Manufacturers to Build Retailer Relationships and to Gain Product Visibility

Jan-Hinrich Meyer<sup>1</sup>(✉), Eva Maria González Hernández<sup>2</sup>,  
and Miguel Angel López Lomelí<sup>2</sup>

<sup>1</sup> IQS School of Management, Universitat Ramon Llull, Barcelona, Spain  
jan.meyer@iqs.edu

<sup>2</sup> Tecnológico de Monterrey, Escuela de Negocios, Monterrey, Mexico  
{emgonzal, lopezma2}@tec.mx

**Abstract.** Many national brand manufacturers are struggling to maintain or grow their market share as they face increased competition. In search for strategic responses to this issue, academic research frequently suggests building stronger retailer relationships as an answer to this development. We add to this stream of literature by investigating the role of the in-store merchandiser as a relationship-building agent for national brand manufacturers. Surprisingly, academic research on the effectiveness of the use of in-store merchandisers is scarce. By conducting an experimental field study, we investigate how increased investments in in-store merchandisers translate into better manufacturer performance. Furthermore, we show that these effects can be explained with increased relationship satisfaction for the store managers. Thereby we show that in-store merchandisers can help enhance manufacturer performance through an improved relationship with retailers and add a new strategy to the relationship building portfolio of manufactures.

**Keywords:** In-store merchandising · Relationship marketing · Share-of-shelf · Retailing

## 1 Introduction

National brands in the consumer packed goods (CPG) industries have faced strong challenges over the last decades (Sethuraman and Gielens, 2014). Increased retailer negotiation power in combination with strong growth in the private label sector has taken its toll on national brand manufactures (e.g. Lamey et al. 2007). To a large part, this development is certainly driven by consumer demand (e.g. Sethuraman and Gielens, 2014), but, in part as well by shelf space allocation policies of the retailers (Gómez Suárez, 2005). Retailers tend to allocate advantageous shelf space to their own private labels (Gómez and Rubio, 2008). Gaining or maintaining shelf space is therefore a key challenge for national brand manufacturers nowadays (Kim et al. 2015). Typically, shelf

space allocations in supermarkets underly certain quantitative guidelines yet, the human factor in store success remains decisive as pointed out by Arnold et al. (2019).

Repeatedly, researchers as well as practitioners have proposed an increased focus on strong manufacturer-retailer relationships to combat this development (Kumar, 1996). National brand manufacturers invest high amounts in a multitude of actions, to foster retailer relationships (Pelser et al. 2015). Interestingly, relatively few studies focus on manufacturer initiated in-store activities such as the employment of in-store merchandisers. In wide parts of the Americas, national brand manufacturers in CPG industries employ in-store merchandisers in strategically important outlets (Lopez-Lomeli, Personal Communication, 2019). Their key-role is to preserve a continuous product replenishment, in order to reduce stockouts and to enhance the display of goods (Cozma-Matei, 2016). To our knowledge, there is no research investigating the effects of the employment of in-store merchandisers as a relationship building strategy.

With this study, we make the following contributions. First, we investigate the in-store merchandiser as an overlooked strategic asset for manufacturing companies. We shed light on her role in enhancing product presentation and share of shelf. Furthermore, we extend her role towards a relationship-agent by showing the positive consequences of an increased in-store support reflected in store manager relationship satisfaction. We draw on the data collected in an experimental field study across 50 supermarkets of all major chains in Mexico to demonstrate how national brand manufacturers can enhance their relationships with the individual store managers, while extending their brand performance.

## 2 Theoretical Background

### 2.1 The Role of the In-store Merchandiser

Sales maximization is one of the key business objectives of both retailers and manufacturers (Drèze et al. 1994). To accomplish this, suppliers and retailers collaborate to define and implement specific marketing initiatives. These initiatives are executed by sales representatives and store managers (Zondag, 2012) with the support of in-store merchandisers (Emberson et al. 2006).

In-store merchandising is defined as all the activities that ensure product availability. Activities include purchase processes, in-store layout plans, allocation of shelf-space and strategic retailer support (Dulsrud and Jacobsen, 2009). Additionally, it stimulates increased consumer demand by enhancing product visibility (Hart and Davies, 1996).

Often, retailers rely on in-store merchandisers who are employed by the national brand manufacturer in order to implement and maintain the desired in-store merchandising (Kuai, 2007). While it has been shown that product visibility and shelf space lead to enhanced sales, there is little research whether manufacturer initiated in-store merchandising activities, indeed yield the desired effect of enhanced visibility and shelf space for the focal brand. We therefore develop the following hypothesis:

**H1.** Increased manufacturer in-store support leads to a better brand representation by a) *product display*, b) *price display* and c) *share of shelf*.



## 2.2 The Role of Store Manager in Retail Outlet Success

Store managers are crucial when predicting the success of an outlet (Arnold et al. 2009). They are a key element in translating corporate strategy initiatives to a tangible practical implantation. Furthermore, they serve as a key motivator for their employees, and therefore often help to increase the clarity of corporate strategy. Arnold et al. (2019) point out that the store manager's relational capacity is a key element to store success. Due to their boundary spanning role, store managers often serve as a mediator between the strategic level and the implementation (Arnold et al. 2019). Typically, store managers with better relationships to super- and subordinates are shown to be more successful on their jobs. Interestingly, very little work has investigated the in-store manager as a relationship agent for suppliers such as manufacturers or distributors. In this study we make a first step towards comprehending the role of the store manager as a relationship agent for manufacturers, by investigating how his perceptions of in-store merchandisers and the manufacturer's brand are affected, once a manufacturer enhances their in-store merchandising support.

## 2.3 Relationship Satisfaction

Over the past decades, relationship marketing has received an exponential growth in attention (Palmatier et al. 2006). Strong relationships are based in trust and commitment of both parties (Palmatier, 2006), which in combination with relationship satisfaction provide the base for relationship quality (Ulaga and Eggert, 2006a). Relationship satisfaction can be split into in non-economic and economic parts (Ulaga and Eggert, 2006b). Economic satisfaction is based on the positive affect resulting from better margins or higher sales, while non-economic satisfactions results from the general appreciation of the relationship (Ferro et al. 2016). Economic satisfaction is thus a foundation for trust and commitment, while non-economic satisfaction is a result of the latter two, meaning that the two notions of satisfaction embrace the relationship building process (Ferro et al. 2016). Yet, not all satisfactory relationships are continued and perceived as profitable (Palmatier et al. 2006). It is important to consider that both relationship parties must present measurable outcomes. Surprisingly, relationships between manufacturing companies and retailers often include many noncontractual dimensions (Mangold and Faulds, 1993). For instance, retailers' often value high service quality of providers. The role of the store manager between strategic planning and practical implementation often empowers her to monitor and evaluate provider service levels (Mangold and Faulds, 1993).

In our study setting, the in-store merchandiser is paid by the manufacturer, yet, she directly reports to the retailer's store manager. To our knowledge there is no research on the relationship-building potential between manufacturer and retailer when enhancing this activity. The primary motivation for manufactures to enhance in-store merchandising activities are increased sales through better product displays. If our set of first hypotheses holds, the primary condition for bottom-line results should be given for the manufacturer. On the other hand, the question remains how store managers react to such an increase in manufacturer-paid in-store merchandising. On the one hand, enhanced in-store merchandising efforts by the national brand manufacturer might create a higher

economic satisfaction for the store manager. A more accurate layout and more appealing product presentation might lift the store manager's image of the manufacturer's brand. Furthermore, the focal brand might indeed perform better through better product visibility, and therefore also enhance the financial performance perceptions of the store manager. Finally, the store manager might also perceive enhanced non-performance elements of satisfaction, or namely a greater perceived level of supportiveness of the manufacture in the store. As stated by Mangold and Faulds (1993), the large majority of store managers values better supplier service by enhancing or improving shelf space and display conditions. This in turn, might fuel a virtuous circle for the manufacturer, as the enhanced support might yield more shelf space through the enhanced supportiveness for the store managers. We therefore hypothesize:

**H2.** Increased manufacturer in-store support leads to a higher store-manager satisfaction with the manufacturer brand expressed by a) *perceived product performance* and b) *perceived financial performance* and c) *perceived supportiveness*.

### 3 Method and Results

#### 3.1 Research Setting

We collaborated with a major national brand manufacturer from Mexico to test our propositions in an experimental field study. The company produces and distributes several national brands in the fabric and home category and uses in-store merchandisers in many of its stores to ensure product availability and visibility. There are several benefits of this experimental design and industry setting. First, we were enabled to tap a real-life setting, enabling us to test for actual store manager evaluations of the in-store merchandisers, in comparison to a more controlled lab study. Secondly, the consumer-packaged goods industry forms part of the large and highly developed retail sector in Mexico, in which the use of in-store merchandisers is common. Third, our research question focuses on aspects of a long-term relationship between manufacturer and retailer on a micro level. By using a field experiment, we are able to trace store manager's ratings of the manufacturer's performance over time and can see if the investments into an increased in-store support are persistent.

#### 3.2 Experimental Sampling and Manipulations

Our partnering manufacturer produces national brands in the categories of Toilet Soap, Detergent and Laundry Soap, which are distributed across most large supermarket chains across the country. Therefore, our sample of 50 supermarkets includes stores of the major chains Walmart (8.4% market share), Bodega Aurrerá (12.2%), Soriana (7.1%), Chedraui (3.8%), and Casa Ley (1.2%). We selected the stores in collaboration with the participating manufacturer to ensure that they are distributed around several bigger cities of the country to account for regional differences and to include different

store formats. The experiment was run for a total period of 8 weeks, which were specifically selected to avoid conflict with sales promotions, special discounts or any other special commercial event.

In the study, we assigned new working conditions (NC) to in-store merchandisers serving 25 of the stores, while the remaining 25 stores remained under the ancient conditions (AC). The in-store merchandisers were selected based on similar demographic profiles (gender, age, education) and length of employment across both conditions. Furthermore, it was ensured that all chains and sales levels of stores were present in the treated as well as the untreated group. For the treatment, we focused on an enhanced investment in in-store merchandisers, which is why an enhanced compensation and education package was created. A major aspect of the new conditions included a specific training on product display and merchandising. Furthermore, the merchandisers received substantial increases in their compensation with up to 17% higher salaries.

### 3.3 Data

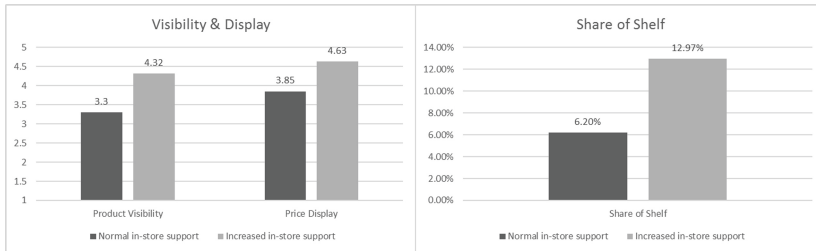
*In-store merchandiser performance:* Performance was evaluated by investigating product and price visibility as well as share of shelf. Product visibility measures the product exhibition execution in the shelf, while price visibility measures that both prices and price tags are perfectly visible. Likewise, the number of product items or stock-keeping units (SKU's) displayed in shelves was tracked for each of the brands in the subcategory. To collect the in-store performance keys, a national marketing research agency was hired to visit each store at the end of the experiment, to complete the measurement instrument designed by the researcher team.

*Store manager perceptions:* To measure store managers' perceptions, we draw on the channel member satisfaction scale, developed by Ruckert and Churchill (1984). Their conceptual model of channel member satisfaction assesses the perceived product performance of a specific supplier in terms of quality, as well as the perceived financial performance. These two constructs fall under the notion of economic supplier satisfaction (Ulaga and Eggert, 2006b). We operationalize non-economic satisfaction as the perceived supportiveness of the in-store merchandiser in the store. It assesses how helpful store managers perceive the in-store merchandisers, thereby proxying service quality. We collected the opinion of the individual store managers in weeks 2 and 8 of the experiment. This helps us to monitor if the effects are stable over the period of the study. To collect this information, the same research agency visited each store twice to conduct a personal interview with the store manager involving the measurement instrument designed by the researcher team.

### 3.4 Results

*In-store merchandiser performance.* The in-store merchandiser performance was measured in terms of product visibility, ( $\alpha = .91$ ), price visibility, ( $\alpha = .69$ ) and the share of shelf (in %). To measure the impact of stock clerks' condition on product visibility, we conducted independent samples t-tests, and the results showed a significant effect of the treatment on product visibility ( $t(48) = 5.58, p < .01, NC = 4.32, SD = .44; AC = 3.30, SD = .79$ ), as well as for the price display ( $t(48) = 4.93, p < .01, NC = 4.63, SD$

= .45;  $AC = 3.85$ ,  $SD = .64$ ) and overall share of shelf ( $t(48) = 2.49$ ,  $p < .05$ ,  $NC = 12.97\%$ ,  $SD = .13$ ;  $AC = 6.20\%$ ,  $SD = .05$ ). The results are shown in Fig. 1. Analyses for the three different product categories provide similar results. For all three categories (toilet soap, detergent and laundry soap) we find significant improvements of product visibility and price display. For share of shelf, we observe significant increases in the categories of laundry soap and detergent, not for toilet soap<sup>1</sup>, offering wide support for our first hypothesis.

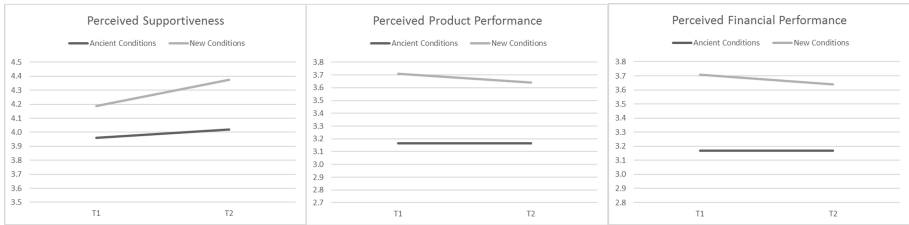


**Fig. 1.** The effect increased in-store support on product display and share of shelf

*Store manager perceptions:* For the data of the store managers, we ran a series of repeated measures ANOVAS to assess the impact of the treatment on the perceived product performance ( $\alpha = .51$ ), financial performance ( $\alpha = .41$ ) and supportiveness ( $\alpha = .64$ ). The results for product performance show a significant between-subjects effect for the treatment ( $F(1,48) = 16.45$ ,  $p < .01$ ), yielding higher means for product performance in the new job conditions in both points of measurement ( $NC_1 = 3.71$ ,  $SD = .57$ ;  $AC_1 = 3.17$ ,  $SD = .51$ ;  $NC_2 = 3.64$ ,  $SD = .59$ ;  $AC_2 = 3.17$ ,  $SD = .38$ ). Next to that, we find an insignificant time effect ( $F(1,48) = .21$ ,  $p > .1$ ) as well as an insignificant interaction of time and treatment ( $F(1,48) = .21$ ,  $p > .1$ ). These results show that in the new conditions, store managers improve their product perceptions of the focal brand significantly. Furthermore, when turning to the financial performance of the focal brand, we can see a significant treatment effect ( $F(1,48) = 10.08$ ,  $p < .01$ ) with consistently higher means for the treatment conditions, implying a better performance throughout the experiment ( $NC_1 = 3.81$ ,  $SD = .53$ ;  $AC_1 = 3.29$ ,  $SD = .75$ ;  $NC_2 = 3.77$ ,  $SD = .67$ ;  $AC_2 = 3.27$ ,  $SD = .68$ ). The within-subjects and interaction effects were insignificant, implying a stable result (Time:  $F(1,48) = .09$ ,  $p > .1$ , Time\*Treatment  $F(1,48) = 0.01$ ,  $p > .1$ ). This shows that store managers also show an increased perception of the focal

<sup>1</sup> Product Visibility: Toilet soap ( $t(48) = 5.49$ ,  $p < .01$ ,  $NC = 4.38$ ,  $SD = .38$ ;  $AC = 3.35$ ,  $SD = .84$ ), Detergent ( $t(48) = 3.46$ ,  $p < .01$ ;  $NC = 4.08$ ,  $SD = .01$ ;  $AC = 3.10$ ,  $SD = .90$ ), Laundry soap ( $t(48) = 5.84$ ,  $p < .01$ ;  $NC = 4.49$ ,  $SD = .39$ ;  $AC = 3.40$ ,  $SD = .83$ ). Price visibility: Toilet soap ( $t(48) = 5.10$ ,  $p < .01$ ;  $NC_t = 4.76$ ,  $SD = .34$ ;  $AC = 3.90$ ,  $SD = .76$ ), Detergent ( $t(48) = 2.53$ ,  $p < .05$ ;  $NC = 4.39$ ,  $SD = 1.06$ ;  $AC = 3.69$ ,  $SD = .90$ ), Laundry soap ( $t(48) = 3.81$ ,  $p < .01$ ;  $NC = 4.68$ ,  $SD = .58$ ;  $AC = 3.99$ ,  $SD = .69$ ). Share of Shelf: Toilet soap ( $t(48) = 1.42$ ,  $p > .1$ ;  $NC = 9.56\%$ ,  $SD = .065$ ;  $AC = 7.37\%$ ,  $SD = .043$ ), Detergent ( $t(48) = 2.07$ ,  $p < .05$ ;  $NC = 8.75\%$ ,  $SD = .07$ ;  $AC = 3.22\%$ ,  $SD = .04$ ), Laundry soap ( $t(48) = 2.10$ ,  $p < .05$ ;  $NC = 16.09\%$ ,  $SD = .14$ ;  $AC = 9.18\%$ ,  $SD = .08$ ).

brands financial performance in the new conditions. Finally, our results depict marginally significant effects for perceived supportiveness. Specifically, our results show a between-subjects effect for the treatment ( $F(1,48) = 3.28, p < .1$ ), with slightly higher means for perceived supportiveness in the new job conditions in both points of measurement ( $NC_1 = 4.18, SD = .79; AC_1 = 3.96, SD = .56; NC_2 = 4.38, SD = .66; AC_2 = 4.02, SD = .54$ ). The within-subjects effects (Time:  $F(1,48) = 2.50, p > .1$ , Time\**Treatment*  $F(48,1) = 0.58, p > .1$ ) were insignificant, showing that our effect was stable over the observation window of six weeks. These results imply that a stronger strategic focus on in-store merchandisers enhances store manager’s perception of their supportiveness. The results of the three tests are displayed graphically in Fig. 2.



**Fig. 2.** The Effect of increased in-store support on perceived performance and support

In summary, these results provide wide support to our second hypothesis, as we confirm that store managers perceived the in-store merchandisers to be more supportive and both, the product, as well as the financial performance to be better for the treated than for the untreated in-store merchandisers.

## 4 Conclusion

In conclusion, in-store merchandisers can serve as a strategic asset for manufactures in two ways. On the one hand, an increased investment yields better product presentation and an increased share of shelf, while it also enhances the relationship satisfaction of store managers. Interestingly, satisfaction is enhanced on an economic, as well as a non-economic level. Through the experimental design in the field, we are able to attribute a relatively high level of certainty in the causality of enhanced in-store support on the observed results. On the other hand, this relatively simple one factor design does not give us sufficient information on the nature of the effect. While we only observe high and low in-store support, we cannot compare it to no in-store support or intermediate levels of support. Finally, finding an optimum level of in-store support remains a challenge for manufacturers. Pay-offs will not be linear beyond certain points. Further research in this direction would represent an interesting contribution. Another interesting avenue is how the increased store manager perceptions translate to the relationship quality at an institutional level. Finally, mere monetary relationship investments are often classified as rather weak relationship building tools (Pelser et al. 2015), as they are easy for competitors to imitate. Developing advanced strategies for in-store support that are hard to copy is another interesting way to enhance this area. Our package already included in-store

merchandise education, yet the largest stimulus in our treatment was certainly a better economic incentive for in-store merchandisers leaving room for further investigation.

## References

- Arnold, T.J., Palmatier, R.W., Grewal, D., Sharma, A.: Understanding retail managers' role in the sales of products and services. *J. Retail.* **85**(2), 129–144 (2009)
- Arnold, T.J., Grewal, D., Motyka, S., Kim, N., Sharma, A., Srivastava, R.: Store manager-store performance relationship: a research note. *J. Retail.* **95**(2), 144–155 (2019)
- Cozma-Matei, D.E.: Issues concerning the definition of the merchandiser position in romanian organizations. *Revista Tinerilor Economisti* **26**, 51–58 (2016)
- Dreze, X., Hoch, S.J., Purk, M.E.: Shelf management and space elasticity. *J. Retail.* **70**(4), 301–326 (1994)
- Dulsrud, A., Jacobsen, E.: In-store marketing as a mode of discipline. *J. Consum. Policy* **32**(3), 203–218 (2009)
- Emberson, C., Storey, J., Godsell, J., Harrison, A.: Managing the supply chain using in store supplier employed merchandisers. *Int. J. Retail Distrib. Manage.* **34**(6), 467–481 (2006)
- Ferro, C., Padin, C., Svensson, G., Payan, J.: Trust and commitment as mediators between economic and non-economic satisfaction in manufacturer-supplier relationships. *J. Bus. Ind. Mark.* **31**(1), 13–23 (2016)
- Gómez Suárez, M.: Shelf space assigned to store and national brands: a neural networks analysis. *Int. J. Retail Distrib. Manage.* **33**(11), 858–878 (2005)
- Gómez, M., Rubio, N.: Shelf management of store brands: analysis of manufacturers' perceptions. *Int. J. Retail Distrib. Manage.* **36**(1), 50–70 (2008)
- Hart, C., Davies, M.: The location and merchandising of non-food in supermarkets. *Int. J. Retail Distrib. Manage.* **24**(3), 17–25 (1996)
- Kim, D., Jung, G.O., Park, H.H.: Manufacturer's retailer dependence: a private branding perspective. *Ind. Mark. Manage.* **49**, 95–104 (2015)
- Kuai, J.: Who stocks the shelf?: an analysis of retail replenishment strategies. Massachusetts Institute of Technology (2007)
- Kumar, N.: The power of trust in manufacturer-retailer relationships. *Harvard Bus. Rev.* **74**(6), 92 (1996)
- Lamey, L., Deleersnyder, B., Dekimpe, M.G., Steenkamp, J.B.E.: How business cycles contribute to private-label success: evidence from the United States and Europe. *J. Mark.* **71**(1), 1–15 (2007)
- Lopez Lomeli, M.A.: Personal Interview, 25 November 2019
- Mangold, G.W., Faulds, D.J.: Service quality in a retail channel system. *J. Serv. Mark.* **7**(4), 4–10 (1993)
- Palmatier, R.W., Dant, R.P., Grewal, D., Evans, K.R.: Factors influencing the effectiveness of relationship marketing: a meta-analysis. *J. Mark.* **70**(4), 136–153 (2006)
- Pelser, J., de Ruyter, K., Wetzels, M., Grewal, D., Cox, D., van Beuningen, J.: B2B channel partner programs: disentangling indebtedness from gratitude. *J. Retail.* **91**(4), 660–678 (2015)
- Ruekert, R.W., Churchill Jr., G.A.: Reliability and validity of alternative measures of channel member satisfaction. *J. Mark. Res.* **21**(2), 226–233 (1984)
- Sethuraman, R., Gielens, K.: Determinants of store brand share. *J. Retail.* **90**(2), 141–153 (2014)
- Uлага, W., Eggert, A.: Relationship value and relationship quality: broadening the nomological network of business-to-business relationships. *Eur. J. Mark.* **40**(4), 311–327 (2006-a)
- Uлага, W., Eggert, A.: Value-based differentiation in business relationships: gaining and sustaining key supplier status. *J. Mark.* **70**(1), 119–136 (2006-b)

Zondag, M.M.: At the frontline of shopper marketing: a multi-method study of in-store shopper marketing execution. Tennessee Research and Creative Exchange, University of Tennessee, Knoxville, Trace (2012). [https://trace.tennessee.edu/utk\\_graddiss/1409/](https://trace.tennessee.edu/utk_graddiss/1409/)



# The Impact of Rural and Urban Advertising and Brand Context on Attitude Towards the Brand

Anne Fota, Sascha Steinmann<sup>(✉)</sup>, Hanna Schramm-Klein, and Gerhard Wagner

Chair of Marketing and Retailing, University of Siegen, 57072 Siegen, Germany  
steinmann@marketing.uni-siegen.de

**Abstract.** Previous research has shown that the impact of advertising on brand attitude depends on various factors, such as the visual elements shown in the advertisement. In this study, we investigate how factors influencing the attitude towards the brand change when advertisements and brands are presented in either a rural or urban context. We conducted two experimental studies that manipulated the experimental factors advertising context (urban vs. rural) and brand context (urban vs. rural), and investigated the mediating influences of attitude towards the advertising, mental imagery, and involvement towards the advertising. The findings show that attitude towards the brand is differently influenced by the advertising and brand context and that these effects are mediated by attitude towards the advertisement and mental imagery. Our findings indicate that marketers need to be aware of which advertising and brand content they choose for an advertisement to reach their target group in an appropriate manner.

**Keywords:** Rural and urban advertising context · National brands · Attitude towards the brand · Mediation analysis

## 1 Introduction

According to the United Nations (2018), more than 55% of the world's population lives in urban areas, while for 2050, that proportion is estimated to reach 68%. Therefore, currently, many communication campaigns of large brand owners are characterized by advertising that focuses on the urban lifestyle. Many brands make use of this supposed preference for city life by presenting their products in a suitable city environment, hoping to reach a larger target group. However, although there has been a long-standing trend of rural depopulation, it is often argued that rural life is not only tranquil but also healthier and more sustainable, and the 'chic' rural lifestyle is becoming increasingly attractive again.

Several studies have already addressed how consumers' processing style as well as their product evaluations are influenced by specific design elements and the content of advertisements (e.g., Hagtvedt and Patrick 2008). Others have investigated how consumers' product evaluations and buying behaviours are likely to change due to advertising that is differently manipulated by certain design elements and results in different



degrees of congruence (Thomas et al. 2015). But, to the best of our knowledge, the issue of consumers' attitudinal or behavioural changes depending on an urban or rural advertising context has not been investigated in previous studies in the field of advertising and consumer behaviour. Therefore, we intend to contrast the two different specifications of rural vs. urban advertising contexts. We therefore address the issue of the congruency between the context and brand, what effects rural and urban communication styles have on the consumer, and if they differ significantly from each other. It is therefore presumed that a perceived congruence between the elements of an advertisement influences the consumers' attitude towards it (e.g., Kuenzel and Halliday 2010). Therefore, we also distinguish between how the attitude towards the brand is influenced depending whether a brand is presented in a rural or urban-type advertisement.

We replicate and expand the findings of previous studies in the field of advertising and consumer behaviour by investigating both the impact of the advertising context (rural vs. urban) and the influence of the brand (rural vs. urban) on the attitude towards the brand. Some brands are more likely to be perceived as rural, as they are designed for the lifestyle or specific activities in the countryside (e.g. gardening). Other brands convey the urban lifestyle message due to their associations and characteristics (e.g. a sporty, agile car in a crowded city). Therefore, the distinction between those two characteristics of the brand is decisive in order to distinguish whether a brand evokes rural or urban associations. So, in this study, the focus is on the advertising context and brand, as these are two concise elements in an advertisement that play a significant role in visually shaping it and influencing the consumer's perception. This allows for a better understanding of whether rural or urban advertising elements are preferred by consumers, which helps marketers in drafting and creating effective and efficient advertising and marketing campaigns by presenting their brands or products in an appropriate context.

## 2 Conceptual Background and Hypotheses Development

The choice of the advertising context depends on the intended content and the statement of the advertisement. Congruence and match-up theories suppose that attitude changes may depend on how consistent, harmonic, and abiding consumers judge information, depending on the congruity of that information with their imagination (Kuenzel and Halliday 2010; Till and Busler 2000). If the information does not match consumers' beliefs, there might be an incongruity between the information provided and consumers' expectations, which may result in a negative attitude change (Osgood and Tannenbaum 1955). Leaning on the conceptual framework of Burns et al. (1993), we used it to explain the proposed effects of our study: in our study, the attitude towards the brand depends on the advertising context and brand association and their two specifications, which act as experimental factors in our framework, as well as on the mediating influence of the attitude towards the advertising and mental imagery.

Match-up theory (Till and Busler 2000) suggests that the attitude towards the brand is the strongest for those advertising context and brand associations that are perceived as the most harmonic with the consumers' thoughts and beliefs regarding the brand. If the fit of the elements of an advertisement is considered high, these elements will be perceived more congruently by the consumers and the more likely it is that the advertisement will

be perceived as positive (Kuenzel and Halliday 2010). This perception of advertising can be influenced by the activation of consumers' memories and fantasies, e.g., by using different visual elements (Burns et al. 1993). For example, contextual details in advertising can, among other things, provide information about the physical environment or activities associated with the consumption of the product (Krishnamurthy and Sujana 1999). According to Scott and Vargas (2007), the perception of stimuli is influenced by the context of advertising; additionally, consumers are provided with information about product attributes, thus helping them to form a better attitude towards the presented advertising as well as of the product itself. In addition, some academic studies imply that rural and urban advertisements and brands generate different consumer perceptions and attitudes since different emotions and memories are activated (e.g., Cho 1995). Furthermore, rural and urban context specifications can be seen as two different lifestyles. Previous studies already assume that lifestyle advertising themes have a differentiated effect on consumers' (purchase) behaviour and brand loyalty (e.g., Englis and Solomon 1995). We therefore, propose the following:

*H1: The (a) advertising context (rural vs. urban) and the (b) brand association (rural vs. urban) of an advertisement will impact the attitude towards the brand.*

Several studies have implicated a positive mediating influence of the attitudes towards the advertisement on the attitude towards the brand, which is also influenced by advertising elements (e.g., Shimp 1981). The attitude towards an advertisement can be differentiated into a cognitive and an affective dimension (Ajzen 1989). Cognitive dimensions reflect the conscious processing of specific executional elements of the consumer, while affective dimensions, for example, relate to the emotions towards the advertisement (Yi 1990). The stronger the cognitive dimensions of consumers are, the more they deal with the advertising shown, in which a stronger connection and commitment to the advertising and the advertised brand arise. In addition, the stronger and more positively the affective attitudinal dimensions are valued, the more positive emotions are associated with the advertising, which, in turn, also strengthens the brand attitude. Together, these two dimensions form the general attitude towards the advertising that we examine in this study. Nevertheless, these two dimensions will be considered separately in the further course of the study. Summing up, we hypothesize the following:

*H2: The attitude towards the advertising positively mediates the hypothesized relationship between (a) the advertising context and (b) the brand association on the consumers' attitude towards the brand.*

Mental imagery is defined by Richardson (1969) as an experience that can occur quasi-sensory or quasi-perceptual, while it "exists in the absence of those stimulus conditions that are known to produce their genuine sensory or perceptual counterparts" and of which a person is also self-consciously aware. For example, Babin and Burns (1997) indicate that by showing the actual utilization of a car in a typical situation of usage in an advertising, consumers form a higher mental imagery since they can imagine the car and how it will be used visually better. Additional studies (e.g., Elder and Krishna 2011) show that mental imagery in advertising could affect the strength of an effect of a stimulus on different outcome variables, such as attitude towards the brand, positively. The findings

of Burns et al. (1993) also provide empirical evidence that mental imagery positively mediates the effects of several advertising stimuli on attitude towards the brand. Looking at the rural and urban contexts, we contrast the two specifications, which differ characteristically and thus activate different mental images of the consumers, especially since these two contexts are often perceived as contrary to each other. Therefore, we propose:

*H3: Mental imagery positively mediates the hypothesized relationships between (a) the advertising context and (b) the brand association on the consumer's attitude towards the brand.*

### 3 Method and Procedure

First, print advertisings were screened to select rural and urban brands, whereupon several advertisings of established brands from the categories of passenger cars, diary products, as well as grocery retail brands were pretested in a preliminary study conducted in a university course. The participants of the preliminary study indicated that they were familiar with the selected brands. In order to meet certain criteria for the main study, the brands were compiled and pretested for contextual perception, showing the brand related images on a white, neutral background ( $n = 80$ ) as well as on an urban and rural background ( $n = 30$ ). The pre-test showed that the advertisings were perceived as either rural or urban as implied, as well as the brands, which were also classified as clearly rural or urban. Hence, the images that were evaluated as the strongest rural or urban in the pre-test were chosen for the study. As a result of the preliminary study, two advertisings were chosen that were evaluated as clearly rural or urban. For example, the context of an advertisement from Coop, one of the biggest retailing and wholesale companies from Switzerland, was evaluated as the most rural advertisement, while an advertisement of Mercedes-Benz and Maybelline were evaluated as the most urban ones.

In the main study, a  $2 \times 2$  between-subject design was used with the advertising context (rural vs. urban) and the brand association (rural vs. urban) as experimental factors in an online study. Several images were used for one experimental condition. Therefore, for each of these four experimental conditions, four rural brands and four urban brands were selected, which were placed in a rural context (i.e. a green meadow in the country) as well as in an urban context (i.e. a busy main street in a large city), while only the brand names and a short advertising slogan that was identical for all images were presented, covering all of the 16 images (*see. Fig. 1*).

The attitude towards the advertised brand ( $\alpha = .90$ ) was measured by adapting the approach of Bergkvist and Rossiter (2009) on a 7-point semantic differential. According to Muehling and McCann (1993) and Burton and Lichtenstein (1988), we differentiated the attitude towards the advertising in two dimensions.

Therefore, the shown advertisings have been evaluated in terms of their cognitive ( $\alpha = .91$ ) and affective ( $\alpha = .85$ ) dimensions of the attitude towards the advertising. Following D'Ercole et al. (2010), the mental imagery ( $\alpha = .92$ ) was measured. In addition, a single-item scale was used to generally rate the assessment of advertising in a rural or urban context and the assessment of the brand in a rural or urban context, with 1 = *completely rural* and 7 = *completely urban*. Each participant of the study has been shown one of



**Fig. 1.** Stimuli design for a rural and urban advertising context (examples)

the 16 possible advertising images, which were randomly chosen for each participant. Afterwards, the participants' responses were aggregated for each experimental factor, which enabled us to control for potential confounding effects and to further investigate whether the relationships under study were primarily triggered by advertisements in general and not by, e.g., specific products. In total,  $n = 227$  participants ( $M_{age} = 25.92$ ,  $SD = 8.89$ ; 58.3% female) could be used for hypotheses testing.

By conducting a manipulation check, we analysed the respective mean values for 1 = completely rural and 7 = completely urban, showing that all eight rural and eight urban advertising images were perceived as intended ( $M_{rural} = 2.77$ ,  $SD = 1.32$ ;  $M_{urban} = 5.64$ ,  $SD = 1.36$ ,  $t(269) = -17.64$ ;  $p < .001$ ). Participants also rated the rural and urban brands selected as intended ( $M_{rural} = 3.22$ ,  $SD = 1.56$ ;  $M_{urban} = 4.58$ ,  $SD = 1.73$ ,  $t(269) = -6.77$ ;  $p < .001$ ). We also conducted a manipulation check to examine the perceived congruence of the four experimental conditions, whereby the highest congruence can be determined for the rural advertising context in combination with a rural brand ( $M = 4.24$ ,  $SD = 1.66$ ), as well as for the urban advertising context in combination with an urban brand ( $M = 4.42$ ,  $SD = 1.64$ ). Before the data were aggregated, we tested for differences in the participants' responses between the different products within the experimental conditions. The results of this analysis revealed no significant differences with regard to participants' responses to the dependent variables.

## 4 Results

To test the first hypothesis, an ANOVA was performed. It was investigated whether a significant influence of the two experimental factors, here our main effects, advertising context (rural vs. urban) and brand association (rural vs. urban), existed on the attitude towards the brand. A significant influence of the advertising context on the attitude towards the brand was identified ( $F = 3.65$ ,  $p < .05$ ), in addition to a significant influence of the brand association on the attitude towards the brand ( $F = 9.02$ ,  $p < .01$ ); regarding the latter case, the effect's strength (partial eta-squared) for the brand ( $\eta^2$  for brand association is observed to be stronger than that for the advertising context, while the  $R^2$  is reported to be .045. The strongest mean value for attitude towards the brand is

observed for the rural advertising context with the urban brand association ( $M = 4.43$ ,  $SD = 1.45$ ).

In addition to H1, we also checked for the proposed mediating influences of attitude towards the advertising and mental imagery using SPSS-Process, as suggested by Demming et al. (2017). First, we analysed the results for the advertising context used as an experimental factor on the attitude towards the brand. Here, we distinguish between a cognitive and affective dimension of the attitude towards the advertising, as such a distinction could be significant for future management implications and further research needs. According to the mediation implications of Zhao et al. (2010), a competitive mediation ( $\beta = .408$ ,  $p < .001$ ) can be shown for the cognitive dimension of the attitude towards the advertising in contrast to the affective attitudinal dimension, which has no mediating influence on attitude towards the brand. In addition, we examined whether mental imagery exerts a mediating influence, which can also be confirmed in the form of a competitive mediation ( $\beta = .248$ ,  $p < .001$ ). In summary, hypotheses *H2a* and *H3a* can be confirmed for the advertising context as the experimental factor. With regard to the brand association, only for mental imagery we can report a significant mediating effect for the influence of the brand association on the attitude towards the brand ( $\beta = .230$ ,  $p < .001$ ), resulting in a complementary mediation (Zhao et al. 2010) and only supporting *H3b*, while *H2b* is not supported.

## 5 Discussion and Implications

In the following, the results of the study will be summarized and discussed, followed by management implications and the need for further research. Using self-designed advertising images, the study can confirm positive influences of the advertising context and the brand association on the attitude towards the brand, showing that the attitude formation of a brand can be positively influenced by showing advertisements with a rural advertising context or advertisements of urban brands. Therefore, a perceived urban brand should preferably be implemented in a rural environmental background, as in the manipulated advertising images. However, due to higher effect strength, the brand association might be of higher relevance for the brand attitude than the advertising context. A competitive mediation of the cognitive dimension of the attitude towards advertising between the advertising context and attitude towards the brand can be confirmed. Thus, the choice of the advertising context exerts an influence through the mediator, supporting past studies (e.g., Shimp 1981). To strengthen the attitude towards the brand, the advertisement context should activate consumers' cognitive dimensions, e.g., by giving interesting or surprising information. In addition, the competitive mediation shows here that the cognitive dimension of the attitude towards the advertising for the urban advertising context is worse than for the rural advertising context. To reduce this effect, a stronger cognitive activation must take place for the urban advertising context.

Additionally, a competitive mediation was also found for mental imagery as a mediator, which is similar to the studies by Elder and Krishna (2011) and Burns et al. (1993). Therefore, to enhance the attitude towards the brand, marketers have to use strong visual elements that stimulate consumers' imagination of the advertising context, such as an idyllic landscape or a hip and lively city scenario. Again, this competitive mediation

indicates that the urban advertising context leads to a weaker mental imagery of the advertisement compared to rural advertising context, resulting here in the necessity to enforce consumers' visual imagination of an urban environmental context. Therefore, both competitive mediations support the results that the rural advertising context is favoured by consumers since cognitive dimensions and mental imagery seems to be easier activated than for the urban advertising context. Looking at the brand association, our results show that mental imagery only partially influences the effect of the brand association on the attitude towards the brand; thus, the brand association is still decisive for the formation of the attitude towards the brand. Nevertheless, the attitude towards the brand should be enhanced by vivid visual presentation, especially for rural brands, in which they are shown in concrete use (Babin and Burns 1997). Moreover, for future studies it is advisable to use hypothetical (new) brands to avoid potentially confounding effects of previous exposure or experience with existing brands.

Future studies should check for moderating effects, e.g., of the involvement, the living environment or lifestyle, since a differentiated perception and attitude towards brands can be assumed for rural and urban consumers. Future research could also examine how brand attitude is influenced by advertisings showing both environmental contexts in one single advertising, such as those which can increasingly be observed for automobile TV commercials. Additionally, the use of different advertising mediums for rural or urban advertising, such as print or TV campaigns, might have different effects on the brand attitude.

## References

- Ajzen, I.: Attitude structure and behavior. In: Pratkanis, A.R., Breckler, S.J., Greenwals, A.G. (eds.) *Attitudes Structure and Function*, pp. 241–274. Lawrence Erlbaum Associates, Hillsdale (1989)
- Babin, L.A., Burns, A.C.: Effects of print ad pictures and copy containing instructions to imagine on mental imagery that mediates attitudes. *J. Advert.* **26**(3), 33–44 (1997)
- Bergkvist, L., Rossiter, J.R.: Tailor-made single-item measures of doubly concrete constructs. *Int. J. Advert.* **28**(4), 607–621 (2009)
- Burns, A.C., Biswas, A., Babin, L.A.: The operation of visual imagery as a mediator of advertising effects. *J. Advert.* **22**(2), 71–85 (1993)
- Burton, S., Lichtenstein, D.R.: The effect of Ad claims and Ad context on attitude toward the advertisement. *J. Advert.* **17**(1), 3–11 (1988)
- Cho, H.: Humor mechanisms, perceived humor and their relationships to various executional types in advertising. *Adv. Consum. Res.* **22**, 191–197 (1995)
- Demming, C.L., Jahn, S., Boztug, Y.: Conducting mediation analysis in marketing research. *Mark. ZFP* **39**(3), 76–93 (2017)
- D'Ercole, M., Castelli, P., Giannini, A.M., Sbrilli, A.: Mental imagery scale. *Measur. Sci. Technol.* **21**(5), 1–8 (2010)
- Elder, R.S., Krishna, A.: The “Visual Depiction Effect” in advertising. *J. Consum. Res.* **38**(6), 988–1003 (2011)
- Englis, B.G., Solomon, M.R.: To be and not to be: lifestyle imagery, reference groups, and “The Clustering of America”. *J. Advert.* **24**(1), 13–28 (1995)
- Hagtvedt, H., Patrick, V.P.: Art infusion: the influence of visual art on the perception and evaluation of consumer products. *J. Mark. Res.* **45**(3), 379–389 (2008)

- Krishnamurthy, P., Sujan, M.: Retrospection versus anticipation: the role of the ad under retrospective and anticipatory self-referencing. *J. Consum. Res.* **26**(1), 55–69 (1999)
- Kuenzel, S., Halliday, S.V.: The chain of effects from reputation and brand personality congruence to brand loyalty: the role of brand identification. *J. Targeting, Meas. Anal. Mark.* **18**(3–4), 167–176 (2010)
- Muehling, D.D., McCann, M.: Attitude toward the Ad: a review. *J. Curr. Issues Res. Advert.* **15**(2), 25–58 (1993)
- Osgood, C.E., Tannenbaum, P.H.: The principle of congruity in the prediction of attitude change. *Psychol. Rev.* **62**(1), 42–55 (1955)
- Richardson, A.: *Mental Imagery*. Routledge & Kegan Paul, London (1969)
- Scott, L.M., Vargas, P.: Writing with pictures: toward a unifying theory of consumer response to images. *J. Consum. Res.* **34**(3), 341–356 (2007)
- Shimp, T.A.: Attitude toward the AD as a mediator of consumer brand choice. *J. Advert.* **10**(2), 9–48 (1981)
- Thomas, T.C., Trump, R.K., Price, L.P.: Advertising as unfavorable self-presentation: the dirty laundry effect. *J. Advert.* **44**(1), 58–70 (2015)
- Till, B.D., Busler, M.: The match-up hypothesis: physical attractiveness, expertise, and the role of fit on brand attitude, purchase intent, brand beliefs. *J. Advert.* **29**, 1–13 (2000)
- United Nations: World urbanization prospect 2018 (2018). <https://esa.un.org/unpd/wup/>. Accessed 4 Dec 2019
- Yi, Y.: Cognitive and affective priming effects of the context for print advertisements. *J. Advert.* **19**(2), 40–48 (1990)
- Zhao, X., Lynch Jr., J.G., Chen, Q.: Reconsidering baron and kenny: myths and truths about mediation analysis. *J. Consum. Res.* **37**(2), 197–206 (2010)





# Potentials and Boundaries in Frontline Service Encounters Through the Infusion of Technology

Tobias Rödinger<sup>(✉)</sup>, Sascha Steinmann, Gerhard Wagner, and Hanna Schramm-Klein

Chair of Marketing and Retailing, University of Siegen, 57072 Siegen, Germany  
roeding@marketing.uni-siegen.de

**Abstract.** Recent literature discusses the increasing relevance of technology-infusion in service encounters, but only a few studies empirically investigate the impact of technology-infusion within the interaction of the frontline employee service (FES) and the customer. Based on the assumptions and implications of Social Interaction Theory (SI), the findings of a quasi-experiment online study (N = 944) indicate a strong negative influence of the level of perceived barrier due to technology-infusion on the evaluation of the competence of the FES. Moreover, we adapt and extend SI theory towards the context of a technology-infused service encounter in order to emphasize the relevance of the customer's evaluation of FES competence and its impact on customer satisfaction with the FES. Besides, we show that non-technology-infused service encounters will create the lowest barrier from customer perspective. However, interestingly, our results imply that customers value technology-infusion in service encounters, which is reflected in a higher willingness to pay.

**Keywords:** POS retailing · Technology-infused service encounter · Frontline service barrier · Customer-FES interaction

## 1 Introduction

The growing multiplicity of point of sale (POS) technologies and the associated variety of technology-infusion in frontline service encounters, e.g., virtual screens and tablet computers, indicate that frontline employee service's (FES) jobs need to be reconfigured to provide a competent and satisfying customer service at the POS (e.g., de Keyser et al. 2019). Especially the increasing pressure from and the (almost) monopolistical structure of the leading online shopping platforms evokes a repositioning of physical retailers and thereby as well by retail store brands. This reorganisation of the retail market, their store concepts and thereby their entire store brand, triggered by the digitalization, makes a redefinition of frontline services, including digital-/technological infusion within the frontline-customer-interaction, bound to happen (Grewal et al. 2017). Hence, it is of interest to understand how to meet customer's service requirements on a level, on which the infusion of technology is not substituting or even undermining human frontline service competence. For example, the use of a tablet computer as a supplementary information source during a customer-frontline employee service encounter might provide



the opportunity to combine individual service competences of the employee as well as the benefits of an additional digital information source (the tablet). This, in turn, could result in a more satisfying service experience from the customer's perspective.

In the context of our study, we refer to van Doorn et al. (2016) by assuming FES's competence to be the decisive component within a technology-infused service encounter towards customer's satisfaction with FES. We argue that FES acts as a mediating influence. According to Fuchs et al. (2010), we furthermore include customer's willingness to pay as another outcome variable that is likewise dependent on the customer's perceived FES's competence. However, if technology-infusion in service encounters is not in line with the customer expectations towards the service encounter, a negative impact of technology-infusion in service encounters on e.g., customer satisfaction or purchase intention might result (Giebelhausen et al. 2014). We conclude that a negative effect is triggered by the fact that the technology-infusion might act as a barrier between the customer and the FES. Thereby, we argue that the infusion of technology might hinder the customer to see FES's competence within the interaction as sufficient as within a traditional, interpersonal-focused service encounter. In particular, these barriers might lead to a shift in the perception of distance between customer and FES within the service encounter.

Our research contributes to the knowledge in the field of technology-infusion in physical retailing in several ways: We extend the SI theory with the help of the differentiated use of a tablet-computer within a customer-FES interaction. We thereby shed new light on the influence and relevance of barrier in this context and systematically manipulated the predictor variables (in terms of high barrier vs. low barrier vs no barrier). More precisely, we give empiric prove for the approaches of Giebelhausen et al. (2014) as well as Wunderlich et al. (2013) by analysing how technology-infusion will influence specific outcome variables as satisfaction with the FES as well as customer's willingness to pay. As previous studies proposed, FES's competence could be considered as a mediator between stimulus and response (van Doorn et al. 2016), we investigated the mediating impact of the extent of barrier on satisfaction with the FES as well as customer's willingness to pay and draw relevant implications for academe and practice in order to that.

## 2 Theoretical Framework and Hypotheses Development

*Literature Review.* The findings and implications of scientific studies in retail context show manifold positive effects as well as adaptability and general sales service from FES's side or customization and customer's delight (e.g., Ahearne et al. 2008; Ahearne and Rapp 2010). The general interplay of these 'two key involved actors' (de Keyser et al. 2019, p. 156) enables a heuristic evaluation of new technological influences at the PoS. Especially, Wunderlich et al. (2013) point out the importance for a deeper investigation of social interaction within technology-infused service encounters and sensitize for possible barriers from customer's site. Moreover, recent studies stress the relevance of the interpersonal components and their positive effects on the entire service encounter (Yoo 2017), respectively the satisfaction with the service encounter (Srivastava and Kaul 2014) and the dyadic relationship between customer and FES (Jamal and Adelowore 2008).

Yet, current literature does not offer empirical investigation of interpersonal interaction and technology-infusion in this relation.

*Research Model.* We refer to Social Interaction (SI) theory (Turner 1988) to explain the influence of a technological device on the evaluation of FES competences in employee-customer interactions. SI theory explains the process of interactive behaviour between two or more parties. By including a technological device in the customer service process, a barrier might arise, which increases furthermore customer's psychological distance towards the FES. Based on Giebelhausen et al. (2014), we argue that the level of barrier depends on the level of technology-infused service encounter and leads consequently to a re-evaluation of FES's competences. In this context, Dhar and Kim (2007) have shown that psychological distance impacts customer satisfaction with FES negatively. Moreover, Bushong et al. (2010) shows customer's willingness to pay to be an additional relevant outcome variable. As technology-infusion might act as a barrier, this might alter customer's perception of FES's competence (van Doorn et al. 2016). In detail, we propose that the level of barrier depends on the customer's perception of psychological distance within a technology-infused service encounter, which is triggered by the way technology is integrated in customer-to-employee interactions (high (vs. low) level of technology integration = low (vs. high) perceived psychological distance).

As we assume that the perceived psychological distance towards the FES is a key component with respect to the level of barrier within a technology-infused service encounter, the corresponding influence on the perception of FES's competence needs to be considered (van Doorn et al. 2016). However, Giebelhausen et al. (2014) stress the fact that general social interaction within a service encounter does not automatically lead to a positive evaluation of the technology perception. A low-level of barrier within a technology-infused service encounter might increase the perceived psychological distance and thereby decrease the perception of FES's competence. A vice versa result is assumed when barrier is high:

*H1: A high (vs. low) level of barrier caused by a technology-infused service encounter will negatively (vs. positively) influence the evaluation of customer's perceived competence of a FES. No barrier will be the most positive.*

Babakus et al. (2004) show a positive relation between service and customer satisfaction and Beatson et al. (2006) emphasize the relevance of the way in which customer service is provided in order to build customer satisfaction. Moreover, van Doorn et al. (2016) draw a direct relation between technology-infusion within a service encounter, FES's competence and customer's satisfaction. In detail, it was assumed that customers who assess the individual attributes of a service positively are more likely to be satisfied with the complete service. In context of our study, we argue that the higher the perceived level of barrier within a technology-infused service encounter is, the less familiar the service appears and the lower is the perceived satisfaction with the frontline service:

*H2a: A high (vs. low) level of barrier caused by a technology-infused service encounter will negatively (vs. positively) influence the evaluation of customer's satisfaction with the FES. No barrier will lead to the highest satisfaction.*

*H3a: The perceived competence mediates the hypothesized relationships between the technology-infused FES and the satisfaction with the FES.*

The technology-infusion of a FES is supposed to gain FES's digital access to information or to involve the customer into the service by presenting additional benefits (Rafaeli et al. 2017). In addition to Bushong et al. (2010), we argue that the combination of interpersonal and technological-infused frontline service improves the perceived monetary value of the given information respectively increases the price the customer is willing to spend on the product. Hence, we conclude:

*H2b: A high (vs. low) level of barrier caused by a technology-infused service encounter will negatively (vs. positively) influence the customer's willingness to pay. The willingness to pay in case of no barrier will be the highest.*

*H3b: The perceived competence mediates the hypothesized relationships between the technology-infused FES on the willingness to pay.*

### **3 Empirical Study: Method, Procedure and Measurements**

We conducted a quasi-experiment study in which we used a tablet computer as technology stimuli in order to present (additional) product information by a male FES. The way the FES included the tablet computer as an additional information source in the service encounter was used to manipulate the level of customer integration in a technology-infused service encounter. In the study, we implemented the tablet within a service encounter in which the presentation of a specific hiking backpack was in focus. To manipulate the experimental factor of the level of barrier, we used three videos (each of about 42 s duration), which were shot in a store for outdoor clothes and equipment. In the video including the high barrier regarding the technology-infused service encounter, the FES used the display of the tablet only for himself and had a look on it ones in a while in order to check product-related information. In this scenario, the customer did not have a chance to see or even use the additional information on the tablet directly. In contrast, in the video of the low barrier, the FES positioned the display towards the potential customer, referring ones in a while to the display and the additional information displayed. Thus, the customer has the opportunity to see the information on the display directly. The third video was shot without a tablet and thereby without any technology-generated barrier. In order to guarantee the consistency of the product information, the employee rehearsed a standardized product presentation.

In an online experiment, subjects were randomly assigned to one of the three experimental conditions. Furthermore, they were told to imagine that this would be a product advisory at the point of sale. Afterwards they had to answer a corresponding questionnaire.

To test our hypotheses constructs from the common literature we used the constructs competence (3 items;  $\alpha = 0.947$ , adapted from van Dolen et al. 2002) as well as satisfaction with the employee service (4 items;  $\alpha = 0.957$ ; adapted from Spake et al. 2003). All items were measured with a 7-point Likert-Scale, reaching from 1 = 'I totally disagree' to 7 = 'I totally agree'. Additionally, we asked what price the subjects were willing to pay for the presented product. Within a student's sample ( $N = 67$ ) the generated questionnaire with respect to the understanding and clarity of items was pretested. Several minor changes in wording were made based on this pilot test. The study included 944

subjects (women: 54.77%) with an average age of 32.72 (SD = 13.20) years. Overall, participants were nearly equally distributed across the three experimental conditions and we obtained no significant differences with regard to age and gender.

We used the subject's evaluations of the perceived psychological distance towards the FES from customer's site within a technology-infused service encounter in order to measure the level of barrier as manipulation check for our experimental design. We thereby adapted the approach of Mashek et al. (2006) to evaluate the perceived closeness to the FES (1 = distant – 7 = close). According to Perdue and Summers (1986), ANOVA tests were conducted to check whether the intended manipulation was successful (psychological distance:  $M_{\text{low barrier}} = 2.45(1.47)$ ,  $M_{\text{high barrier}} = 1.86(1.13)$ ,  $M_{\text{no barrier}} = 2.55(1.58)$ ,  $F(1, 941) = 22.085$ ,  $p < .001$ ,  $\eta^2 = 0.045$ ).

## 4 Results and Discussion

In hypotheses H1 and H2a as well as H2b, we postulated an effect of the level of barrier on the perception of FES competence and on satisfaction with FES. To test these hypotheses, we conducted several ANOVAs. Based on the results, an empirical support for the hypothesized influence of the level of barrier on customer's perceived competence can be stated, whereas the low barrier is overall perceived clearly more positive than a high barrier ( $M_{\text{low barrier}} = 5.04(1.42)$ ,  $M_{\text{high barrier}} = 3.79(1.42)$ ,  $M_{\text{no barrier}} = 5.66(1.08)$ ,  $F(1, 941) = 165.56$ ,  $p < .001$ ,  $\eta^2 = 0.260$ ). Yet, the results furthermore state that the distance between low barrier and no barrier is by far smaller than the distance between the high barrier and no barrier in context of the perceived competence. The same applies to the evaluation of satisfaction of the FES ( $M_{\text{low barrier}} = 4.41(1.43)$ ,  $M_{\text{high barrier}} = 3.57(1.43)$ ,  $M_{\text{no barrier}} = 4.85(1.15)$ ,  $F(1, 941) = 74.40$ ,  $p < .001$ ,  $\eta^2 = 0.137$ ). Furthermore, the results show that customer's willingness to pay for the presented product is higher when barriers are lower, however in case of no barriers respectively of non-additional technological information source the willingness to pay is the lowest ( $M_{\text{low barrier}} = 66.43(18.13)$ ,  $M_{\text{high barrier}} = 64.84(19.29)$ ,  $M_{\text{no barrier}} = 62.64(17.14)$ ,  $F(1, 941) = 3.23$ ,  $p < .01$ ,  $\eta^2 = 0.007$ ). These findings support hypotheses H1, H2a and H2b. Consequently, it can be concluded that even if the perceived FES competence suffers in the case of an integrated technology, the monetization of the product presentation seems to benefit.

To test the proposed mediating impact of the perceived FES competence on the relationship between the level of barrier and thereby barrier within a technology-infused service encounter and satisfaction with FES, we used PROCESS (model 4) as suggested by Zhao et al. (2010). Thereby, within a first step, we found a generally significant relationship between the level of the barrier and satisfaction with the FES and the willingness to pay. Secondly, we pointed out that the regression of the level of the barrier on the mediator, perceived competence, was also significant. Step 3 of the mediation process furthermore indicates that the mediator (perceived competence), controlling for the level of the barrier, was significant with respect to the satisfaction with,  $b = .73$ ,  $t(941) = 37.02$ ,  $p < .001$ . However, the willingness to pay was not significant,  $b = .59$ ,  $t(941) = 1.51$ ,  $p > .01$ . Step 4 of the analyses revealed that, controlling for the mediator (perceived competence), the level of the barrier was a significant predictor of the satisfaction with,  $b = -.01$ ,  $t(941) = -.25$ ,  $p = .805$ . Additionally, significance can also be

shown regarding customer's willingness to pay,  $b = .59$ ,  $t(941) = -2.74$ ,  $p = .01$  in this context. Consequently, we found full mediation of perceived FES competence on the relationship between the level of barrier on satisfaction with the FES and no mediation on willingness to pay. That gives reason to emphasize the relevance of customer's perceived competence; however, the willingness to pay just seems to depend on the level of the barrier and is not influenced due to the FES's competence.

## 5 General Discussion and Implications

Our study offers first empiric orientation that technology-infused service encounter can be seen as a barrier and thereby distance perception. This is again responsible for negative service effects as a reduction of the perceived FES's competence as well as satisfaction with the FES. We thereby shed new light on recent literature not just with respect to possible negative outcomes, which clearly depend on the way the technology is infused (e.g., Marinova et al. 2016). Besides, we also regard the relevance of interpersonal interaction between customer (Wünderlich et al. 2013) and FES respectively the level of barrier within a service encounter. Moreover, we show that in addition to Giebelhausen et al. (2014), a FES technology-infusion service encounter can also act as a barrier as it increases the perceived psychological distance. Referring to the construal level (CL) theory this research gives new insights in the relation of perceived distance triggered by the infused technology and the competence perception respectively a change in customer's perception of the level of construal in this context. However, our findings indicate that even if technology-infusion within service encounter seems to have a negative impact on customers' evaluation of frontline employees' competence, customers' willingness to pay increases due to technology-infusion. This effect is stronger when technology is integrated in customer-to-employee interactions in a way that minimizes customers' perception of psychological distance by the infusion of technology. We therefore call for future research, especially with respect to the effect size, as the consumers did not actively choose the infused second information source (Reinders et al. 2008). In fact, it is relevant to analyze the influence of additional (digital) sources in this relation.

A primary conclusion for marketing researchers and practitioners is the fact that the customer-FES relationship is currently a key for a successful service encounter. Hence, the level of barrier plays not just a decisive role when it comes to a differentiated perception of FES's competence but also on satisfaction with the FSE. However, based on our results, retailers need to decide whether they focus more on a strategic orientation by enhancing FES's competence as well as satisfaction with the FSE in the long-run or if they concentrate on the simple implementing of digital devices in order to generate potentially a higher price in the short-term.

As findings show that there is still a strong desire for face-to-face-interaction in this context, we can emphasize the topicality of the physical retail environment and consequently of the retail store brand as a whole. In order to strengthen the position of these brands and to maximize customers' satisfaction as well as their willingness to pay, a smart integration of technologies within the service encounter is indispensable. An economical balance of technological-infusion and interpersonal interaction should be the purpose of further research.

## References

- Ahearne, M., Jones, E., Rapp, A., Mathieu, J.: High touch through high tech: the impact of salesperson technology usage on sales performance via mediating mechanisms. *Manage. Sci.* **54**(4), 671–685 (2008)
- Ahearne, M., Rapp, A.: The role of technology at the interface between salespeople and consumers. *J. Pers. Selling Sales Manage.* **30**(2), 111–120 (2010)
- Babakus, E., Bienstock, C.C., van Scotter, James R.: Linking perceived quality and customer satisfaction to store traffic and revenue growth. *Decis. Sci.* **35**(4), 713–737 (2004)
- Beatson, A., Coote, L.V., Rudd, J.M.: Determining consumer satisfaction and commitment through self-service technology and personal service usage. *J. Mark. Manage.* **22**(7–8), 853–882 (2006)
- Bushong, B., King, L.M., Camerer, C.F., Rangel, A.: Pavlovian processes in consumer choice: the physical presence of a good increases willingness-to-pay. *Am. Econ. Rev.* **100**(4), 1556–1571 (2010)
- Dhar, R., Kim, E.Y.: Seeing the forest or the trees: Implications of construal level theory for consumer choice. *J. Consum. Psychol.* **17**(2), 96–100 (2007)
- De Keyser, A., Köcher, S., Alkire, L., Verbeeck, C., Kandampully, J.: Frontline service technology infusion: conceptual archetypes and future research directions. *J. Serv. Manage.* **30**(1), 156–183 (2019)
- Fuchs, C., Prandelli, E., Schreier, M.: The psychological effects of empowerment strategies on consumer's product demand. *J. Mark.* **74**(1), 65–79 (2010)
- Gefen, D., Straub, D.: Managing user trust in B2C e-services. *e-Service* **2**(2), 7–24 (2003)
- Giebelhausen, M., Robinson, S.G., Sirianni, N.J., Brady, M.K.: Touch versus tech. when technology functions as a barrier or a benefit to service encounters. *J. Mark.* **78**(4), 113–124 (2014)
- Grewal, D., Roggeveen, A., Nordfält, J.: The future of retailing. *J. Retail.* **93**(1), 1–6 (2017)
- Jamal, A., Adelowore, A.: Customer-employee relationship: the role of self-employee congruence. *Eur. J. Mark.* **42**(11/12), 1316–1345 (2008)
- Marinova, D., de Ruyter, K., Huang, M.-H., Meuter, M.L., Challagalla, G.: Getting smart. *J. Serv. Res.* **20**(1), 29–42 (2016)
- Mashek, D., Stuewig, J., Furukawa, E., Tangney, J.: Psychological and behavioral implications of connectedness to communities with opposing values and beliefs. *J. Soc. Clin. Psychol.* **25**(4), 404–428 (2006)
- Novak, T.P., Hoffman, D.L.: Relationship journeys in the internet of things: a new framework for understanding interactions between consumers and smart objects. *J. Acad. Mark. Sci.* **47**(2), 1–22 (2018)
- Perdue, B.C., Summers, J.O.: Checking the success of manipulations in marketing experiments. *J. Mark. Res.* **23**(4), 317–326 (1986)
- Rafaeli, A., Altman, D., Gremler, D.D., Huang, M.-H., Grewal, D., Iyer, B., Parasuraman, A., de Ruyter, K.: The future of frontline research. *J. Serv. Res.* **20**(1), 91–99 (2017)
- Reinders, M.J., Dabholkar, P.A., Frambach, R.T.: Consequences of forcing consumers to use technology-based self-service. *J. Serv. Res.* **11**(2), 107–123 (2008)

- Spake, Deborah F., Beatty, Sharon E., Brockman, Beverly K., Crutchfield, Tammy: Consumer comfort in service relationships: measurement and importance. *J. Serv. Res.* **5**(4), 316–332 (2003)
- Srivastava, M., Kaul, D.: Social interaction, convenience and customer satisfaction. the mediating effect of customer experience. *J. Retail. Consum. Serv.* **21**(6), 1028–1037 (2014)
- Turner, J.H.: *A theory of social interaction*. Stanford University Press, Palo Alto (1988)
- Van Dolen, W., Lemmink, J., de Ruyter, K., de Jong, A.: Customer-sales employee encounters: a dyadic perspective. *J. Retail.* **78**(4), 265–279 (2002)
- van Doorn, J., Mende, M., Noble, S.M., Hulland, J., Ostrom, A.L., Grewal, D., Petersen, J.A.: Domo Arigato Mr. Roboto: emergence of automated social presence in organizational frontlines and customer's service experiences. *J. Serv. Res.* **20**(1), 43–58 (2016)
- Wunderlich, N.V., Wangenheim, F.V., Bitner, M.J.: High tech and high touch: a framework for understanding user attitudes and behaviors related to smart interactive services. *J. Serv. Res.* **16**(1), 3–20 (2013)
- Yoo, J.: Customer power and FES voice behavior. *Eur. J. Mark.* **51**(1), 238–256 (2017)
- Zhao, X., Lynch Jr., J.G., Chen, Q.: Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *J. Consum. Res.* **37**(2), 197–206 (2010)



# The Vegan Revolution: Opportunities and Differences Across Countries

Belén Derqui<sup>1</sup>(✉), Hana Gendel Guterman<sup>2</sup>, Mahsa Ghaffari<sup>3</sup>, and Padmali Rodrigo<sup>4</sup>

<sup>1</sup> IQS School of Management, Universitat Ramon Llull, Barcelona, Spain  
belen.derqui@iqs.url.edu

<sup>2</sup> Ariel University, Ariel, Israel

<sup>3</sup> University of Portsmouth, Portsmouth, UK

<sup>4</sup> University of Northumbria, Newcastle upon Tyne, UK

**Abstract.** Adopting a vegan diet can be beneficial in addressing public, health, and environmental concerns associated with increasing levels of meat consumption. However, veganism remains an underdeveloped area of investigation. The majority of studies on dietary lifestyles have focused on vegetarianism and there are only a limited number on consumer adoption of vegan diets and cultural differences in this regard. To close this gap, the study investigates consumers' cognitive structures for adopting a vegan diet through exploring the hierarchical linkages between vegan product attributes, consequences of vegan product consumption and consumer values in two countries. The data were gathered via semi-structured laddering interviews with vegan consumers in Spain and Israel. These interviews were complemented with projective and enabling techniques to facilitate the elicitation of initial product attributes. The findings of the study reveal that the cognitive structures behind vegan consumption are comprised of abstract (e.g., eco-friendliness) and tangible product attributes (e.g., freshness), functional (feeling healthy) and psychological consequences (feeling guilt-free), as well as terminal (achievement) and instrumental values (self-direction). The study discusses implications for marketing and policymaking.

**Keywords:** Veganism · Laddering interviews · Means-end chain · Values · Consumers

## 1 Introduction

Veganism is a globally growing phenomenon. The drastic increase in the number of vegans all over the world in the last decade is evidence of a change and being vegan is considered the biggest food trend nowadays. Moreover, European retailers are becoming increasingly more interested in vegan foods and beverages because vegan ranges offer a point of difference for retailers currently facing increasing competition (Schierhorn 2017).

Marketing practitioners have reacted to the increased demand about veganism and introduced new vegan products. According to MINTEL GNPD, the number of new



products including Vegan/No animal ingredients claims has tripled since 2014, reaching more than 5% of the global food and drink launches, and up to 15% in Germany or 14% in the UK and 4% in Spain (Mintel 2018). Meanwhile the ratio of new products with vegetarian claims has remained 11% which is stable in the same period.

That said, research indicates that this trend is comprised of three consumer sub-groups based on diverse motivations, namely: health and personal wellbeing, environment, and ethics (animal welfare), although most consumers are driven by more than one motive (Janssen 2016). Due to the rapid growth of the veganism, it is important to identify the motives and higher values held among sub-groups of vegans today, and to discover the importance of these values in leading the increase in veganism. The results of this study will be useful for marketing strategy practitioners to provide manufacturers with a guideline for developing new vegan products. In addition, it can help retailers in developing effective communication messages and corresponding offers.

It is important to note that the rate of vegans in various countries are very different. For instance, 5% in Israel, 4% in Sweden and 1.1% in the United Kingdom and only 0.1% in Spain (Lane 2020). Such differences may arise from cultural, sociologic and economic differences among countries. Hence, it is important to explore the underpinning reasons resulting in such differences. In this study two countries, Israel and Spain, are selected, where the rate of veganism is not corresponding to the obvious factors such as religion, being part of developed or developing country. In this research, we rely on the updated Hofstede's five dimensions model (2001) that compares many countries. In this respect, Spain and Israel - despite having a similar culture in regard to power distance, individualism, masculinity, uncertainty avoidance, long term orientation, and indulge (Hofstede 1980) - have very different rate of vegans. For this purpose, in this research a qualitative approach is adopted where reasons behind the adoption of vegan diet are explored through in-depth interviews and laddering techniques. It is important to note that identical guidelines in the two countries were used to ensure consistency. The results were analysed according to the means-end chain model. The model assumes that the consequences of consumption are the "means" for the consumers to satisfy their desired goals or values (Choi 2016). By investigating means-end chains in two countries, we aim to discover a broader spectrum of possible chains.

## 2 Literature Review

The research about the vegan movement and its sources is scarce. Many studies focus on vegans together with vegetarians, or just vegetarians (e.g. Vinnari et al. 2009; Christopher et al. 2018). Therefore, there is a need to rely on the more expanded research of the vegetarian movement. Most of research acknowledge that there is a vegetarian diet spectrum, beginning with "Pesco", people who consume fish, dairy and eggs but no meat, to "Lacto-ovo" who consume only dairy and eggs, to "Vegan" who does not consume any animal products at all. The vegan segment conducts the strictest kind of diet (Christopher et al. 2018). In fact, veganism is described by Ulusoy (2015, p 419) as a philosophy, a movement that goes beyond the diet, entails "abstinence from any animal product including meat, dairy, eggs, leather and silk and stands against animal exploitation". Thus, veganism is defined as the practice of abstaining from the use

of all animal-derived products (The Vegan Society 2016). Merely people who consume only plant based substances is to be considered vegan (Vinnari et al. 2009).

Cherry (2006) posits veganism is a cultural movement closely linked to animal right and environmental defence movements. Furthermore, according to Ulusoy (2015), veganism can be a way for consumers to express their identities, concluding that veganism includes three dimensions, as it is the core of ethical consumerism, environmental sustainability, as well as consumer health and wellbeing. Correspondingly, veganism movement can transform marketplace structures for reasons regarding social justice, animal welfare or/and health.

Research has described several demographic traits of vegetarians and vegans. Usually there are more women among them, they are more educated as well as being more affluent and with more liberal political views (Tobler 2011, Ruby 2012; Vinnari et al. 2009). Veganism is a youth driven trend in Europe: the 16–24 year old age group is leading the trend with for instance 7% vegan consumers in this age group in Spain (compared to 0,1% nationwide) or 12% in France (Statista). Furthermore, in three surveys in Finland, it was found that they are predominantly single or divorced (Vinnari et al. 2009). Worth highlighting is the fact that in certain religions, being vegetarian remains a central element (Walters and Portmess 2001).

## 2.1 Vegan Motives

Most current research deals with the motives that derive people to become vegetarians or vegans. Scholars emphasize three main motives: firstly, health-driven diets; secondly, preventing animal suffering and, finally, environmental and sustainability concerns (Testoni et al. 2017; Christopher et al. 2018; da Costa Birchal et al. 2018). The first one, following a healthy diet, is based on functional and self-related needs; the other two motives arise from ethical or moral values, other related needs. Research has also found that both ethical and health vegetarians are expressing environmental concerns (Springmann et al. 2016; Amiot and Bastian 2017; Testoni et al. 2017). Interestingly, Tobler (2011) concluded that the less frequently consumers eat meat, the more aware they are on the environmental benefit of reducing meat consumption.

Ruby (2012) found that ethical vegetarians were more restrictive in their diets than health vegetarians. However, it was found these motives usually evolve through life, (Beardsworth and Keil 1992; Fox et al. 2008; Ruby 2012). Thus, when exploring personal motives, it is prudent to assume that several reasons coexist (Christopher et al. 2018). Da Costa Birchal et al. (2018) go further and indicate five motives to become vegetarians or vegans: functional - being healthy, physical and mental well-being; social - perception that being a vegetarian is something positive; emotional - more peaceful feeling, a clean conscience; conditional - ease of access and variety of vegetarian food and monetary values. Beardsworth and Keil (1992) refer to another motive – spirituality, one’s most innermost beliefs, thoughts, and feelings, which might represent the emotional motive, mentioned before.

On the other hand, Vainio et al. (2016) found that convenience and price were the main barriers preventing consumers from substituting meat with plant proteins. With regard to other relevant issues considered by consumers in their decision making process when

buying vegan food, Tobler et al. (2011) found that consumers seem to overestimate the environmental impact caused by food packaging.

## 2.2 Theoretical Framework

This study differs from previous research as it uses “The means–end chain model” for understanding behaviors, associations and goals). This model was built on the hypothesis that a product’s anticipated consequences through consumption are the “means” for the consumer to satisfy his or her “ends”, namely, desired goals or values (Choi 2016). The idea of levels of abstraction is expressed in this model: attributes or reasons have the lowest level of abstraction, they are linked to psychological consequences or associations which have a higher level of abstraction, and in turn they are linked to value, which has the highest level of abstraction. (Gutman 1982). The model enables to understand how the attribute of a product or its purchasing consumption can be used to fulfill personal values of a consumer. Thus, deciphering the “hidden” motivation of consumers using vegan products. In these “laddering” methods, only significant behaviors are studied and the values are revealed by questioning why particular things are done or are seen to be important. Then, the “why” usually discovers some conscious rationalization of the behavior. The reasons behind the adoption of a vegan diet that cannot be articulated by consumers, can be revealed through a MEC laddering technique.

## 3 Methods

This research was conducted in Spain and Israel through qualitative interviews among 10 vegan consumers in Spain and 11 in Israel. In Spain, the majority (70%) were female, age range between 22–55, all had university degrees. Both in Spain and Israel most of them (70–65%) had been vegetarians prior to becoming vegan and were social activists. In Israel, the ratio of women vs men was similar, age range from 21–72, most (90%) had university degrees. Hence, samples share similarities and differences do not invalidate results.

The interviews were conducted face to face or by telephone, relying on a semi-structured interview, including projective techniques, encompassing eating habits, dining out behavior, opinion on meat consumption, family and social influence, the importance of attributes in choosing vegan food. In addition, free association technique was used to compare attitudes regarding meat eaters and vegans projecting in appearance, type of animal etc. as well as the most important values for each interviewee for adopting a vegan diet. The length of each interview was about one hour. Interviews were recorded and transcribed or hand written during the interviews. Next step was analyzing the verbatims, coding and ranking of codes by frequency of usage. Final step was to categorize the answers (attribute, consequences and values). In order to ensure inter reliability the data were analysed by all researchers.

## 4 Results

Results are based on comparing the three levels of the means-end model in the two countries in order to see the influence of diverse cultures on vegan consumers' behavior and values.

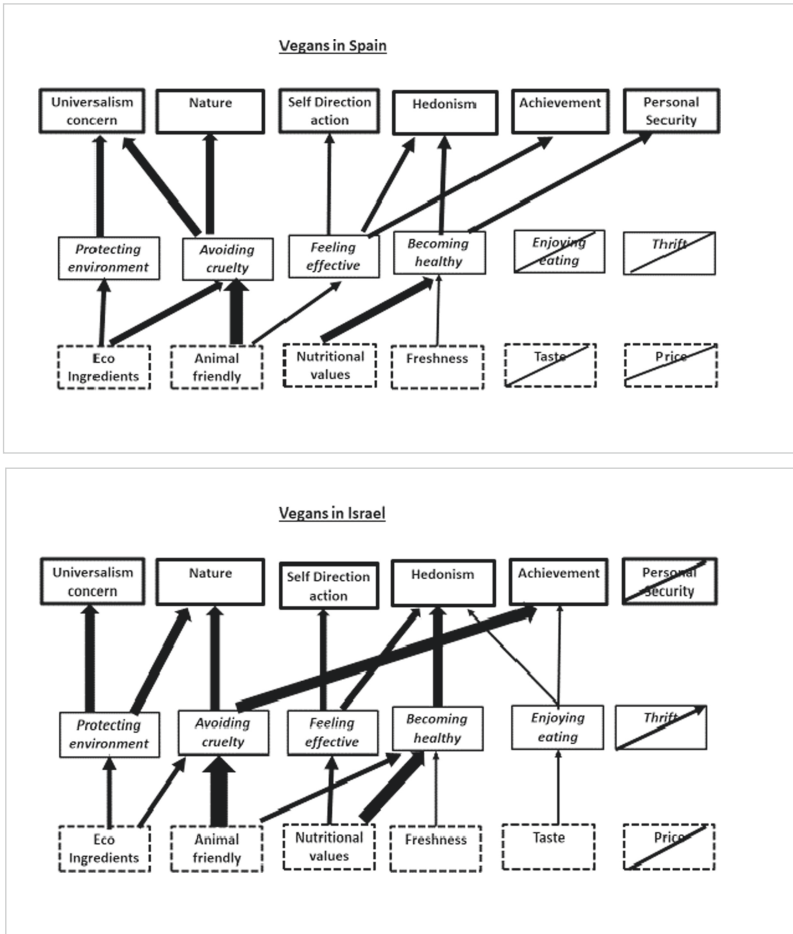


Fig. 1. Hierarchical value maps.

Table 1 below summaries the results and Fig. 1 represents them graphically.

**Table 1.** Data Analysis of the three countries (Horizontal %)

<i>Values</i>	<i>Universalism</i>	<i>Nature-animal</i>	<i>Self-direction</i>	<i>Achievement</i>	<i>Hedonism</i>	<i>Security</i>	
<i>Spain</i>	13%	31%	14%	2%	40%	0%	
<i>Israel</i>	18%	36%	15%	1%	27%	0%	
<i>Consequences</i>	<i>Protecting environment</i>	<i>Avoiding crudity</i>	<i>Feeling effective</i>	<i>Becoming healthy</i>	<i>Enjoying eating</i>	<i>Thrift</i>	<i>Animal Welfare</i>
<i>Spain</i>	9%	14%	14%	34%	5%	0%	24%
<i>Israels</i>	13%	18%	15%	23%	4%	0%	27%
<i>Behavior</i>	<i>Eco-universe welfare</i>	<i>Friendly to animals</i>	<i>Nutritional values</i>	<i>Freshness</i>	<i>Taste</i>	<i>Price</i>	
<i>Spain</i>	<b>19%</b>	<b>43%</b>	<b>27%</b>	<b>11%</b>	<b>0%</b>	<b>0%</b>	
<i>Israel</i>	<b>21%</b>	<b>40%</b>	<b>32%</b>	<b>2%</b>	<b>6%</b>	<b>0%</b>	

## 5 Discussion/Implications

Consistent with literature, the main values that guide vegans in the three countries are animal ethics concern (Fox and Ward 2008), environmental concern and health concern. However, this research contribution is new: the importance of each value changes according to the culture in these countries. The values in Spain and in Israel are quite similar. According to Hofstede's five dimensions' model: Spain and Israel share high collectivism and uncertainty avoidance and lesser masculinity. Interestingly, motive number one to adopt a vegan lifestyle in Spain and Israel is animal welfare, with about 40% of the motives. It can be assumed that in a collectivistic culture, caring for others is part of the basic values and maybe animals are even considered to be "others", while in more individualist countries, personal utilities are prioritized, and people think less about others. It should be noticed that the value representing financial security and saving was not mentioned by interviewees. The explanation may lie in the relative high prices of animal-free ingredient products compared to "regular" products in Spain and Israel.

This research has theoretical and empirical contributions. First, it demonstrates the need for cross national behavior and value research. Yet, it is important to understand factors that affect the different penetration rates of vegan and vegetarian consumers across countries. For example, the low share of veganism in Spain, is not illustrated in this research. This issue should be considered for future research.

This study has several practical implications. Although vegans across countries embrace animal welfare and sustainability issues, marketers addressing vegans still need to consider that they may have diverse motivations. Animal welfare and protecting the environment should be highlighted in Spain and Israel, while pleasure and price issues are not so relevant. As consumers increasingly demand information about products, brands and retailers must ensure enough on-pack labelling information and in-store signage to

ease vegan consumers' path to purchase. For retailers, they might consider displaying vegan products in proximity, not adjacent to the health-products area, in high collectivism and uncertainty avoidance countries like Israel or Spain. Future research should use quantitative methods to increase the generalizability of this study's findings.

## References

- Amiot, C.E., Bastian, B.: Solidarity with animals: assessing a relevant dimension of social identification with animals. *PLoS ONE* **12**(1), e0168184 (2017)
- Beardsworth, A., Keil, T.: The vegetarian option: varieties, conversions, motives and careers. *Soc. Rev.* **40**, 253–293 (1992)
- Choi, B.J.: The influence of cultural thinking style on consumer cognitive complexity underlying wine purchase decisions. *J. Appl. Bus. Res.* **32**(4), 1257 (2016)
- Christopher, A., Bartkowski, J., Haverda, T.: Portraits of veganism: a comparative discourse analysis of a second-order subculture. *Societies* **8**(3), 55 (2018)
- da Costa Birchall, R.A.M., Moura, L.R.C., Vasconcelos, F.C.W., da Silveira Cunha, N.R.: The value and the sacrifice perceived by vegetarian food consumers. *Revista Pensamento Contemporâneo em Administração* **12**(1), 1–17 (2018)
- Fox, N., Ward, K.: Health, ethics and environment: a qualitative study of vegetarian motivations. *Appetite* **50**, 422–429 (2008)
- Gutman, J.: A means-end chain model based on consumer categorization processes. *J. Mark.* **26**, 60–72 (1982)
- Hofstede, G.: *Culture's Consequences: International Differences in Work-Related Values*. Sage, Beverly Hills (1980)
- Hofstede, G.: *Culture's consequences: comparing values, behaviors, institutions, and organizations across Nations*, 2nd edn. Sage, Thousand Oaks (2001)
- Janssen, M., Busch, C., Rödiger, M., Hamm, U.: Motives of consumers following a vegan diet and their attitudes towards animal agriculture. *Appetite* **105**, 643–651 (2016)
- Lane: How many vegans in the world? In the USA (2020). <https://veganbits.com/vegan-demographics/>
- Mintel Press Office, July 30 2018 <https://www.mintel.com/press-centre/food-and-drink/>. Accessed 2 Jan 2020
- Ruby, M.B.: Vegetarianism: a blossoming field of study. *Appetite* **58**, 141–150 (2012)
- Schierhorn, C.: *Private Label International*, vol. 33, no. 2 (2017)
- Springmann, M., Godfray, H.C.J., Rayner, M., Scarborough, P.: Analysis and valuation of the health and climate change cobenefits of dietary change. *PNAS* **113**(15), 4146–4151 (2016)
- Testoni, I., Ghellar, T., Rodelli, M., De Cataldo, L., Zamperini, A.: Representations of death among Italian vegetarians: an ethnographic research on environment, disgust and transcendence. *Eur. J. Psychol.* **13**(3), 378 (2017)
- The Vegan Society: Memorandum and articles of association, May 28 2016 (2016). <https://www.vegansociety.com/resources/downloads/articles-association-2017>
- Tobler: Eating green Consumers' willingness to adopt ecological food consumption behaviors. *Appetite*, **57**(3), 674–682 (2011)
- Ulusoy, E.: I Think, therefore i am vegan: veganism, ethics, and social justice. In: Proceedings of the 40th Annual Macromarketing Conference (2015)
- Vinnari, M., Montonen, J., Härkänen, T., Männistö, S.: Identifying vegetarians and their food consumption according to self-identification and operationalized definition in Finland. *Publ. Health Nutr.* **12**(4), 481–488 (2009)
- Walters, K.S., Portmess, L.: *Religious vegetarianism: From Hesiod to the Dalai Lama*. SUNY Press, Albany (2001)



# Assortment Mix Choice Within Shop and Drive: Customer Arbitrage on the Competition Between Private Label and National Brand

Léopold Lessassy<sup>1</sup>(✉) and Patrick Georges<sup>2</sup>

<sup>1</sup> CERAG, Université Grenoble Alpes, Grenoble, France  
leopold.lessassy@univ-grenoble-alpes.fr

<sup>2</sup> Schneider Electric Industry Business, Rueil-Malmaison, France  
patgeocom@gmail.com

**Abstract.** The retailing world looks less and less like it did years ago. The development of Private Label (PL) in almost every consumer product category and the advent of Omni-channel retailing have changed dramatically the landscape. However the evolution of Private Label has tender to be mixed and the competition between National Brand (NB) and Private Label becomes stronger and stronger. The Omni-channel retailing is offering to the retailer the opportunity to push, within the product mix, PL products in difficulties, mainly when managing a physical outlet and an attached-Drive. Investigation and analysis of data between two channels of a distribution chain (Study 1) and a customer survey on mix-clients (Shop & Drive) (study 2) demonstrate inconsistencies of the Drive product-mix choices and the moderating role of the inventory shortage and out of date good policy. The results suggest to the retailer which products to be referenced or delisted.

**Keywords:** Private Label · National Brand · Omni-channel retailing · Drive

## 1 Introduction

The retailing world has changed dramatically in the recent years. Manufacturers and retailers are being compelled to more frequently rethink and adapt their organizations, strategies and even business models to satisfy, retain as well as grow their customer bases. These adaptations, Drive stores, Private Label products, oftentimes aim to optimize the customer's experience with the manufacturer's brand or the retailer's brand throughout the whole customer journey, thereby increasing the chances of the company to survive in the new retail landscape (Stanton et al. 2015).

A retail landscape deeply impacted by the digitalization with the dawn of the mobile channel, tablets, social media and the integration of these new channels in online and offline retailing (Verhoef et al. 2015).

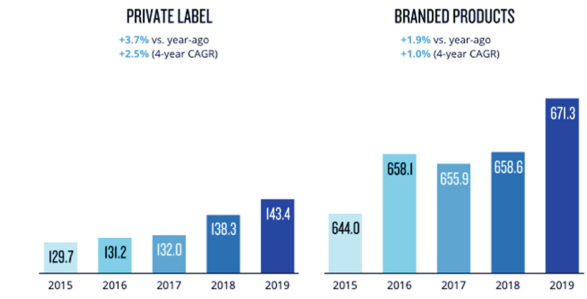
The Drive Stores are part of this change. Since the launching of the Drive, the concept is growing (+7% in France Nielsen report 2019) and represents an important part of the retail sales in many countries.

In the meantime, retailers are filling their shelves with Private Label products to better control branding, pricing, and profitability. While Private Label products are in the minority, some are showing a strong growth according to a Nielsen report (2019). Please, see Fig. 1.

These out of stocks have forced the retailers to implement a new strategy and to take advantage of the right tools.

The literature was interested in the way the distributors, with both physical outlets and online ones, decide or not to implement within its online channel the same product mix (Emrich et al. 2015).

### DOLLAR SALES & GROWTH



Source: Nielsen Retail Measurement Services, inclusive of Nielsen's Total Food View, Total U.S. All Outlets Combined (vAOC), 52 weeks ended May 25, 2019 vs. year-ago  
 CAGR - Compounded Annual Growth Rate  
 Copyright © 2019 The Nielsen Company (US), LLC. All Rights Reserved

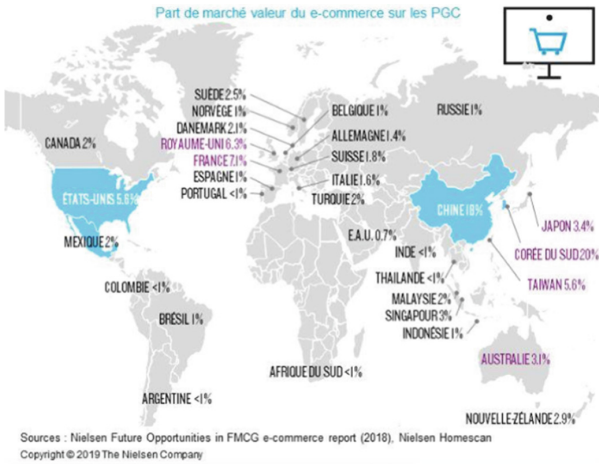


Fig. 1. Nielsen Retail Report

But the competition between NB and PL on this new format was not examined and in particular the mix-customer reactions (offline and online).

Nevertheless, Specialized media and annual reports of major distribution companies mention the decisions taken in terms of PL strategy for their online channels with reference of outlet situations (Annual report Carrefour 2018; Annual report Casino 2018).



- The Drive.com is an opportunity to promote Private Label
- The distributor is placing and pushing in the Drive its Private Label products that are not moving within the shop to try to re-boost their sales
- On the other hand the distributor is not placing in the Drive successful Shop NB references to limit competition with its PL.

The aim of the present research is then to assess the impact of drive PLs and NB assortment management on consumers' reaction, taking into consideration other factors identified that may influence consumers' loyalty (store-related factors: in-store and economic factors).

We address this issue by offering an integrative model of store loyalty in which not only is the consumers' loyalty towards the PLs included as an explanatory variable, but also several other drivers of store loyalty that have been highlighted in earlier studies that play a relevant role. In addition, this research takes into consideration the multi-dimensional characteristics of loyalty, controlling simultaneously for retailers' and consumers' specific characteristics.

Two studies will help us demonstrate inconsistencies of the e-Drive product-mix choices and the moderating role of the inventory shortage and out of date good policy. The results suggest to the retailer which products to be referenced or delisted.

## 2 Conceptual Framework

### **The Drive: Connect/Click/Collect**

Born in the 1940's in the USA with the Drive-thru concept, the model appears in the 2010's within the Hypermarket retail. But how does it works? With just a few clicks, you shop on the website of the closest retailer offering this Drive service. After choosing your products, you place your order online, then print your ticket, or keep it on your smartphone. You can pick up your products whenever you want, from two hours to three days after your order. The employee loads the groceries directly into the trunk of the car, the waiting time for delivery is a few minutes.

### **Hypothesis**

- H1a.** The decision not to promote identically NB or PL of the shop to in the Drive is influencing the mix-customer's purchases towards PL and consequently the Drive sales
- H1b.** The decision to promote identically NB and PL of the shop to in the Drive is influencing the consumer satisfaction
- H2.** The out of date goods policy is moderating the effects of this strategy. When the level of out of date goods is low, the e-Drive sales increases, When the level of out of date goods is high, the e-Drive sales decreases.
- H3.** The out of stock policy is moderating the effects of this strategy The decision not to promote identically NB or PL of the shop to in the e-Drive on the Drive sales. Précisely, not suggesting replacement while stock-outs are immediately visible at delivery stage, reduces more the e-Drive sales than suggesting replacement while stock-outs are immediately visible at delivery stage. This is line with literature showing that suggesting a replacement item, in contrast, facilitates the substitution

decision and slightly reduces the purchase cancellation rate. It also substantially increases the suggested item’s choice probability (Breugelmans et al. 2007).

Please, see the conceptual model in Fig. 2.

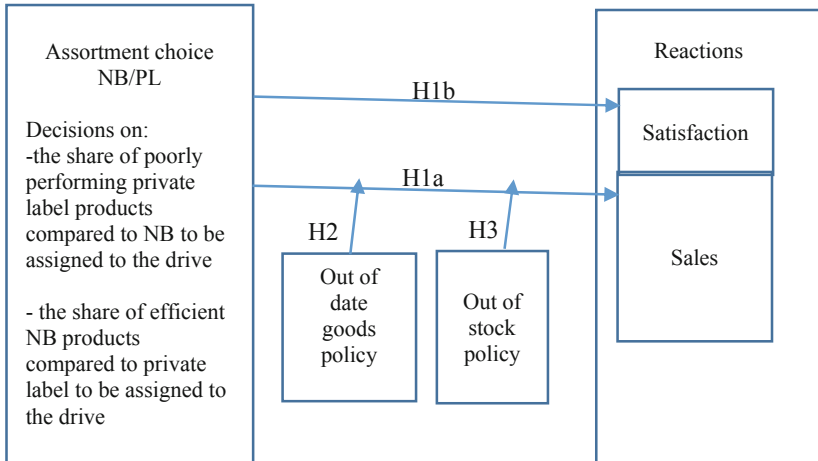


Fig. 2. Conceptual model

### 3 Data Collection Method

To measure the Drive sales performances We had access to two series of data:

- The sales data on cheese categories (year 2016) in shop and Drive differentiating National Brands and Private Label offers.
- The Sales performance of 96 Drives with the impacts of Out of Goods and out of stock policies

To assess the mix-customer satisfaction and determine their barriers and motivations we have implemented 2 groups of interviews (led by students in 2015 through Internet and Telephone):

- Targeting Customers who have abandoned the Drive: 101 interviews, 86% who were responsible for the purchases.
- Targeting occasional customers (customers for more than six months with a single order by month): 154 interviews 80% Women 20% Men.

#### 3.1 Measures of Variables

- Product mix choice: number of NB of the store presented at the drive; number of store private label presented at the drive.
- Mix customer reaction: sales figures for the period

- Out of date goods policy is measured in euros by the figures representing the value of products not sold

We use sales data, delivered the retailer Auchan who own the drive and the store. We have used the figures provided by the distributor on the breakage at the drive. We compared the means between product mix choice and case. There is indeed a significant relationship between the choices in terms of MN and MDD for the drive and the level of breakage at the drive. We used the comparison of means. We have validated the moderating roles of the 3 policies on the relationship between choice of assortment between NB and PL and sales at the drive. The hypotheses H1, H2 and H3 are validated.

## 4 Results

### 4.1 Findings 1

The choice of the retailer

- The complete cheese offer (332 products) is made of 181 mandatory and 151 complementary with a mix of National Brands and Private Labels
- The decision was to introduce in the Drive more products of the complementary range and less of the mandatory range.
- The distributor is taking up the challenge that the customer will buy more on complementary brands and Private Label offers through the Drive.
  - On the 332 products offered 32 products from mandatory range are not part of the Drive offer
  - On the 79 best sales of the complementary range ( $VMH > 20$ ) through the Hyper store 27 absence of products in the Drive and mainly NB
  - On the 50 poorer sales of the complementary range through the Hyper store 27 products are within the Drive offer.

### First findings

- Performances of:
  - We observe that the Hyper store Average Weekly Sales ( $VMH$  Hyper) are higher than the Drive Average Weekly Sales ( $VMH$  Drive)
  - With the appearance of 2 categories of products
    - Segment 1 with a 1 to 8 variance between sales Drive and sales Hyper
    - Segment 2 with a 1 to 2 variance between sales Drive and sales Hyper
  - On both channels the performance of the 50 poorer sales remains low, there is no clear evidence of the impact of the Drive
  - In the complementary range the lower sales are in both NB and PL.

- On the 79 best sales of the complementary range within the Hyper (VMH > 20) 27 products are not offered through the Drive

The hypothesis H1a is not validated. The above study is demonstrating that the addition of a Drive channel is not boosting the PL sales in front of the NB.

## 4.2 Second Findings

- H2- The out of date goods policy is moderating the effects of this strategy  
When the level of out of date goods is low, the e-Drive sales increases, When the level of out of date goods is high, the e-Drive sales decreases.
- H3- The out of stock policy is moderating the effects of this strategy The decision not to promote identically NB or PL of the shop to in the e-Drive on the Drive sales. Precisely, Not suggesting replacement while stock-outs are immediately visible at delivery stage, reduces more the e-Drive sales than suggesting replacement while stock-outs are immediately visible at delivery stage

Extract of data sheet. Please, see Table 1.

**Table 1.** Extract of data sheet.

Year	Month	Place	Nr of orders	Sales	Range	average	% of out of stock	% of out of date
2016	January	DARDILLY	13 162	1 107 792,38 €	9 592	377	3,92%	0,12%
2017	February	DARDILLY	11 799	972 202,11 €	9 354	314	3,35%	1,04%
2018	March	DARDILLY	13 562	1 104 973,12 €	9 300	404	4,34%	0,09%
2019	April	DARDILLY	12 241	1 016 940,89 €	9 156	316	3,45%	0,13%
2020	May	DARDILLY	12 266	1 033 751,56 €	9 238	391	4,23%	0,09%
2021	June	DARDILLY	9 030	773 903,19 €	9 324	328	3,53%	0,13%
2022	January	EPAGNY	19 319	1 653 895,50 €	9 545	400	4,19%	0,04%
2023	February	EPAGNY	18 726	1 587 909,64 €	9 496	336	3,55%	0,05%
2024	March	EPAGNY	19 945	1 686 625,57 €	9 577	367	3,83%	0,05%
2025	April	EPAGNY	19 012	1 602 755,55 €	9 516	350	3,68%	0,10%
2026	May	EPAGNY	18 899	1 596 732,40 €	9 635	515	5,35%	0,06%
2027	June	EPAGNY	12 625	1 064 843,10 €	9 840	438	4,46%	0,03%

## 4.3 Third Findings

- H1b- The decision to promote identically NB and PL of the shop to in the Drive is influencing the consumer satisfaction

### Customer interviews

– Let us listen to the customers who abandon the Drive (101 interviews)

- The first purchases were driven by curiosity and speed of service.
- The top 3 of the most important elements for the customers: 1<sup>st</sup> Speed of the ordering, 2<sup>nd</sup> The number of references, 3<sup>rd</sup> the variety of payment mode
- The top 3 of the most important elements regarding the service to the trunk: 1<sup>st</sup> the speed of the service, 2<sup>nd</sup> Welcoming staff, 3<sup>rd</sup> quality presentation of the goods

- The main reasons of their abandon: 1<sup>st</sup> insufficient assortment offer 2<sup>nd</sup> better perception of competitors' offers 3<sup>rd</sup> low intuitive web site
  - 89% of the customers who have abandoned are satisfied of the Drive service but are looking for a wider offer more comparable with the store's
- Who are the occasional customers of the Drive (154 interviews)
- 80% Women, 20% Men. 47% 18–35 years old, 43% 36–55, 10% > 55 years old
  - Social Professional Groups + : 37% , – : 63%
  - 57% have already ordered in an other Drive
  - Important criteria: 1<sup>st</sup> Speed of the service and the diversity of proposed offers 3<sup>rd</sup> the kindness of the employees. See Fig. 3.



Fig. 3. Quotes taken from the interviews.

- H1b is validated: both studies are emphasizing the importance of the variety of the offer as a key element of the Drive.

#### 4.4 Study 3: Retailer's Data Related to Logistic Issues

The objective of this study 3 is to measure the effect of integrating the NB/PL brand assortment (choose the MN and MDDs from the store that will be presented at the drive) following the out of date goods policy, the out of stock policy and the transfer drive/shop policy.

What is the Out of date goods policy? (Auchan example)

These are the products that are withdrawn for sale because their sales deadline (DLV) (Auchan Hyper and Drive Charter) is exceeded. At Auchan, They withdraw from the DLV to give our customers time to consume the products.

Example: you receive a product on 01/01 and its DLC is on 18/01 : 01/01 09/01 : DSA 12/01 : DLV 18/01 : DLC The products not sold to the store on 09/01 and not sold on 12/01, are therefore broken on 12/01. Namely: Auchan donates "broken" products to food banks.

Even before taking concrete action to reduce food waste at the point of sale, experiments of green Cook partners (Greentag and the University of Stuttgart (ISWA)) have shown that it is appropriate to identify the causes and scale, with qualitative elements but also encrypted data to quantify which rays generate the most waste and how much, in the end, the “cost” of food waste is for the store chain.

## 5 Conclusion

Our study challenges the idea that adding a drive format (of the click & collect type with a transported customer) to the traditional store allows private label stores to face competition from NB. Mixed consumers tend to reproduce the same purchase volumes from store to drive. However, the sales levels of the complementary range remain better than those of the compulsory range.

The results show the inconsistencies in the choice of drive assortment and the moderating role of the out-of-stock and breakage policies. However, the use of services allows the distributor to reduce this trend. Indeed, the distributor, by improving the policy of breakage, of responses to stock shortages, of transfer from drive to store, the effects of decisions on the choice between NB and PLs at the level of assortments are reduced. These results also underscore the importance of brand substitution in the event of a breakdown. When an NB is out of stock, offering a private label instead would be risky. PLs proposal should be made after acceptance by the client. Otherwise, his satisfaction may be affected. The results suggest to the distributor which products to reference or dereference. The PL products in the compulsory range, which do not sell well compared to NB in stores, do not improve their performance on the drive, with mixed customers. One would think, given the results of our qualitative study, that only new exclusive drive customers would contribute to developing these private labels.

One might think that it would be wise for the distributor to reference NB products in the Mandatory Range in drive; then dereference in Drive products in the Complementary range that do not sell. We can think that it would be wise for the distributor to reference in complementary Products in drive which sell well in hypermarkets. Consequently, it could dereference in drive products in the Complementary Range which sell less well.

Our study is based on a single chain. This is one of the main limitations. NB and PL assortment decisions effects may differ across chains.

## References

- Annual report Carrefour, 2018; Annual report Casino, 2018
- Breugelmans, E., Campo, K., Gijsbrechts, E.: Shelf sequence and proximity effects on online grocery choices. *Mark. Lett.* **18**, 117–133 (2007)
- Emrich, O., Paul, M., Rudolph, T.: Shopping benefits of multichannel assortment integration and the moderating role of retailer type. *J. Retail.* **91**(2), 326–342 (2015)
- Nielsen report (2019)
- Stanton, J.L., Wiley, J., Hooker, N.H., Salmikova, E.: Relationship of product claims between private label and national brands: the influence of private label penetration. *Int. J. Retail Distrib. Manag.* **43**(9), 815–830 (2015)
- Verhoef, P.C., Kannan, P.K., Inman, J.J.: From multi-channel retailing to omni-channel retailing: Introduction to the special issue on multi-channel retailing. *J. Retail.* **9**(2), 174–181 (2015)



# Influences of Juxtaposition, Coordination and Brand Type on Product Evaluation: An In-Store Experimental Approach

Léopold Lessassy<sup>1</sup>(✉) and Alain Jolibert<sup>2</sup>

<sup>1</sup> IAE, CERAG, University Grenoble Alpes, Grenoble, France  
leopold.lessassy@univ-grenoble-alpes.fr

<sup>2</sup> CERAG, INSEEC Chambéry, Le Bourget-du-Lac, France  
alain.jolibert@univ-grenoble-alpes.fr

**Abstract.** Retailers often organize part of their assortment by displaying products from juxtaposition (vertically, horizontally or separately) and coordination (target, complementary) modes. Researchers have observed an interaction effect of coordination and juxtaposition on product evaluation. This article investigated how the inclusion of brand, national brand (NB) and private label (PL), in the juxtaposition and coordination analysis, as a three-way interaction, influences product evaluation. We use an in-store survey and a controlled experiment to test our framework. The results show that, in the dual interaction, a complement PL and a target NB presented vertically are favorably evaluated, while a horizontal display induces a poor evaluation. However, in the three-way interactions a horizontal display and a separate presentation lead to better product evaluations.

**Keywords:** Product coordination · National brand · Retailer brand · Juxtaposition · Evaluation

## 1 Introduction

Retailers often organize part of their assortment by displaying products from juxtaposition (vertically, horizontally or separately) and coordination (target, complementary) modes (Lam and Mukherjee 2005). Juxtaposition implies the proximate placement of complementary items (e.g., shirts and pants) on the shelf (e.g., vertically, side by side, or horizontally), such that they appear to pertain to the same set. Coordination instead emphasises close links between a target product, which the customer already has indicated an interest in purchasing while entering the store, and a complementary product that is consumed together with the target product. Researchers have observed an interaction effect of coordination and juxtaposition on the North American consumers' product attitudes (Lam and Mukherjee 2005; Russell et al. 1999).

Private labels (PLs) are much more important in Europe than in the USA. In U.S. grocery stores, the PL dollar share of consumer packaged goods spending was 24.2% in 2016 (Retail & Trade 2016). On the other hand, in Europe PLs enjoy a stronger market

share and competitive position, i.e., much more than 50% in England and 30% in France and Portugal in 2016 (Loureiro 2017). Moreover, the main specificity of France is the state intervention occurring once a year during national negotiation between manufacturer and retailers to frame national brand (NB) delisting decisions. This delisting forced the entry in assortment of PLs, which have strongly increased their quality in the recent years (Geyskens et al. 2010; Loureiro 2017); and impacted products' organisation beyond the price-based PL merchandising technique like the end of aisle (Chandon et al. 2009).

However, little is known about how adding PL into the existing offer influences the consumer's decision-making process. The effect of PLs on display remains insufficiently studied in literature as compared to NBs in a French retail context (Kapferer 1998; Gomez and Okazaki 2009).

This article investigated how the inclusion of brand in the juxtaposition and coordination analysis, as a three-way interaction, influences product evaluation.

Literature made a distinction between different types of PLs. Economy PLs are not quality-equivalent to NBs in the retail assortment (Burt 2000). The standard PL is positioned at par with mainstream quality NBs (Alpi 2004; Geyskens et al. 2010). In contrast, premium PLs are positioned as close substitutes for the premium-quality NBs (Kumar and Steenkamp 2007). Then our research focuses on the premium PL.

The inclusion of brand type (PL versus NB) in the analysis is one of the important contributions elaborating the previous research regarding the effect of shelf arrangements. Insights into the three-way interactions can provide a contribution to the academic literature since it corrects previous product evaluation based on double interaction and helps in identifying new and relevant schemas for the retailers. The results of this study on textile products can be generalised, given the clothing sector's importance and its capacity for innovation, and globalisation; the supermarket evolution from groceries to visual merchandising conscious fashion label fashion (Visual Thinking 2018).

Insights into the three-way interactions can provide managerial guidelines for store merchandising regarding PLs. As the points of view of retailers' and manufacturers' might not coincide in this matter, this research focuses on position that generates numerous opportunities for retailers.

Moreover, insights into the three-way interactions can improve managerial guidelines by suggesting the retailers about location for complementary products, target to optimise shelf arrangement performance and the schemas to be developed.

To address these research objectives, we used two studies. In Study 1, we conducted an in-store survey to shed light on the focal customers' PL behaviour. In Study 2, we conducted a controlled experiment to measure the effect of a triple interaction on product evaluation by including additional variables.

## 2 Theoretical Framework and Hypotheses

Coordination (target and complementary) shows the interest of literature concerning consumers' purchase intention before entering a store. While in a store, a consumer learns schemas of the front shelves. Then, we assumed that relation to brands matters to realise consumers' objectives.



### **Purchase Intention**

The literature review performed showed that there are several internal and external factors that might lead to the occurrence of in-store decision making and unplanned purchases in a grocery store environment. When entering a store, consumers are presented with countless sensory stimuli that help them make decisions among the variety of available products. More than two-thirds of all the purchase decisions involve some level of in-store decision-making, consisting what is typically called unplanned buying behaviour (Kahn et al. 1992). Consumers generate motivational process for the in-store stimuli encountered, which are moderated by factors such as deal proneness, age, need for cognition and time constraints. When the stimuli encountered affected the decision of the consumer, the need to buy a sporting good was acquiesced, whether the consumer had planned to buy the product initially or not.

### **Schemas**

Consumers learn schemas. A schema is an organised collection of beliefs and feelings (Solomon 2004), allowing consumers to assimilate the required information or to look for it. It guides the consumers' expectations of what information to collect. A schema is composed of a network of relationships between attributes and concepts (e.g., brands and product categories) or between concepts. This structure is learned and stored in the pre-existing semantic memory of the consumer. It guides the placement of products and brands on the store shelves (Pham and Johar 1991). These schemas reflect efficient information processes (Lichtenstein and Burton 1989) and are derived from prior experiences with selling situations, such as consummating a sale or entering a purchase situation (Anderson 1983). Strategic display options in a store can challenge or modify these learned schemas, such that they affect the judgments and attitudes learned in the store. In this sense, context could modify the diagnostic function of information seeking in a store, such as by creating expectations of difference or similarity. Prior research identifies different schemas that reflect beliefs about brands or their attributes, thus affecting consumer evaluations.

*Brand Schemas.* According to a widely held schema, when considering two different brands, if the first brand offers good perceived quality, the perception generates expectations of a difference with the second brand (Schema [SH] 1). If the first brand is not familiar though, it generates an expectation of similarity with the second brand (Buchanan, Simmons and Bickart 1999) (SH2).

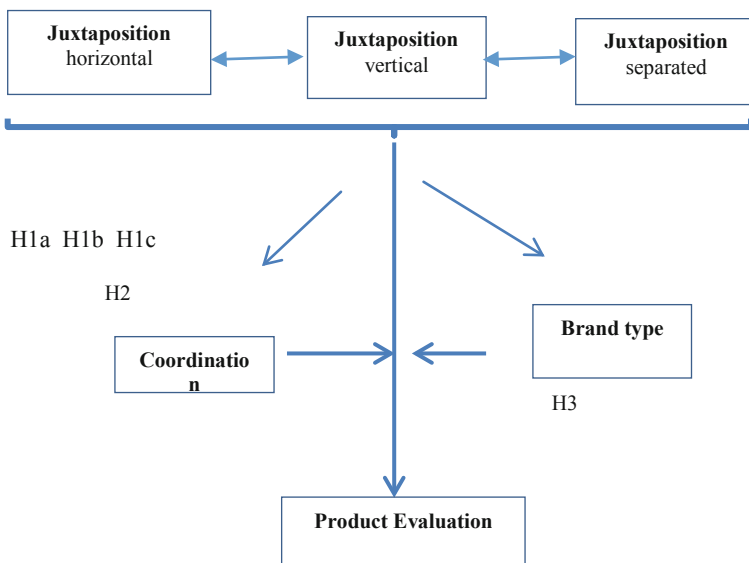
*Juxtaposition Schemas.* In a store, retailers combine displays of complementary items in the same location, i.e., they juxtapose the items so that the shoppers see them as an ensemble (Lam and Mukherjee 2005). Many apparel retailers also juxtapose complementary items (such as, shirts and pants) on mannequins and free-standing fixtures, so that the items appear to be complete outfits (Berman and Evans 2013). Such juxtaposition might enhance the shoppers' awareness of a retailer's merchandise variety and stimulate them to make complementary purchases. The absolute position of a product on the shelf or its relative position as compared to that of other products might influence consumer choices. Breugelmans, Campo and Gijbrecchts (2006) showed the probability of purchasing a product located near another product that the consumer had previously

purchased increases due to this proximity. The influence of two modes of presentation the juxtaposition and the coordination of the products/brands is established by previous research. Juxtaposition consists of placing on the shelf (e.g., side by side in a vertical, or horizontal or separate position) complementary articles (e.g., shirts and pants), in order to let them appear as pertaining to the same set. The coordination of the articles is determined by the adequacy between the target product (or product that customer claims to want to buy while entering the store) and the complementary product (or product carried or consumed with the target product). Prior research analysed how the juxtaposition of products and brands affects consumer evaluations. Locating two competing products in a vertical design, instead of presenting only one product, evokes a different consumer perception (Hsee and Leclerc 1998). Because consumers instinctively make comparisons when they see two options, a common schema that consumers use leads them to perceive the disadvantages of and dissatisfaction with at least one option. Those perceptions would not exist if the options were presented separately (Hsee and Zhang 2004) (SH3). Raghbir and Valenzuela (2008) also highlighted the existence of strong schemas that result from vertical positioning, such as the belief that retailers place expensive, good quality brands on the top shelf and cheap, low quality brands on the bottom shelf.

*Coordination of Complementary Product Schemas.* Literature also identified the coordination effect or coherence between a target product and complementary offerings. Well-coordinated merchandise displays based on these key attributes might create or enhance a store's image, attract consumer attention and influence feeling, shopping experience, shopping behaviour, and purchase outcome (Veryzer and Hutchinson 1998) (SH4). Similarly, Hsee and Leclerc (1998) showed that when two products are presented simultaneously, their evaluation improves as compared to a situation where each product is presented separately. However, a poorly designed, uncoordinated consideration set likely decreases the evaluations of the target and complementary products.

*Dual Schemas.* Choi and Coughlan (2006) showed that the optimal PL positioning depends on the nature of its competition with the NB as well as the quality of the product sold by the NB. In one schema, for example, when NBs are strongly differentiated, a PL of top quality must be placed in close proximity with a NB of top quality, and a PL of low quality should be juxtaposed with a NB of low quality (SH5).

Some researchers have observed an interaction effect of coordination and juxtaposition, i.e., coordinated products might influence evaluations of the target product only if they are presented in a vertical juxtaposition (Hsee and Leclerc 1998) (SH6). Presenting two badly coordinated articles vertically instead tends to depreciate the evaluations of both the articles. Poorly coordinated articles hinder the items' attractiveness and reduce the probability of purchase. These schemas have been highlighted by Nam and Sternthal (2008), who showed that the product presentation context increases or decreases the evaluations of the target brand, such that contextual information provides insights for evaluating the target product. Stapel, Koomen and Velthuijsen (1998) showed that because of an assimilation effect, a more favourable presentation context leads to a more favourable evaluations of the target product. Conversely, Meyers-Levy and Sternthal (1993) explained that a contrasting schema can occur if a negative context generates a more positive, reactive evaluation of the target product (SH7).



**Fig. 1.** Model

No research has postulated or investigated the potential existence of a triple interaction among brand type, juxtaposition and coordination in a real-world setting. This triple interaction, if it exists, would make analyses of double interactions obsolete, because the means of the double interactions would depend on the means of the triple interaction (Kirk 1996). Therefore, this article seeks to identify the schemas that use brands, their juxtaposition, and their coordination simultaneously, to define the wider schemas that the consumers might use when they evaluate brands.

According to Geyskens et al. (2010), differences between NBs and PLs remain regarding quality tier top premium.

Whether or not the brand is preferred by customers is determined by brand equity components: brand equity is the level at which consumers react more favourably to a product when the brand is identified than when it is not (Keller 1993, 1998). We have chosen the brand equity components affect purchase intention by providing a reason for consumers to buy the brand (Keller and Lehmann 2003). Retailer positive image affects the image of a store, which in turn provides backing to the PL and encourages its purchase (Loureiro 2017).

From Keller's approach, we formulated five main hypotheses that could be applied to retail brands (see Fig. 1), which are as follows:

We formulate five main hypotheses applied to retail brands:

Main effect

H1-coordination positively influence brand evaluation.

H2-brand type perception positively influence brand evaluation.

H3-coordination positively influence brand evaluation.

Double interaction

H4a: There is a coordination  $\times$  juxtaposition interaction effect on brand evaluation.

H4b: There is a brand  $\times$  coordination interaction effect on brand evaluation.

H4c: There is a brand  $\times$  juxtaposition interaction effect on brand evaluation.

Triple interaction

H5: There is a brand type  $\times$  coordination  $\times$  juxtaposition interaction effect on brand evaluation (Fig. 2).



Fig. 2. Shelf 1 horizontal

– Target items at the top and complementary items at the bottom (Figs. 3 and 4).



Fig. 3. Shelf 2 vertical



Fig. 4. Shelf 3: Separated

### 3 Discussion

Our results confirm previous literature's findings stating that the main effects show that coordination, juxtaposition and brand affect product evaluation. Moreover we show that the target product's brand is less well evaluated than the complementary product's brand, a vertical presentation is evaluated as better than a separate or horizontal presentation and NB earns lower evaluations than the PL.

The interaction coordination x juxtaposition on product evaluation may be affected by a brand type. This three-way interaction effects that appears, coordination x juxtaposition x brand type, provide a refinement of the two-way interaction. This could strengthen the evaluation of the product. The highest evaluations appear when consumers are searching for a target NB placed vertically, or separately, and a PL complementary whatever the presentation, because the effect of the complementary shelf location largely disappears.

The poorest evaluations appear when the target brand is a PL, regardless of the complementary brand placed horizontally (NB or PL). Because a contrasting effect works to induce a less favourable evaluation of the target, the horizontal presentation creates an unfamiliar context that the consumer does not expect to see when shopping in a store.

Additionally, 40% customers entering a store with no specific product target have appreciated separated display, probably due to the context that created additional opportunities (Wiebach and Hildebrandt 2012; Geyskens et al. 2010).

Our study was conducted in the domain of clothing, one may wonder whether the effects of three-way interaction will remain the same for other product categories. Our response is positive for different reasons. The results of this study on textile products can be generalised, given the sector's importance and its capacity for innovation and globalisation. The apparel and clothing market is one of the largest in Europe: all Western-based economies show a year on year rise over the next four years, UK has the largest market in Europe, with an expected value of 77 billion U.S. dollars in 2020 (Consumer Goods and FMCG 2017). In addition, textile merchandising inspires mass retailers. One interesting example is Sainsbury in England. From supermarket to visual merchandising conscious fashion label, Sainsbury's evolved from groceries to fashion, combining fashion retail's best practices with supermarket ease, by identifying what they could change to deliver

consistent and effective product presentation (Visual Thinking 2018). Moreover, Diehl et al (2015) show the link between organization format (complement-based or substitute-based) and consumers hedonic or utilitarian focus for a clothing retailer. Our findings confirm that some merchandising techniques could actually benefit the PL.

## 4 Limitations

The “vertical vs. horizontal” display issue shows a limitation of this study. Given that the “shirt on the top and pants at the bottom” juxtaposition creates a more natural appearance, it may be the natural-ness, not verticality, of this juxtaposition that enhances product evaluation. If so, the opposite vertical juxtaposition (i.e., pants on the top) may not produce the same positive effect, and a different product category (e.g., a fork and a knife) may benefit more from horizontal juxtaposition. Moreover, we did not perform a manipulation check to confirm that the PL was perceived as a premium PL indeed. Our findings cannot hold if an economy PL or a standard PL is used instead. This issue, as well as the effect of the NB’s quality have to be investigated on future research.

## References

- Alpi, J.C.: “Intermarché Adopts 3-Tier PL Strat egy,” Private Label International, (Fall) (2004). [http://www.privatelabelmag.com/pdf/pli\\_fall2004/print/4.cfm](http://www.privatelabelmag.com/pdf/pli_fall2004/print/4.cfm). Accessed 17 Dec 2007
- Anderson, J.R.: *The Architecture of Cognition*. Lawrence Erlbaum Mahvah, New Jersey (1983)
- Babin, B., Harris, E.: “CB3”, Cengage Learning, Student Edition, pp. 125–290 (2009)
- Berman, B., Evans, J.: *Retail Management: A Strategic Approach*, 12th edn. Prentice Hall, Upper Saddle River (2013)
- Breugelmans, E., Campo, K., Gijsbrechts, E.: Opportunities for active stock-out management in online stores: the impact of the stock-out policy on online stock-out reactions. *J. Retail.* **82**(3), 215–228 (2006)
- Breugelmans, E., Campo, K., Gijsbrechts, E.: Shelf sequence and proximity effects on online grocery choices. *Mark. Lett.* **18**, 117–133 (2007)
- Buchanan, L., Simmons, C.J., Bickart, B.A.: Brand equity dilution: retailer display and context brand effects. *J. Mark. Res.* **36**(3), 345–355 (1999)
- Burt, S.L.: The strategic role of retail brands in british grocery retailing. *Eur. J. Mark.* **34**(8), 875–890 (2000)
- Chandon, P., Hutchinson, J.W., Bradlow, E.T., Young, S.: Does in-store marketing work? Effects of the number and position of shelf facings on attention and evaluation at the point of purchase. *J. Mark.* **73**(6), 1–17 (2009)
- Choi, S.C., Coughlan, A.T.: Private label positioning: quality versus feature differentiation from the national brand. *J. Retail.* **82**(2), 79–93 (2006)
- Consumer Goods & FMCG: *Apparel market: value in Europe 2017–2022*, Clothing & Apparel (2017). <https://www.statista.com/statistics/678243/apparel-market-value-in-europe/>
- Diehl, K., van Herpen, E., Lambertson, C.: Organizing products with complements versus substitutes: effects on store preferences as a function of effort and assortment perceptions. *J. Retail.* **91**(1), 1–18 (2015)
- Geyskens, I., Gielens, K., Gijsbrechts, E.: Proliferating private-label portfolios: How introducing economy and premium private labels influences brand choice. *J. Mark. Res.* **47**(5), 791–807 (2010)

- Gomez, M., Okazaki, S.: Estimating store brand shelf space: a new framework using neural networks and partial least square. *Int. J. Mark. Res.* **51**(2), 243–266 (2009)
- Hsee, C., Leclerc, F.: Will products look more attractive when presented separately or together. *J. Consum. Res.* **25**(2), 175–186 (1998)
- Hsee, C.K., Zhang, J.: Distinction bias: misprediction and mischoice due to joint evaluation. *J. Pers. Soc. Psychol.* **86**(5), 680–695 (2004)
- Kahn, B.E., Schmittlein, D.C.: The relationship between purchases made on promotion and shopping trip behavior. *J. Retail.* **68**(3), 294–315 (1992)
- Kapferer, J.-N.: *Les marques, capital de l'entreprise*, 3ème edn. Editions d'Organisation, Paris (1998)
- Keller, K.L.: Conceptualizing, measuring, and managing customer-based brand equity. *J. Mark.* **57**(1), 1–22 (1993)
- Keller, K.L.: *Strategic Brand Management: Building Measuring and Managing Brand Equity*. Prentice Hall, Upper saddle River (1998)
- Keller, K.L., Lehmann, D.R.: How do brands create value? *Mark. Manag.* **12**(3), 27–31 (2003)
- Kirk, D.: Demographic transition theory. *Popul. Stud.* **50**(3), 361–387 (1996)
- Kumar, N., Steenkamp, J.B.: *Private label Strategy*. Harvard Business Press, Boston (2007)
- Lam, S.Y., Mukherjee, A.: The effects of merchandise coordination and juxtaposition on consumers' product evaluation and purchase intention in store-based retailing. *J. Retail.* **81**(3), 231–250 (2005)
- Leeflang, P.S.H., Wittink D.R., Wedel M., Naert, P.A.: *Building Models for Marketing Decisions*. Kluwer Academic Publishers, Dordrecht (2000)
- Levy, M., Weitz, B.A.: *Retailing Management*. Irwin, Chicago (1998)
- Loureiro, S.M.C.: Exploring the attractiveness of manufacturer brands and retailer own-brands in supermarket context. *Int. J. Retail. Distrib. Manag.* **45**(10), 1095–1113 (2017)
- Lichtenstein, D., Burton, S.: The relationship between perceived and objective price-quality. *J. Mark. Res.* **26**(4), 429–443 (1989)
- Meyers-Levy, J., Sternthal, B.: A two-factor explanation of assimilation and contrast effects. *J. Mark. Res.* **30**(3), 259–268 (1993)
- Mieres, C., Martin, A., Gutierrez, J.: Antecedents of the difference in perceived risk between store brands and national brands. *Eur. J. Mark.* **40**(1/2), 61–82 (2006)
- Nam, M., Sternthal, B.: The effects of a different category context on target brand evaluations. *J. Consum. Res.* **35**(4), 668–679 (2008)
- Oh, H., Petrie, J.: How do storefront window displays influence entering decisions of clothing stores? *J. Retail. Consum. Serv.* **19**(1), 27–35 (2012)
- Pham, M., Johar, G.: Contingent processes of source identification. *J. Consum. Res.* **24**(3), 249–265 (1991)
- Pinto, M.P.: *Les univers de consommation: application du principe de catégorisation*. *Décis. Mark.* **17**, 37–43 (1999)
- Campo, K., Gijsbrechts, E., Nisol, P.: The impact of retailer stockouts oti whether, how much and what to buy. *Int. J. Res. Mark.* **20**, 273–286 (2003)
- Raghubir, P., Valenzuela, A.: The center stage effect. *J. Consum. Psychol.* **19**(2), 185–196 (2008)
- Retail & Trade, (groceries) (2016). [www.statista.com/statistics/241147/private-label-share-of-cpg-spending-in-us-grocery-channels/](http://www.statista.com/statistics/241147/private-label-share-of-cpg-spending-in-us-grocery-channels/)
- Russell, G., Ratneshwar, S., Shocker, A.D., Bell, D., Bodapati, A., Degeratu, A., Hildebrandt, L., Kim, N., Ramaswami, S., Shankar, V.H.: Multiple-category decision-making: review and synthesis. *Market. Lett.* **10**(4), 319–332 (1999)
- Ramaswami, S., Shankar, V.H.: Multiple-category decision-making: review and synthesis. *Market. Lett.* **10**(4), 319–332 (1999)
- Solomon, M.: *Consumer behavior*. Sixth edn. Prentice Hall, Upper Saddle River (2004)

- Stanton, J.L., Wiley, J., Hooker, N.H., Salnikova, E.: Relationship of product claims between private label and national brands: the influence of private label penetration. *Int. J. Retail Distrib. Manag.* **43**(9), 815–830 (2015)
- Stapel, D.A., Koomen, W., Velthuijsen, A.S.: Assimilation or contrast? Comparison relevance, distinctness, and the impact of accessible information on consumer judgments. *J. Consum. Psychol.* **7**(1), 1–24 (1998)
- Veryzer, R.W., Hutchinson, W.J.: The influence of unity and prototypicality on aesthetic responses to new product designs. *J. Consum. Res.* **24**(4), 374–394 (1998)
- Visual Thinking, 2018. [http://www.visualthinking.co.uk/case\\_study/sainsburys-visual-merchandising-solutions/](http://www.visualthinking.co.uk/case_study/sainsburys-visual-merchandising-solutions/)
- Wiebach, N., Hildebrandt, L.: Explaining customers' switching patterns to brand delisting. *J. Retail. Consum. Serv.* **19**, 1–10 (2012)





# Buying Veg Private Labels. Antecedents and Mediators

Elisa Martinelli<sup>1</sup> (✉), Francesca De Canio<sup>1</sup>, and Emiro Endrighi<sup>2</sup>

<sup>1</sup> Department of Economics Marco Biagi,

University of Modena and Reggio Emilia, Modena, Italy

{elisa.martinelli, francesca.decanio}@unimore.it

<sup>2</sup> Department of Life Sciences, University of Modena and Reggio Emilia, Modena, Italy

emiro.endrighi@unimore.it

**Abstract.** The current work focuses on consumer buying behavior concerning veg food branded with the private label. Studies on the factors driving consumers in buying veg private labels are uncommon and empirical studies on the topic are lacking. Specifically, we propose a model aimed at exploring the attitude-intention-behaviour path when veg private labels (VPL) are concerned and when a double kind of behavior is considered: behavioral loyalty (BLVPL) and willingness to pay (WTP).

The study was performed via a survey accomplished administering a structured questionnaire to a sample of consumers via social networks and then applying structural equation modeling (SEM) to the dataset. Findings confirm the investigated path in developing a positive willingness to pay (WTP) and buying behavior (BLVPL) regarding VPL, through the mediating role of attitude towards vegan food consumption (ATTV) and intention to buy the vegan private label (INTB-VPL), activated by an ethical motive: planet concern. Theoretical and managerial implications are derived.

**Keywords:** Private Labels (PLs) · Veg food · Attitude · Intention to buy · Behavior

## 1 Introduction

Vegetarian and vegan food products, so-called “veg”, are enjoying the sympathies of an increasing number of people, developing a growing interest also from an economic point of view. In Europe, food sales of meat substitutes have increased by 451% since 2013 (TRUE 2018), while online research on the topic quadrupled in the period 2012-17 (Piccoli 2018).

Even from an academic viewpoint, vegetarianism has been classified as “a blossoming field of study” (Ruby 2012, p. 141). Nevertheless, empirical researches on the topic are still recent (Corrin and Papadopoulos 2017; Rosenfeld 2019), and mainly drawn by the increasing importance that the phenomenon is assuming on a social, psychological and nutritional level, as well as by the development prospects that it looks at Radnitz et al. 2015.

To respond to the emerging needs and wants of consumers, grocery retailers have increased the presence of veg foods inside their assortments, not only listing national brands but also launching their own private labels (PLs) specifically targeted to shoppers interested in buying vegan and vegetarian foods. This is coherent with the evolution that PLs strategies experienced recently: the introduction of different store brands tiers (Geyskens et al. 2010), with a particular attention to premium private labels (PPLs) (Huang and Huddleston 2009; Ter Braak et al. 2014), the tier in which veg PLs are usually classified.

Besides this positive trend, empirical studies on veg private labels are lacking and poor is the academic and managerial knowledge on the factors that are driving consumers in buying this kind of food products. This work focuses on consumer buying behavior concerning veg food branded with the private label. Specifically, we propose a model aimed at exploring the impact of a fundamental ethical motive – planet concern - on the attitude-intention-behaviour link when veg private labels (VPL) are concerned. A double kind of behavior is investigated: behavioral loyalty (BLVPL) and willingness to pay (WTP).

The study was performed via a survey accomplished through administering a structured questionnaire to a sample of consumers via social networks and then applying structural equation modeling (SEM) to the data collected.

The paper is structured as follows: first, the conceptual model and the hypotheses proposed are presented, followed by the methodology used. Then, results are depicted and discussed, ending with some conclusions aimed at evidencing the main theoretical and managerial implications arising from this study as well as its limitations and further possible developments.

## 2 Conceptual Model and Hypotheses

The consumer behaviour literature has made an extensive use of the purchasing intention construct as an indicator of current actions (Grewal et al. 1998). In particular, this work takes place under the perspective of the theory of reasoned action (TRA) that proposes as the best predictor of the behaviour the intention (Fishbein and Ajzen 1975), that in turn is impacted by attitude. Our hypotheses are as follows.

Food plays an important role in people life, not only to survive. Particularly in developed countries, individuals are increasingly giving to food ethical meanings, conceived as the proximal factors that influence food consumption and attitudes. To this regard, the impact that food choices can have on the world were proved as being an important pillar of the meaning of food in life (Arbit et al. 2017).

*H1. Planet concern (PC) has a significant and positive impact on ATTV.*

A growing number of people are willing to pay more for environmentally friendly products (Laroche et al. 2001) and organic foods (McFadden and Huffman 2017). This was found true when veg food are concerned too (Marangon et al. 2016). The attitude-WTP link was verified for special food products (organic, local, halal, etc.). Moreover, as

PLs are no longer perceived as low-price alternatives, especially when present in premium niche categories, consumers should be more prone to pay for veg alternatives. Consequently, we can posit that:

*H2. ATT has a significant and positive impact on Willingness to pay for veg food products (WTP).*

There is a common and general consensus in considering that attitude toward a product is the most important predictor of intention to buy (Ajzen and Fishbein 1980). This was found true when the purchase of food products is involved, as well as when PLs are considered. Moreover, intention to purchase a product is commonly considered as leading to a real purchase behavior (Fishbein and Ajzen 1975). Consequently, we can postulate similar relationships when veg PLs are concerned.

*H3. ATT has a significant and positive impact on INTBVPL.*

*H4. INTBVPL has a significant and positive impact on BLVPL.*

### 3 Methodology

The study was performed administering a structured questionnaire to a sample of Italian consumers approached on the most diffused social networks, intercepting both veg and non-veg people, in order to have a heterogeneous sample. About 7% of Italians declared themselves vegetarian or vegan (Eurispes report 2019). The questionnaire was posted twice a day for seven days on Facebook and Instagram, with a brief description of the aim of the survey, asking to respondents to share it in turn with their contacts. 300 completed questionnaires were collected in March 2019. The sample, mainly based on female shoppers (89.3%) shows high percentage of young respondents as follows: 43.7% of the sample is younger than 25 years, 40.0% is aged 25–35 years, 12.0% is aged 36–50 years, and 4.3% is older than 50 years. In terms of educational level, both high-school graduates (42.3%) and university graduates (49.7%) mainly compose the sample, residual the number of respondents with lower and higher study levels. The majority of respondents report an annual income lower than 36.000€ (54.0%) or between 36 and 70.000€ (36.0%).

The items used in the model (Table 1), previously pre-tested and validated on a limited sample of consumers, were evaluated on 7-point Likert type rating scales, (1 = strongly disagree and 7 = strongly agree), apart from attitude towards vegan food consumption (ATTV), assessed on a seven-point semantic differential scales using the Armitage and Conner's (1999) scale.

#### 3.1 Measure Validity

The two-step Anderson and Gerbing's procedure (1988) was used to assess the validity of the hypotheses. First, a confirmatory factor analysis (CFA) was performed to verify the unidimensionality of the measures and the convergent validity of constructs. Second, the

structural equation model with Maximum Likelihood method (SEM) was performed to measure paths between constructs. Both procedures were performed using the software Lisrel 8.80.

The psychometric analysis of the scales investigated assesses the convergence and discriminant validity. Results of the factor analysis, reported in Table 1, confirm that all items are significant (t-values > 17) and substantially load onto the expected construct (factor loading >0.804), confirming the convergent validity of the measures (Hu and Bentler 1999). Further, all the items exhibited a high item-total correlation, indicating their capability to measure the investigated construct.

**Table 1.** Constructs and measures factor loadings

Original scale	Constructs	Items	F.L.	t-value
Mägi (2003)	Behavioral loyalty towards Veg PL (BLVPL)	How often do you buy PL veg food products?	0.983	n.d.
adapted from Grewal et al. (1998)	Intention to buy veg PL (INTBVPL)	I would consider buying PL veg food products	0.898	n.d.
		I would purchase PL veg food products next time I go grocery shopping	0.964	32.88
		There is a strong likelihood that I will buy PL veg food products again	0.948	30.54
Armitage and Conner (1999)	Attitude towards Veg food consumption (ATTV)	Eating veg food products is....		
		Bad/Good	0.881	n.d.
		Unpleasant/Pleasant	0.842	25.40
		Negative/positive	0.889	24.25
Arbit et al. (2017)	Planet Concern (PC)	I feel responsible for the impact of my food choices on the world	0.921	n.d.
		I care about the impact of my food choices on the world	0.911	30.85
		My food choices are an important way that I can affect the world	0.844	27.57

(continued)

**Table 1.** (continued)

Original scale	Constructs	Items	F.L.	t-value
		I eat in a way that expresses care for the world	0.816	21.76
		My food choices matter to the world	0.866	29.79
Voon et al. (2011)	Willingness to Pay (WTP)	I am willing to buy veg food because the benefits outweigh the cost	0.911	n.d.
		Buying veg food is the right thing to do even if they cost more	0.954	29.75
		I will still buy veg foods even though conventional alternatives are on sale	0.848	23.26

The convergent validity is assessed by values for the Average Variance Extracted (AVE) and Composite Reliability (CR) that are bigger than their conventional cut-offs for all the constructs (AVE > 0.5 (Fornell and Larcker 1981); CR > 0.7 (Steenkamp and van Trijp 1991). By the means of the Fornell and Larcker criterion (1981) the discriminant validity of the measurement model was assessed: the square root of the average variance extracted, presented in bold characters in the correlation matrix (Table 2), are larger than the correlation of this construct and the others.

**Table 2.** Convergent and discriminant validity and correlation matrix

Constructs		AVE	CR	BLVPL	INTBVPL	ATTV	WTP	PC
Behavioral loyalty	BLVPL	0,966	0,966	<b>0,983</b>				
Intention to buy Veg PL	INTBVPL	0,826	0,956	0,670	<b>0,909</b>			
Attitude tw Veg food	ATTV	0,733	0,916	0,494	0,737	<b>0,856</b>		
Willingness to Pay	WTP	0,820	0,932	0,391	0,582	0,790	<b>0,906</b>	
Planet Concern	PC	0,762	0,941	0,270	0,401	0,544	0,430	<b>0,873</b>

The model achieves good overall fit: although the significant Satorra and Bentler chi-square  $\chi^2_{(SB)(143)} = 436.944$ ,  $p < 0.01$ , and the significant Close-Fit RMSEA ( $p$ -value =

0.000) indicating that the hypothesized model does not mirror the pattern of covariance contained within the raw data, the chi-square ratio  $\chi^2/df$  (3.049) confirm the goodness of the model fit. The Standardized Root Mean Square Residual (SRMR = 0.0797) confirms no substantial problem with residuals and the incremental fit measurements, greater than 0.95 (NFI = 0.962; CFI = 0.977), corroborate the goodness of the overall model fit.

### 4 Results

The Covariance-Based Structural Equation Model (CB-SEM) estimated with the Maximum Likelihood method and presented in Fig. 1, shows a substantial predictive ability for Attitude towards Veg food consumption ( $R^2_{(ATTV)} = 0.296$ ), the Intention to buy Veg PL products ( $R^2_{(INTBVPL)} = 0.543$ ), the Behavioral loyalty towards Veg PL ( $R^2_{(BLVPL)} = 0.464$ ) and the Willingness to pay ( $R^2_{(WTP)} = 0.624$ ). The opportunity to adopt a sustainable choice for the planet has a positive effect on the attitude towards the veg food consumption, confirming the first hypothesis proposed in the theoretical model (H1:  $\beta = 0.544$ ,  $p < 0.01$ ). The attitude towards veg food is a positive driver for the willingness to pay a premium price for veg food, supporting our second hypothesis (H2:  $\beta = 0.790$ ,  $p < 0.01$ ). Furthermore, results confirm the strong and positive relationship of the Attitude-Intention-Behavior path as proposed in our hypotheses three and four (H3:  $\beta = 0.737$ ,  $p < 0.01$ ; H4:  $\beta = 0.660$ ,  $p < 0.01$ ). Demographic control variables such as age, study and income were included in the structural model. The age and the study show a modest positive impact on the behavior of buying VPL products as showed in the figure below, evidencing that older consumers with higher study levels buy VPL more.

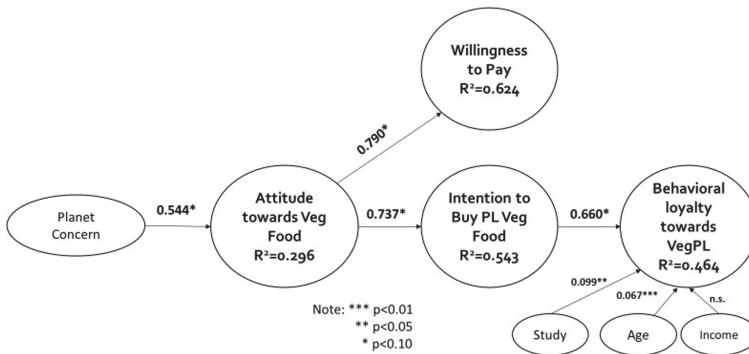


Fig. 1. Research model

#### Mediation Analysis

Interesting the indirect effects of planet concern on both the intention to buy VPL products and the willingness to pay a premium price for veg products. Indeed, the results of the Sobel test show that PC indirectly influence the intention to buy the VPL and the WTP by the means of the ATTV. In particular, the feeling of responsibility for planet

concerns shows a stronger effect on both aspects, as follows (PC-ATTV- INTBVPL:  $\beta = 0.420$ ,  $p < 0.01$ ; PC-ATTV-WTP:  $\beta = 0.415$ ,  $p < 0.01$ ).

## 5 Conclusions

Our findings contribute to the literature on PLs verifying the attitude-intention-behavior buying path when VPL are concerned. Indeed, in these days, veg products are bought not only from pure veg consumers, but also by a growing number of consumers not directly involved in a vegetarian or vegan diet. Results show that veg buyers consider the impact of their food choices on the planet a relevant issue when buying veg foods, directly impacting attitudes, but also intentions and behaviors in an indirect way. The mediated effect verified also on consumers' WTP is particularly important, and help in evidencing the intensity of a double kind of behavior that is rarely reported by the food literature, contributing to it.

Relevant are also the final composition of the sample and the effects of the demographic variables on behavioral loyalty towards Veg PL. First, considering the age, the sample confirm that the Veg consumption trends involve more young consumers than older ones. Indeed, although empirical results showed that older consumers buy VPL more than younger, we need to consider that respondents aged no more than 35 years old mainly compose our sample (84%). Accordingly, buyers of veg food products are aged between 25 and 35 years old.

Our results might help retailers in correctly positioning their VPLs on the market. The importance given to the ethical concern about the impact of food choices on the planet are strongly driving consumer behaviors, enabling retailers to put a premium on veg PLs and increase attitudinal and behavioral loyalty towards these offerings. Accordingly, communication and PL product features (i.e. packaging), should evoke ethical issues related to the strong connection between eating behaviors and the environment.

This study presents some limitations. First, the survey relates to a generic concept of VPL, even if we are acknowledged that general results must be affected by the product category. In addition, the work does not include moderators. Next works would benefit for this possible inclusion. Then, the survey was performed in a sole country, while a comparison with other EU retail contexts should strengthen current results. Last, the gender was not included as control variable as female respondents mainly compose the sample. Further studies should deeply investigate this demographic aspect, as women are more involved in the shopping task, above all in country such as Italy.

## References

- Ajzen, I., Fishbein, M.: *Understanding Attitudes and Predicting Social Behavior*. Prentice-Hall, Englewood Cliffs, NJ (1980)
- Anderson, J.C., Gerbing, D.W.: Structural equation modeling in practice: a review and recommended two-step approach. *Psychol. Bull.* **103**(3), 411–423 (1988)
- Armitage, C.J., Conner, M.: The theory of planned behaviour: assessment of predictive validity and 'perceived control. *Br. J. Soc. Psychol.* **38**, 35–54 (1999)

- Arbit, N., Ruby, M., Rozin, P.: Development and validation of the meaning of food in life questionnaire (MFLQ): evidence for a new construct to explain eating behavior. *Food Qual. Prefer.* **59**, 35–45 (2017)
- Corrin, T., Papadopoulos, A.: Understanding the attitudes and perceptions of vegetarian and plant-based diets to shape future health promotion programs. *Appetite* **109**, 40–47 (2017)
- Fishbein, M., Ajzen, I.: *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Addison-Wesley, Reading (1975)
- Fornell, C., Larcker, D.F.: Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **18**(1), 39–50 (1981)
- Geyskens, I., Gielens, K., Gijsbrechts, E.: Proliferating private-label portfolios: how introducing economy and premium private labels influences brand choice. *J. Mark. Res.* **47**(5), 791–807 (2010)
- Grewal, D., Krishnan, R., Baker, J., Borin, N.: The effect of store name, brand name and price discounts on consumers' evaluations and purchase intentions. *J. Retail.* **74**(3), 331–352 (1998)
- Hu, L.-T., Bentler, P.M.: Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Struct. Equ. Model. Multi. J.* **6**(1), 1–55 (1999)
- Huang, Y., Huddleston, P.: Retailer premium own-brands: creating customer loyalty through own-brand products advantage. *Int. J. Retail Distrib. Manag.* **37**(11), 975–992 (2009)
- Mägi, A.W.: Share of wallet in retailing: the effects of customer satisfaction, loyalty cards and shopper characteristics. *J. Retail.* **79**(2), 97–106 (2003)
- McFadden, J.R., Huffman, W.E.: Willingness-to-pay for natural, organic, and conventional foods: the effects of information and meaningful labels. *Food Policy* **68**, 214–232 (2017)
- Laroche, M., Bergeron, J., Barbaro-Forleo, G.: Targeting consumers who are willing to pay more for environmentally friendly products. *J. Consum. Mark.* **18**(6), 503–520 (2001)
- Marangon, F., Tempesta, T., Troiano, S., Vecchiato, D.: Toward a better understanding of market potentials for vegan food. A choice experiment for the analysis of breadsticks preferences. *Agric. Agric. Sci. Procedia* **8**, 158–166 (2016)
- Piccoli, M.: Vegani, carnivori e onnivori: il futuro dell'alimentazione spiegato con i numeri. *Il Sole* 24 ore, 26 novembre 2018
- Radnitz, C., Beezhold, B., DiMatteo, J.: Investigation of lifestyle choices of individuals following a vegan diet for health and ethical reasons. *Appetite* **90**, 31–36 (2015)
- Rosenfeld, D.L.: Psychometric properties of the dietarian identity questionnaire among vegetarians. *Food Qual. Prefer.* **74**, 135–141 (2019)
- Ruby, M.B.: Vegetarianism. A blossoming field of study. *Appetite* **58**, 141–150 (2012)
- Steenkamp, J.-B., van Trijp, H.: The use of Lisrel in validating marketing constructs. *Int. J. Res. Mark.* **8**(4), 283–299 (1991)
- Ter Braak, A., Geyskens, I., Dekimpe, M.G.: Why premium private label presence varies by category. *J. Retail.* **90**(2), 125–140 (2014)
- TRUE (2018). <https://www.true-project.eu/>
- Voon, J.P., Ngui, K.S., Agrawal, A.: Determinants of willingness to purchase organic food: an exploratory study using structural equation modeling. *Int. Food Agribusiness Manage. Rev.* **14**(2), 103–120 (2011)





# Impact of CSR Initiatives on Consumer's Perceptions and Attitudes Towards Retailers

Rita Coelho do Vale<sup>1</sup>✉, Pedro Verga Matos<sup>2</sup>, and Vera Herédia-Colaço<sup>1</sup>

<sup>1</sup> Católica Lisbon School of Business and Economics,  
Universidade Católica Portuguesa, Lisbon, Portugal  
{ritavale, vcolaco}@ucp.pt

<sup>2</sup> ISEG- Lisbon School of Economics and Management,  
Universidade de Lisboa, Lisbon, Portugal  
pvmatos@iseg.ulisboa.pt

**Abstract.** This research aims to analyze how retailers' endorsement of socially responsible and sustainable practices impact consumers' attitudes and perceptions towards retailers' products (private labels). A laboratory experiment, in which CSR practices were manipulated (environmental initiatives vs philanthropic initiatives) revealed that in general, CSR practices have a positive impact on consumers' perceptions towards the retailer. Results suggest that consumers' willingness to pay extra for products is higher for environmental than philanthropic initiatives. However, when analyzing behavioral intentions to purchase the products sold by retailer, results reveal a marginally significant preference for philanthropic vs environmental initiatives. Further analysis, this time considering consumers' green values, indicate that high green consumers seem to infer higher product quality when retailers engage in environmental initiatives, while average green consumers seem to anticipate higher shopping experience when presented with an initiative of philanthropic nature. Overall, findings reveal interesting insights, highlighting how different CSR initiatives may have different impact in terms of product quality, willingness to pay, purchase intentions and shopping experience perceptions. Moreover, results also highlight a number of different psychological mechanisms that emerge when consumers hold distinct green consumption values.

**Keywords:** Retailing · CSR initiatives · Sustainability · Product perceptions · PLs

## 1 Introduction

The aim of this research is to analyze the impact of sustainability strategies undertaken by retailers on consumers' attitudes and perceptions towards its products (private labels). The retail industry has suffered significant changes in the last decades (Ailawadi and Keller 2004; Cinar 2020; Sandberg 2011). From the evolution of traditional direct trade to self-service trade, to the increase on the number of players, as to a significant raise in the competition between players, retailers have been forced in the last decades to adopt

new differentiating strategies. Along with the introduction of private-label products and its growing sales in the generality of the markets (Steenkamp et al. 2010), retailers also started shifting part of their profits to the development of sustainable practices as a way of differentiating themselves from other players in the market. For example, Tesco launched a worldwide set of sustainable actions under the motto “Every little help makes a difference” (Tesco 2019). Also, Coca-Cola announced recently a global commitment to help fight obesity, as part of their social responsibility mission, and Unilever embraced publicly a strong commitment on the pursuing of sustainable practices (e.g., “Putting sustainability into the heart of our business model”, Unilever 2018).

Despite all this apparent strong commitment by both retailers and manufacturing organizations on the development of sustainable practices, little is known to what extent these actions really have an impact on consumers’ perceptions towards companies and its products. In particular, to what extent CSR initiatives have a (positive) impact on consumers’ shopping experience and on the likelihood of choosing retailers’ products.

According to a Nielsen report (2019), it is expected that in the US alone, the sustainable product market will reach \$150 billion by 2021. Many large retail chain stores of grocery and consumer packaged goods such as Walmart, Home Depot, Tesco, Amazon, among others, have been on top of this unstoppable macro trend. This is a critical and highly relevant issue, since reaching a common understanding about the need to improve global well-being is also dependent on consumers’ proneness to adopt products that follow socially responsible and sustainable practices (Lii et al. 2013; Oberseder et al. 2011). Living in an era where global well-being is at the heart of policy making and is shaping businesses’ operations, this research aims to analyze how retailers’ endorsement of socially responsible and sustainable practices are adopted by consumers at the point of sale.

## 2 Private Labels, Sustainability, and Consumers

Store brands are present on almost every product category (Geyskens et al. 2010) and are being increasingly accepted by consumers (Nielsen 2014). As highlighted by Steenkamp and colleagues (2010), store brands are overwhelmingly playing a catch-up game with national brands (NBs), copying many of the innovations introduced in the market. Some retailers as Tesco and Marks & Spencer in UK, have initiated consistent sustainable strategies in their store brands as a way of boosting consumers’ likelihood of choosing for these products, but research on the impact of these measures is very scarce.

Store brands are being increasingly accepted by consumers, with nearly every European and U.S. consumers declaring to have already bought store brands (Geyskens et al. 2010). Alongside with PL market share growth, retailers started to strongly invest in their store brands (Hoch 1996) in order to increase their power (Quelch and Harding 1996), and to enhance store loyalty and their profits (Ailawadi et al. 2008).

In line with this, many retailers worldwide started also to include sustainability attributes in their store brands’ packages and manufacturing processes, in order to differentiate themselves from the competitors and increase loyalty towards their store brands. The impact of sustainability features in products started deserving attention of some researchers in the last few years, but results are often opposite. While some prior research

suggests that, for certain product categories the inclusion of sustainability characteristics (e.g., FT certification) will positively influence product evaluation and therefore enhance the likelihood of choice (Hainmuller et al. 2015), other studies suggest that product ethicality does not always drive positive product evaluations (White et al. 2012). That is, consumers are likely to favor the functional benefits of a product in detriment of CSR functions (Obermiller et al 2009; Chernev and Blair 2015). To our knowledge, limited research has focused in understanding the impact of CSR practices on store brands.

Store image, which encompasses consumers' overall attitude towards a store (Collins-Dodd and Lindley 2003), is a critical tool for retailers that want to maintain a strong market position since it constitutes a valuable marketing asset that creates competitive advantage (Steenkamp and Wedel 1991). It is therefore reasonable to assume that one of the objectives of companies when deciding to engage in sustainability practices is to boost companies' image in consumers' minds, in order to enhance consumers' attitudes and generate loyalty. However, most of previous research on CSR practices has approached it mostly as a corporate issue, neglecting the voices of other stakeholders, aside the companies and its investors (Pomeroy and Dolnicar 2009). As highlighted by Oberseder and colleagues (2014), a special emphasis should be put in studying consumers' views on CSR practices, to understand how these affect consumers' attitudes and behavior. Results from Pomeroy and Dolnicar (2009) revealed that many times there is a lack of consumers' response to firms' CSR initiatives, mainly because consumers are unaware of them. It seems then of great relevance to understand which CSR practices are more likely to boost consumers' perceptions and enhance consumers' preferences towards the store products. To our knowledge this is something new that will allow companies to understand which CSR practices most are welcomed by consumers, assessing simultaneously the impact of their sustainable initiatives on consumers' perceptions and behavior.

### **3 The Impact of CSR Initiatives on Consumers' Product Evaluation and Purchase Intentions- an Empirical Investigation**

The objective of this study is to evaluate the impact of different CSR initiatives on consumers' product evaluation and purchase intentions.

*Participants, Design, and Procedure.* One hundred and eleven participants (57 male, mean age range = 18–24) were recruited using a database of students from a Portuguese university. The study was run via a Qualtrics interface in exchange for course credit and followed a 2 (CSR initiative type: social, environmental), × 2 (green consumption values: average, high) within-between subjects design. Participants were firstly introduced to a retailer described as a supermarket chain of stores that offered a myriad of private label as well as well-known national brands across all product categories and at different price points. Each participant was then asked to evaluate this fictitious groceries' retailer in a set of variables (first measures: Sustainability perceptions, Shopping Experience, Purchase Intention). After that, participants were randomly allocated to a scenario, which described one of the two manipulated CSR initiatives: environmental (participants read that the retailer was committed to be more sustainable and that had just launched a

program to reduce plastic waste) and philanthropic (participants read that the retailer was committed to fight against hunger that and that through funding and food donations provided millions of meals). Afterwards, participants were asked to complete similar measures to the first ones provided (post measures), as well as asked to indicate their overall perception regarding the price, quality, and willingness to pay the PLs sold by the retailer. To finalize, participants were asked to answer some measures related with their green consumption values (adapted from Haws et al. 2014) followed by some demographics.

*Impact of CSR initiatives.* Paired samples t-tests between the pre measures (before CSR initiative presentation) and the post measures (after CSR initiative presentation) indicate different effects across the two types of CSR initiatives (environmental vs philanthropic). When exposed to the philanthropic initiative results indicate an increase both in terms of sustainability perceptions regarding the retailer (“how sustainable they perceived the retailer and its associated products to be?”:  $M_{\text{pre-measure}} = 4.91$  vs.  $M_{\text{post-measure}} = 5.44$ ;  $t(56) = 3.45$ ;  $p < .01$ ) as in terms of shopping experience (“how much do you think you would enjoy shopping at the retailer’s shop?”:  $M_{\text{pre-measure}} = 4.56$  vs.  $M_{\text{post-measure}} = 5.04$ ;  $t(56) = 2.70$ ;  $p < .01$ ) and purchase intention (“how likely would you purchase from this retailer’s shop?”:  $M_{\text{pre-measure}} = 4.56$ , vs.  $M_{\text{post-measure}} = 5.51$ ;  $t(56) = -6.98$ ;  $p < .001$ ). On the other hand, when exposed to the environmental initiative differences just revealed to be significant for the sustainability perceptions ( $M_{\text{pre-measure}} = 4.89$  vs.  $M_{\text{post-measure}} = 5.74$ ;  $t(53) = 4.33$ ;  $p < .001$ ) and purchase intentions ( $M_{\text{pre-measure}} = 4.69$  vs.  $M_{\text{post-measure}} = 5.15$ ;  $t(53) = 2.46$ ;  $p < .05$ ), revealing to have no impact on consumer’s perceptions regarding their shopping experience ( $M_{\text{pre-measure}} = 4.56$  vs.  $M_{\text{post-measure}} = 4.81$ ;  $t(53) = 1.17$ ; *n.s.*).

*Dependent Variables Analysis.* The next step was to understand the impact of the different CSR initiatives on multiple dependent variables: PLs’ quality perception, purchase intention of product sold by retailer, willingness to pay extra for products of the retailer, high price perceptions, sustainability perceptions, and consumers’ perceptions in terms of shopping experience. A multivariate analysis of variance (MANOVA) revealed that the adoption of initiatives by retailer seem to lead to no differences in terms of both product quality perceptions ( $M_{\text{environ}} = 5.07$ ,  $M_{\text{philant}} = 4.88$ ,  $t(53) = .69$ , *n.s.*) or high price perceptions ( $M_{\text{environ}} = 4.76$ ,  $M_{\text{philant}} = 4.68$ ,  $t(53) = .085$ , *n.s.*) (see Table 1). However, when analyzing the willingness to pay extra for products ( $M_{\text{environ}} = 19.61$ ,  $M_{\text{philant}} = 13.67$ ,  $t(53) = 4.36$ ,  $p < .05$ ), the impact is higher for environmental than philanthropic initiatives. When analyzing the purchase intention, results revealed a marginally significant difference in terms of purchase intention of products ( $M_{\text{environ}} = 5.15$ ,  $M_{\text{philant}} = 5.51$ ,  $t(53) = 2.79$ ,  $p < .1$ ), suggesting that philanthropic initiatives may have a more impactful effect on consumers behavior than environmental based initiatives. This may be due to the fact that environmental concerns are no longer considered to be a differentiating factor but instead a *sine qua non* factor that all companies must comply with. Both initiatives led to the same type of sustainability and shopping experience perceptions (both t-tests  $< 2.0$ , *n.s.*).

**Table 1.** Mean differences between environmental and philanthropic initiatives

	Environmental (n = 54)	Philanthropic (n = 57)	t-tests
Quality	5.07 (1.34)	4.88 (1.14)	.69
Shopping experience	4.81 (1.40)	5.04 (1.30)	.74
Purchase intention	5.15 (1.24)	5.51 (1.04)	2.79 <sup>+</sup>
WTP extra	19.61 (18.90)	13.67 (9.97)	4.36*
Price	4.76 (1.29)	4.68 (1.42)	.085
Sustainability perceptions	5.74 (1.13)	5.44 (1.13)	1.99

Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p \leq .05$ , + $p \leq .1$ ; standard deviations are presented between parentheses

*Green vs Non-green Consumer Analysis.* Further, a multivariate analysis of variance (MANOVA) was conducted revealing that a significant two-way CSR initiative x green consumption values interaction effect was found for the quality perceptions and shopping experience dependent variables (quality perceptions:  $F(1, 110) = 4.42, p < .05$ ; shopping experience:  $F(1, 110) = 4.13, p < .05$ ). Findings show that high green consumers seem to infer higher product quality when retailers engage in environmental initiatives (quality perceptions:  $M_{\text{environ,high\_green}} = 5.29, M_{\text{philant,high\_green}} = 4.59, t(53) = 2.063, p < .05$ ) while average green consumers seem to anticipate higher shopping

**Table 2.** Differences between green and non-green consumers (n = 111)

	Environmental CSR initiative		Philanthropic CSR initiative		CSR initiative M.E.	Green values M.E.	Interaction effect
	Average green consumer (n = 26)	High green consumer (n = 28)	Average green consumer (n = 30)	High green consumer (n = 27)	F test	F test	F test
Quality perceptions	4.85 (1.43)	5.29 (1.24)	5.13 (.97)	4.59 (1.25)	.76	.05	4.42*
Shopping experience	4.46 (1.58)	5.14 (1.15)	5.20 (1.03)	4.85 (1.54)	.78	.43	4.13*
Purchase intention	4.81 (1.44)	5.46 (.92)	5.30 (1.12)	5.74 (.90)	3.30 <sup>+</sup>	6.73*	.26
WTP extra	19.27 (21.04)	19.93 (17.04)	11.00 (6.08)	16.63 (12.47)	4.12*	1.22	.76
Price	4.77 (1.45)	4.75 (1.14)	4.80 (1.3)	4.56 (1.55)	1.80	3.84*	.19
Sustainability perceptions	5.46 (1.27)	6.00 (.90)	5.30 (1.26)	5.59 (.97)	.10	.26	.34

Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p \leq .05$ , + $p \leq .1$ ; standard deviations are presented between parentheses.

experience when presented with an initiative of philanthropic nature (shopping experience:  $M_{\text{environ,aver\_green}} = 4.46$ ,  $M_{\text{philant,aver\_green}} = 5.20$ ,  $t(54) = 2.057$ ,  $p < .05$ ) (see Table 2).

## 4 Conclusions

These results reveal interesting findings since highlight how different CSR initiatives may have different impact in terms of willingness to pay and purchase intentions. Results also highlight a number of different psychological mechanisms that emerge when consumers hold distinct green consumption values. For those consumers with high green consumption values, product evaluations seem to focus more on product-related issues as being environmentally friendly. For consumers with more average green consumption values, the focus is more related with the social aspect of the initiative and not so much related with the environmental characteristics of the products. This is line with prior literature that suggest that quality is a major driver in consumer preferences related with environmentally friendly products (Obermiller et al. 2009). Similarly, prior literature in this domain also suggests that environmental products are specifically related with environmental attributes and not, with other seemingly related issues that a consumer interprets as relevant to their values such as philanthropy or ethics (Mohr and Webb 2005). As such “the tendency to express the value of environmental protection through one’s purchases and consumption behaviors” (Haws et al. 2014, p. 337) is more present in high than average green consumption value-oriented consumers.

## References

- Ailawadi, K.L., Keller, K.L.: Understanding retail branding: conceptual insights and research priorities. *J. Retail.* **80**(4), 331–342 (2004)
- Ailawadi, K.L., Pauwels, K., Steenkamp, J.B.E.: Private-label use and store loyalty. *J. Mark.* **72**(6), 19–30 (2008)
- Chernev, A., Blair, S.: Doing well by doing good: the Benevolent Halo of corporate social responsibility. *J. Consum. Res.* **41**(6), 1412–1425 (2015)
- Cinar, D.: The impact of private label brand personality perception on consumers’ buying intentions. In: *Improving Marketing Strategies for Private Label Products*, pp. 254–276. IGI Global (2020)
- Collins-Dodd, C., Lindley, T.: Store brands and retail differentiation: the influence of store image and store brand attitude on store own brand perceptions. *J. Retail. Consum. Serv.* **10**(6), 345–352 (2003)
- Geyskens, I., Gielens, K., Gijsbrechts, E.: Proliferating private-label portfolios: how introducing economy and premium private labels influences brand choice. *J. Mark. Res.* **47**(5), 791–807 (2010)
- Hainmuller, J.M., Hiscox, M.J., Sequeira, S.: Consumer demand for the fair trade label: evidence from a field experiment. *Rev. Econ. Stat.* **97**(2), 242–256 (2015)
- Haws, K.L., Winterich, K.P., Naylor, R.W.: Seeing the world through GREEN-tinted glasses: green consumption values and responses to environmentally friendly products. *J. Consum. Psychol.* **24**(3), 336–354 (2014)

- Hoch, S.J.: How should national brands think about private labels? *MIT Sloan Manag. Rev.* **37**(2), 89 (1996)
- Lii, Y.S., Wu, K.W., Ding, M.C.: Doing good does good? Sustainable marketing of CSR and consumer evaluations. *Corp. Soc. Responsib. Environ. Manag.* **20**(1), 15–28 (2013)
- Mohr, L.A., Webb, D.J.: The effects of corporate social responsibility and price on consumer responses. *J. Consum. Aff.* **39**(1), 121–147 (2005)
- Nielsen: Nielsen global private-label report – The state of private label around the world, Nielsen N.V. (2014)
- Nielsen: A sustainability how-to guide for retailers and manufacturers (2019). <https://www.nielsen.com/us/en/insights/article/2019/a-sustainability-how-to-guide-for-retailers-and-manufacturers/>. Accessed 3 June 2019
- Obermiller, C., Burke, C., Talbott, E., Green, G.P.: Taste great or more fulfilling?: the effect of brand reputation on consumer social responsibility advertising for fair trade coffee. *Corp. Reput. Rev.* **12**(2), 159–176 (2009)
- Oberseder, M., Schlegelmilch, B.B., Gruber, V.: Why don't consumers care about CSR?: a qualitative study exploring the role of CSR in consumption decisions. *J. Bus. Ethics* **104**(4), 449–460 (2011)
- Oberseder, M., Schlegelmilch, B.B., Murphy, P.E., Gruber, V.: Consumers' perceptions of corporate social responsibility: scale development and validation. *J. Bus. Ethics* **124**(1), 101–115 (2014)
- Pomering, A., Dolnicar, S.: Assessing the prerequisite of successful CSR implementation: are consumers aware of CSR initiatives? *J. Bus. Ethics* **85**(2), 285–301 (2009)
- Quelch, J.A., Harding, D.: Brands versus Private labels-Fighting to win (1996)
- Sandberg, E.: Business trends and logistics challenges in the Western European retail industry. *J. Bus. Retail Manag. Res.* **6**(1) (2011). [https://jbrmr.com/cdn/article\\_file/i-14\\_c-109.pdf](https://jbrmr.com/cdn/article_file/i-14_c-109.pdf). Accessed 2 June 2019
- Steenkamp, J.B.E., Wedel, M.: Segmenting retail markets on store image using a consumer-based methodology. *J. Retail.* **67**(3), 300–320 (1991)
- Steenkamp, J.B.E., Van Heerde, H.J., Geyskens, I.: What makes consumers willing to pay a price premium for national brands over private labels? *J. Mark. Res.* **47**(6), 1011–1024 (2010)
- Tesco: Tesco sustainability report (2019). <https://www.tescopl.com/sustainability/>. Accessed 10 June 2019
- Unilever: Unilever sustainability plan report (2018). <https://www.unilever.com/sustainable-living/our-sustainable-living-report-hub/>. Accessed 10 June 2019
- White, K., MacDonnell, R., Ellard, J.H.: Belief in a just world: consumer intentions and behaviors toward ethical products. *J. Mark.* **76**(1), 103–118 (2012)



# “I’d like to, but I Can’t”. Store Brands’ Limited Exploitation of the Gluten-Free Opportunity

Edoardo Fornari<sup>(✉)</sup>, Alessandro Iuffmann Ghezzi, and Daniele Fornari

Catholic University of the Sacred Heart, Piacenza, Italy  
{edoardo.fornari, alessandro.iuffmannghizzi,  
daniele.fornari}@unicatt.it

**Abstract.** Over recent years, Free-From food products have shown a significant increase in consumption internationally. Retailers from the Modern Grocery Distribution (MGD) are taking advantage of this positive trend by extending their assortment in the area, thus benefitting remarkably in terms of sales and margins. The present work is focused on the Gluten-Free segment; through an analysis of Italian IRI sell-out data from 2014 to 2019, our results show a considerably positive sales increase, albeit slightly diminishing during the last two years. However, Store Brands (SBs) are only partially exploiting this opportunity since their contribution to the overall turnover of Gluten-Free products has been limited; this is mainly due to a lack in assortment depth.

**Keywords:** Free-From products · Gluten-Free products · Store Brands segmentation · Modern Grocery Distribution · Italy

## 1 Introduction

In the last decade, Free-From products grew in popularity worldwide, driven not only by increasing awareness of food allergies and intolerances but also by a well-publicized connection between “free of X” and “healthy” conceits (Priven et al. 2015; Hartmann et al. 2018; Larson 2019). This tendency has been seized upon as a promising marketing opportunity by both manufacturers and retailers, to the extent that National Brands’ (NBs) and Store Brands’ (SBs) ranges of products reporting Free-From claims on-pack have grown significantly (Stanton et al. 2015). Taking as an example the Italian market, across the Modern Grocery Distribution (MGD) stores in 2018, on average, 11,900 items (18.4% of the total) claimed as “Free-From” were listed; their total turnover accounted for 6.8 billion euros in the same year (27% of the total).<sup>1</sup> From the retailer’s point of view, the choice of enriching assortment in this area is based on the reasoning that the consumers’ willingness to pay a premium price for a “free of X” product instead of a conventional “contain X” alternative is consistent (Liaukonyte et al. 2013; Wongprawmas et al. 2016). A double advantage follows: on one hand there is a positive impact on value sales and

<sup>1</sup> Source: Osservatorio Immagino, Nielsen GS1 Italy, 2019/1 edition, “*Le etichette dei prodotti raccontano i consumi degli italiani*”.



on the other a favorable influence on the retailer’s brand image. In the light of these considerations, the work herein assumes a supply-side perspective, aiming to deepen the specific case of Gluten-Free (GF) products in order to: (i) monitor their positioning and performance trends within retailer assortments in the last years; (ii) verify to what extent and with what results retailers are developing their SBs within this segment.

Until now, the analysis approach adopted in literature regarding Free-From products has been demand-side and has mainly been based on consumer interviews. To the best of our knowledge, this is the first attempt ever to investigate the topic starting from objective sell-out data aiming to draw implications for retail marketing strategies.

The work is divided into four Sections. The first deals with a review of existing literature and formulation of Research Questions. The second describes data and analysis methods used. The third presents and discusses research results, while the fourth suggests implications and concludes.

## 2 Literature Review and Research Questions

Our framework refers to two main literature strands: one concerns drivers of Gluten-Free products’ growth, the other SBs segmentation policies.

*Drivers of Gluten-Free Products’ Growth.* Recent studies highlighted that Gluten-Free (GF) products are gaining in popularity; in 2015, 26.4% of new food products launched in the US were claimed to be so; a rapid and consistent growth occurred from 2009 when GF segment accounted for 12.1% (Larson 2019). Moreover, in 2017, 9% of total at-home food consumption occasions included GF products (Schierhorn 2018). These data are far higher than the actual number of individuals clinically diagnosed as celiac (approximately 1% of the whole population) (Hensel 2015; Choung et al. 2017). This is because the consumption of these products is stimulated by not only the existence of objective conditions of intolerance/allergy such as the difficulty of assimilating/digesting gluten, but also by personal choices linked to: (i) positive nutritional values; (ii) weight loss possibilities; (iii) mis-perceived wish to eliminate artificial ingredients from a diet (Schierhorn 2018). A recent study showed that approximately 30% of adult Americans perceive gluten as a “risky” component and, consequently, they are trying to reduce or eliminate the consumption of food products containing such a component (Priven et al. 2015). The spreading of these perceptions in public opinion, attributable to a capillary dissemination of information about side effects connected to gluten consumption, led to a consistent growth in GF products’ demand on one hand and to an exponential growth of GF products’ offer on the other. Besides new alternative products added to those commonly containing gluten, many others have been claimed as GF even though naturally free of gluten (i.e. processed meats and sauces, among others). This transpired to activate a potential market multiplier effect by 6–7 times over its organic dimensions (Hensel 2015).<sup>2</sup> To retailers, it consists of a promising business opportunity.

<sup>2</sup> 2018 data relative to the Italian market show that assortment share of products claimed as Gluten-Free within MGD stores was 11.9%. This figure, however, includes categories like pre-packed processed meats, fresh pre-packed cow meats, ketchup and mayonnaise, all of which are naturally free of gluten [Source: Osservatorio Immagino, Nielsen GS1 Italy, 2019/1 edition, “*Le etichette dei prodotti raccontano i consumi degli italiani*”].

*Store Brands Segmentation.* SBs have been growing in sales internationally over the last decades and their share is gradually increasing (Sethuraman and Gielens 2014). The reasons retailers are adopting a strategic approach in managing their own brands are: (i) improving store margins; (ii) differentiating offer from competitors; (iii) reinforcing store loyalty (Pauwels and Srinivasan 2004; Ailawadi et al. 2008). The achievement of such results is directly related to the growth of SBs market share to the detriment of NBs. In this regard, a number of studies have shown that the determinants of SB share increase are represented by both price (baseline price gap *versus* NBs and/or price promotion intensity) and non-price (i.e. assortment depth, shelf space, product quality development, among others) drivers (Sethuraman and Gielens 2014; Fornari et al. 2016). Nevertheless, it has been proven that the greatest impulse to SBs sales growth comes from an increase in assortment depth; in fact, for all kinds of brands there is a strong direct correlation between assortment share (which is also a *proxy* of shelf visibility) and sales share (Amrouche and Zaccour 2007; Fornari et al. 2013). This led retailers to develop a sophisticated segmentation of their SBs by following principles of brand architecture. This implies a range which is articulated by price-tiers covering not only mainstream but also the economy/value tier and, moreover, the premium one (ter Braak et al. 2013; Schnittka, 2015; Nenycz-Thiel and Romaniuk 2016). The latter in particular allows retailers to reduce quality gap perceptions when compared to NBs, improving willingness to pay together with trust and loyalty levels towards SBs (Stanton et al. 2015). It follows that the launch of GF items, supported by the presence of respective “free of” claim on-pack, represents a potential opportunity to strengthen SB image in the premium tier.

In the light of the aforementioned considerations, regarding GF products’ sales performance as a whole and with specific regard to SB, we formulate the following Research Questions:

**RQ1.** *Are retailers scoring positive sales performance on GF products and what is the productivity of GF assortment?*

**RQ2.** *What is the competitive positioning of SBs within the GF range offered by MGD retailers?*

### 3 Data and Research Method

Our analysis is based on an IRI dataset of sell-out data from all Italian hypermarkets and supermarkets. The dataset includes seven macro-categories from which data regarding both conventional products (containing gluten) and the corresponding “free of gluten” have been extracted: bakery (biscuits, pop-tarts, cereals and so on,) industrial bread, dry pasta, flours, fresh pasta, pizza bases, frozen foods (pizza, pasta, bread and ready meals, among others). These macro-categories significantly affect the overall MGD stores’ performance, in that their 2019 turnover accounted for 7.6 billion euro, 16.57% of total Food and Beverage sales. Their importance is also confirmed by the fact that in the same year their average per-store assortment was 1,388 items, 19.05% of total Food

and Beverage. Data cover the six-year period 2014–2019. For each macro-category and per-year we analyzed the following variables for both GF and conventional products: (i) value sales (in euros); (ii) volume sales (in kgs) and (iii) average number of listed items per store. Data were subsequently split into Store Brands (SBs) and National Brands (NBs). The performed analysis is based on a longitudinal approach whose aim is to investigate the mid-term sales/assortment performance of GF products in general and of SBs in particular.

## 4 Results

With reference to the first Research Question (RQ1), data regarding main performance indicators of GF products have been calculated and benchmarked with the corresponding conventional ones (Table 1).

The results allowed us to deduce that GF products’ performance has been very positive, thus confirming international trends. The overall sales growth 2014–2019 was +86% in value (CAGR +17%) and +65% in volume (CAGR +13%). However, these trends have shown different intensity indexes across the considered timespan; it is possible to identify two sub-periods: (i) the first is 2015–17 when growth rates were constantly double-digit; (ii) the second is 2018–19 when rates downsized below +10%. This evidence leads us to assume that, from 2018, GF products may have accessed a new phase of their lifecycle, marked by initial signs of maturity, as already verified in the US (Schierhorn 2018).

**Table 1.** Growth dynamics of GF products in Italian MGD

GF products’ performance indicators	2015	2016	2017	2018	2019
Annual value sales (euro mln)	125.18	160.84	180.05	182.39	191.44
Annual value sales growth (%)	+21.61	+28.49	+11.95	+1.30	+4.96
Annual volume sales growth (%)	+18.67	+21.26	+8.01	+0.80	+5.31
Value sales share on GF + <i>conventional</i> (%)	1.71	2.14	2.37	2.38	2.49
Volume sales share on GF + <i>conventional</i> (%)	0.87	1.05	1.12	1.16	1.21
Average price index vs <i>conventional</i> = 100	199	207	214	208	209
Average per store assortment (n. items)	64	83	97	101	101
Annual assortment growth (%)	+19.84	+28.86	+16.91	+4.26	+0.59
Assortment share on GF + <i>conventional</i> (%)	4.63	5.71	6.33	6.75	6.81
Value sales/assortment shares ratio	0.37	0.38	0.37	0.35	0.37

However, the growth of GF products has been much higher than that of corresponding conventional ones, so that a constant growth of GF segment share has been recorded. Moreover, the value share of GF products has always been twice their volume share as their average price index has systematically amounted to 200 or more compared to the

corresponding conventional products, set at 100. An interesting value creation took place for retailers: even though GF increase generated a partial cannibalization of conventional products' volumes, in the end it determined positive trading-up effects in value terms<sup>3</sup>. Nevertheless, we need to consider that the significant increase in GF products sales and share has been deeply favored by retailers' assortment strategies. Data highlight a constant increase in average per store number of GF items (+87% 2019 *versus* 2014, CAGR: +18%). In this regard it is possible to calculate the Bravais and Pearson linear correlation index ( $\rho$ ) between average per store assortment and annual value sales. The  $\rho$  index is 0.99, stating that there is a strong correlation between the two variables: to wider GF assortment corresponds higher sales values. However, this made it possible to reach an assortment share far higher than their sales share. This imbalance translates into extremely low GF assortment productivity, defined by the sales share to assortment share ratio, systematically lower than 0.4.

Regarding the second Research Question (RQ2), main performance indicators of SBs within the GF segment (GF SBs) have been calculated (Table 2).

From these analyses we can draw the conclusion that in the considered timespan, SBs' contribution to GF growth has been discontinuous and only partial. Three main items of evidence support this. The first consists of the fact that SB sales trends has been aligned to the general ones, with a +77% total growth in values (CAGR: +15%) and +68% in volumes (CAGR: +14%). However, it is necessary to bear in mind that these values came from fragmentary trends, negative in 2017 and particularly positive in 2018 and 2019. It follows that: (i) SBs' share in the GF segment was unvaried from 2015 to 2019, with a first dropping phase till 2017 and a second (2018–19) in which an increase of 3% points was recorded; (ii) SBs' contribution to overall annual sales growth of GF products decreased in 2015–16, was negative in 2017 and very high in 2018–19. Data would seem to suggest the hypothesis that until 2017 the positioning of SBs in the GF segment was really weak, while in 2018–19 the growth rhythm became more consistent even if the achieved market share is still far below the one held in corresponding conventional products<sup>4</sup>.

The second item of evidence is that SBs price index is significantly lower (between 80 and 90) than the average NBs one and progressively reducing. There follows a competitive positioning mainly focused on offering a lower price alternative instead of on gaining a positive quality image in the premium tier.

The third item of evidence consists of a still weak SBs assortment share, which transpires to be throughout the entire timespan not only significantly lower than that in the corresponding conventional products but also lower than its sales share<sup>5</sup>. The  $\rho$  index

<sup>3</sup> Sales trade-off from conventional to GF products appears limited in that in four years out of five (2016–2017–2018–2019) value sales trends of both were characterized by the same positive sign and in three years out of five (2016–2017–2019) the same also happened with regard to volume sales dynamics.

<sup>4</sup> SBs value sales share in the corresponding conventional products was equal to 16.55% in 2015, 16.59% in 2016, 16.41% in 2017, 16.80% in 2018 and 17.22% in 2019. All these values are 4–5% points higher than those reached by SBs within the GF segment.

<sup>5</sup> SBs assortment share in the corresponding conventional products was equal to 16.81% in 2015, 16.73% in 2016, 16.75% in 2017, 17.75% in 2018, and 18.30% in 2019. All these values are 7–8% points higher than those reached by SBs within the GF segment.

**Table 2.** GF SBs’ performance in Italian MGD

GF SBs’ performance indicators	2015	2016	2017	2018	2019
Annual value sales growth (%)	+15.39	+18.00	−9.12	+21.94	+17.37
Share on total GF value sales (%)	12.55	11.53	9.36	11.26	12.60
Share on total GF value sales growth (%)	9.42	7.93	−8.80	157.83	39.44
Average price index <i>versus</i> NBs = 100	88	85	82	81	82
Annual assortment growth (%)	+5.06	+24.64	+9.33	+37.67	+12.56
Share on total GF assortment (%)	9.20	8.89	8.32	10.98	12.29
Value sales/assortment shares ratio	1.36	1.30	1.13	1.03	1.02

between GF SBs’ sales values and GF SBs’ average per store assortment is 0.94, stating again a strong positive correlation between the two variables. Data show that if on one hand the average productivity of each SBs item is more balanced than that of NBs ones, on the other retailers are not seizing the full potential of the assortment lever as a driver of sales growth in the GF segment.

## 5 Conclusions and Implications

The results of our analysis allow us to deduce three main implications for retail management. The first is that GF products’ turnover has shown a significant growth in the last six years but its overall size is still limited (191.44 million euros, 0.41% of Food and Beverage). It follows that even though the success of these products generated a sales values trading-up phenomenon, thanks to their premium price compared to the corresponding conventional ones, their impact on retailers’ balance sheet has been significantly lower than their media echo. Moreover, if the down-turning signals of the last two years are confirmed, in future business GF-related opportunities might well soon expire. The second implication is that sales growth of GF products has been strongly influenced by a more-than-proportional increase in their assortment depth. This means that retailers have developed push marketing policies by allocating extra shelf space/visibility to these products in order to boost impulse purchases and to facilitate sales switching from conventional products to free of gluten ones. A third implication concerns SBs, now holding a followership position in the GF segment. Our results pointed out that the latter consists of a high-value niche dominated by NBs and particularly by specialized players such as the global leader Schar. This is a highly competitive context in which SBs have struggled to be perceived as a quality equivalent alternative to NBs, especially in Italy, where their market share is still very low, and a significant variability occurs among retailers (both on product quality and on brand identity). As a confirmation of this, the assortment share of GF SBs is still, on average, limited; this means that only a few MGD players are manning this segment; it follows that sales of SBs are penalized. The opportunities of GF products’ growth have only partially been seized upon in their maximum potential phase, and only by leading retailers.

The main limits of our work are: (i) data in account only refer to categories where a correspondence between GF and conventional products is available; (ii) the IRI dataset contains data from the entire MGD system. Consequently, future research could enrich the analysis on one hand by including naturally free of gluten but claimed as “Gluten-Free” products, and on the other by segmenting data attributable to different business models characteristic of individual retailers.

## References

- Ailawadi, K.L., Pauwels, K., Steenkamp, J.-B.E.M.: Private label use and store loyalty. *J. Mark.* **72**(6), 19–30 (2008)
- Amrouche, N., Zaccour, G.: Shelf-space allocation of national and private brands. *Eur. J. Oper. Res.* **180**(2), 648–663 (2007)
- Choung, R.S., Unalp-Arida, A., Ruhl, C.E., Brantner, T.L., Everhart, J.E., Murray, J.A.: Less hidden celiac disease but increased gluten avoidance without a diagnosis in the United States: findings from the National Health and Nutrition Examination Surveys from 2009 to 2014. In: *Mayo Clinic Proceedings*, vol. 92, no. 1, pp. 30–38 (2017)
- Fornari, E., Fornari, D., Grandi, S., Menegatti, M.: The influence of retailing-mix levers on private label market share: the case of the Italian FMCG market. *J. Retail. Consum. Serv.* **20**(6), 617–624 (2013)
- Fornari, D., Fornari, E., Grandi, S., Menegatti, M.: Leading national brands facing store brands competition: is price competitiveness the only thing that matters? *J. Retail. Consum. Serv.* **30**, 234–241 (2016)
- Hartmann, C., Hieke, S., Taper, C., Siegrist, M.: European consumer healthiness evaluation of ‘free-from’ labelled food products. *Food Qual. Prefer.* **68**, 377–388 (2018)
- Hensel, K.: Gluten free without the sacrifice. *Food Technol.* **69**(11), 20–31 (2015)
- Larson, R.B.: Examining prospective buyer attitudes toward four food product traits. *Br. Food J.* **121**(8), 1936–1950 (2019)
- Liaukonyte, J., Streletskaia, N.A., Kaiser, H.M., Rickard, B.J.: Consumer response to ‘contains’ and ‘free of’ labeling: evidence from lab experiments. *Appl. Econ. Perspect. Policy* **35**(3), 476–507 (2013)
- Nenycz-Thiel, M., Romaniuk, J.: Understanding premium private labels: a consumer categorisation approach. *J. Retail. Consum. Serv.* **29**, 22–30 (2016)
- Pauwels, K., Srinivasan, S.: Who benefits from store brand entry? *Mark. Sci.* **23**(3), 364–390 (2004)
- Priven, M., Baum, J., Vieira, E., Fung, T., Herbold, N.: The influence of a factitious free-from food product label on consumer perceptions of healthfulness. *J. Acad. Nutr. Diet.* **115**(11), 1808–1814 (2015)
- Schierhorn, C.D.: Why gluten-free is here to stay. *Food Technol.* **72**(8), 46–57 (2018)
- Schnittka, O.: Are they always promising? An empirical analysis of moderators influencing consumer preferences for economy and premium private labels. *J. Retail. Consum. Serv.* **24**, 94–99 (2015)
- Sethuraman, R., Gielens, K.: Determinants of store brand share. *J. Retail.* **90**, 141–153 (2014)
- Stanton, J.L., Wiley, J., Hooker, N.H., Salnikova, E.: Relationship of product claims between private label and national brands. The influence of private label penetration. *Int. J. Retail. Distrib. Manag.* **43**(9), 815–830 (2015)
- ter Braak, A., Geyskens, I., Dekimpe, M.G.: Taking private label upmarket: empirical generalizations on category drivers of premium private label introductions. *J. Retail.* **90**(2), 125–140 (2013)
- Wongprawmas, R., Pappalardo, G., Canavari, M., Pecorino, B.: Willingness-to-pay for multiple units of eco-friendly wheat-derived products: results from open-ended choice experiments. *J. Food Prod. Mark.* **22**(6), 658–682 (2016)



# A View of Retailing Formats Based on the Assortment Dimension: An Analysis in the Spanish Context

José Luis Ruiz-Real<sup>1</sup>(✉), Juan Carlos Gázquez-Abad<sup>1</sup>,  
and Francisco J. Martínez-López<sup>2</sup>

<sup>1</sup> Faculty of Economics and Business, Agrifood Campus of International Excellence ceiA3,  
University of Almería, Almería, Spain

{jlruioreal, jcgazque}@ual.es

<sup>2</sup> Business School, University of Granada, Granada, Spain

fjmlopez@ugr.es

**Abstract.** Assortment, as a key component of marketing mix, constitutes a fundamental positioning tool for retailers. Assortment composition can influence both current and future product choices by helping shape consumer preferences. Consumers expect retailers to provide a suitable mix of products; the impact that a retailer's assortment design has on their sales and profit margins is clear. Assortment planning, therefore, represents an opportunity for the academic world to contribute to improving retail practice, although a dominant solution to such planning has not yet emerged. Several criteria have been used in literature to classify retail stores. A relevant classification is the one that classifies retailers attending to the variety, or breadth and depth, of the assortment. In Spain, the most recognized retail store commercial formats are: traditional commerce, specialized commerce, category killer, convenience store, self-service, supermarket, hypermarket, department store, popular store and discount store.

**Keywords:** Retailing · Assortment · Private label · Commercial formats

## 1 Introduction

Assortment is a fundamental positioning tool for retailers, helping both the strategic positioning of the store (McGoldrick 2002) and the classification of commercial formats (Peng 2008), by identifying offer at the point of sale. In fact, together with quality and prices, assortment determines the positioning and image of the store (Kunkel and Berry 1968; Lindquist 1975; Mazursky and Jacoby 1986; Ailawadi and Keller 2004; Mantrala et al. 2009).

Several criteria have been used in literature to classify retail stores. Some involve the classification of retailers into generic categories that must be defined according to the merchandise assortment, type of owner, size and interior design, or from a combination of these (Mollá et al. 2010). Eurostat (Structural Business Statistics) meets the dimension criteria to classify retail stores in the countries of the European Union. Nielsen,

also considering its size, mentions the following self-service retail formats: self-service, super-service or small supermarket, medium supermarket, large supermarket and hypermarket. Other retail formats are discount stores (e.g. Wal-Mart, Lidl or DIA), category killers, convenience stores (e.g. Opencor, Repshop or Depaso), department stores and popular stores (Sánchez et al. 2011).

A well-known classification of retailers addresses the variety or breadth and depth of the assortment. The variety can be wide (multiple product lines) or narrow (few lines), and we can speak of a deep assortment (many products in one line), or shallow (few products in a line). The typology of Tordjman (1991) distinguishes four strategies: 1) defensive strategy, wide and shallow assortment; 2) offensive strategy, narrow and deep assortment; 3) push strategy, narrow and shallow assortment; and 4) pull strategy, wide and deep assortment.

Another important aspect to consider when talking about retailer's assortment is the substitutability of products. When the consumer does not find certain product, they can choose to buy a substitute product. Customer willingness to substitute a product within a specific category is an important parameter in assortment planning. If customers have a high propensity to substitute a product of a certain category, then having a very deep assortment with a high stock rate is less relevant; the opposite would be also true (Kök et al. 2009).

Three patterns can be defined with respect to customer substitution: (1) *Stockouts-based substitution*. Consumers usually buy a product for daily consumption in a store, but some days there is out of stock and they buy another product; (2) *Assortment-based substitution*. Consumers identify in advertising, or because they have seen it in other stores, a product that they like, but when they want to buy it in their usual store, they realize that the retailer does not have it in their assortment, so that, finally, they buy another product; (3) Consumers *choose their favourite product* from those they see at the store shelves and buy it when they think it has more utility than not purchasing it. There may be other products that they would have preferred, but did not see at the store, either because of a stock outage or because the retailer does not include them in its assortment. Although, it can be said that the consumer substituted the product, she was not aware that these other products exist and, therefore, she did not consider that her purchase decision process contemplates the substitution of products. The first two patterns are common in daily consumer goods (e.g., food), while the latter is more common in consumer durables.

## 2 Legislation and Classification of Retailers in Spain

In Spain, currently retail trade is regulated by Law 1/2010, of March 1, reforming Law 7/1996, of January 15, on Retail Trade (*Ordenación del Comercio Minorista*), which established a legal framework in the distribution sector and was issued considering the need to adapt to the reality of markets. Law 1/2010, of March 1, modified the retail trade regulation to adapt it to the European Directive 2006/123/EC, regarding services in the common market.

Article 2 of the aforementioned Law speaks of commercial establishments and says in point 1 that the following are those that will have such consideration: "premises



and buildings or installations of a fixed and permanent nature, destined for the regular exercise of commercial activities, either continuously or on specific days or seasons". In point 2, it states that "kiosks and, in general, facilities of any kind that fulfil the purpose indicated therein are included, provided they have the character of real estate in accordance with article 334 of the Civil Code".

The establishment of the requirements by virtue of which the large commercial area qualification will be granted will depend on the Autonomous Communities, although point 3 of the same Article 2 of the Law sets guidelines when stating that: "in any case, they will have this consideration, for the purposes of authorizations and the provisions of commercial regulations, commercial stores, which, intended for the retail trade of any kind of articles, have a useful area for exhibition and sale to the public of more than 2,500 square meters".

Among the self-service stores, those in which the products are placed on shelves and it is the customer who selects and withdraws for herself what she wants to buy, paying in cash, we can distinguish the following (Esteban and Lorenzo 2013):

- *Self-service*. Total sales area not exceeding 400 m<sup>2</sup>. They emerge as an evolution of traditional grocery stores and food or drug stores. A very small area of influence is estimated, around 300 m.
- *Supermarket*. It is the most popular format, with a sales area between 400 and 2,500 m<sup>2</sup>. A sub-classification is usually made between small neighborhood supermarkets (up to 1,000 m<sup>2</sup>) and large supermarkets (up to 2,500 m<sup>2</sup>, and usually with parking). They base their strategy on location, proximity being of great importance. The best-selling product categories are food, cleaning and household. As examples we can mention Mercadona, Caprabo, or Carrefour Express.
- *Hypermarket*. Large establishment, with a sales area of over 2,500 m<sup>2</sup>, although the average size is around 10,000 m<sup>2</sup>. They offer mass consumption products, with large assortments, which allow customers to make a wide purchase, which includes fresh and packaged food, personal hygiene products, household goods, clothing and domestic equipment. They have high sales volume and high product turnover, allowing them to keep low prices. They offer parking and are usually located outside urban centers. Examples, among others, Carrefour, Eroski, Alcampo, or Hipercor.
- *Discount Store*. Medium size, generally smaller than supermarkets, they offer a limited assortment, but with large sales volumes, as they have very competitive prices, for which they reduce the services offered or automate some of them, focusing on reducing costs. Their goal is to sell a small number of items, with high turnover products, at the lowest possible price. It is possible to distinguish between the *Hard Discount*, with a reduced number of references, a large presence of private labels and low and aggressive prices (e.g. Aldi, Lidl) and the *Soft Discount*, with a wider assortment than the previous one, based mainly on national brands, and with a low price policy applied especially to its private labels (e.g. Día).
- *Convenience Store or Drugstore*. They are characterized by very wide-ranging schedule, between 18 and 24 h a day. It has a wide but shallow assortment, with a reduced variety in each product category. According to the Law 2/1996 complementary to the Retail Trade Regulation, they are "those stores that, with a commercial area of no more than 500 m<sup>2</sup>, remain open to the public for at least eighteen hours a day and

distribute their offer in a similar way, including books, newspapers and magazines, food items, records, videos, toys, gifts and miscellaneous items”. They are normally found in urban settings. Examples in this category are Seven Eleven and VIPS.

- *Category Killers (Specialist Superstores)*. They have a sales area normally above 2,000 m<sup>2</sup>, with a very deep assortment, specialized in a certain product category, in which they try to become a reference for consumers. Examples of this category are Ikea, Toys “R” Us, or Decathlon.

Taking into account criteria such as sales area, breadth of the assortment, linear layout and sales system, Santesmases (1999) distinguishes up to ten retail store commercial formats (see Table 1): Traditional Commerce, Specialized Commerce, Category Killer, Convenience Store, Self-service, Supermarket, Hypermarket, Department Store, Popular Store and Discount Store.

**Table 1.** Types of retailers according to commercial formats

Commercial format	Sales area	Assortment	Sales system	Examples of retailers
Traditional store	Very small	One class of products Shallow	Assisted	Neighborhood stores
Specialized store	Very small	A single line of products Shallow but great depth	Assisted	Cortefiel, Zara
Category killer	Large	A single line of products Wide and deep	Self-service	Toys R Us, Decathlon
Convenience store	Small, drugstore style	Food, drinks, books, perfumery...	Wide-ranging schedule	7-Eleven, VIPS
Self-service	– Small: <100 m <sup>2</sup> – Large: 100–400 m <sup>2</sup>	Food and household products	Self-service	Local character. E.g. Supremo
Supermarket	– Small: 400-1,000 m <sup>2</sup> – Large: 1.000–2,500 m <sup>2</sup>	Food, cleaning and household Wide assortment	Self-service Departments. Proximity to the client Complementary services	Mercadona, Consum

(continued)

**Table 1.** (continued)

Commercial format	Sales area	Assortment	Sales system	Examples of retailers
Hypermarket	Large. More than 2,500 m <sup>2</sup>	Very wide assortment. Great variety of products (more than 20,000 references)	Self-service. Parking for more than 1,000 vehicles. Wide-ranging schedule. Low prices	Carrefour, Alcampo
Department store	Large	Wide variety of products (but less depth than specialized stores)	They usually operate in branch chains. Departments. Extensive services. High prices	El Corte Inglés
Popular store	Smaller than the Department Store	Specialized in substandard product lines	Reduced services. Low prices	Champion, C&A
Discount store	Large	Very limited offer, with high turnover products	Reduced services. Many private labels. Very low prices	– Hard Discount: Aldi, Lidl – Soft Discount: DIA

Source: Own elaboration from Santesmases (1999)

### 3 Conclusions and Implications

The assortment, as a key component of the marketing mix, becomes an instrument that, through strategic positioning, makes it easier for businesses to acquire and retain customers (Grewal et al. 1999; Kahn 1999; Koelemeijer and Oppewal 1999; Stassen et al. 1999). In addition to attracting consumers to the store, assortment composition can influence both current and future product choices by helping to shape consumer preferences (Simonson 1999; van Ryzin and Mahajan 1999). The impact that a retailer's assortment design has on their sales and profit margins is clear. Consumers expect retailers to offer them a suitable mix of products (Gruen and Shah 2000). Thus, if the assortment is not as expected, consumers will leave, leading to losses in both current and future sales (Mantrala et al. 2009).

The retailer must select the products that it will offer at its point of sale considering, on the one hand, the preferences of the clients and, on the other hand, optimizing the available space, by defining the appropriate quantities for each reference and attending to its levels of turnover, trying to achieve the highest sales index per square meter. The exchange in transaction or distribution costs that occurs between retailers and consumers must meet both the needs and desires of the latter and the profit objective of the retailers

(Ingene 1984; Goodman 1985; Betancourt and Gautschi 1988; Oi 1992; Betancourt 2004).

The objective of assortment planning is to design it in a way that allows to maximize the store's sales or its gross margin, considering that it is subjected to certain restrictions, such as a limited budget for the acquisition of products, a certain space for its exhibition, and a series of other obstacles, such as the desire to have at least two suppliers for each type of product (Kök et al. 2009). The store must offer its customers a certain number of references, since the possibility of choosing a specific product in the store is one of the main satisfactions of the customer (Bruel and Saint Cricq 1975).

Cristol and Sealey (2000) establish the concept of "*Simplicity Marketing*", according to which it is convenient to reduce the number of products and brands that make up the assortment, thus simplifying customer decisions. This reduction in consumer confusion can be accomplished in a number of ways: by consolidating, adding, or integrating multiple functions into a single product or service. Simplifying customer decision making can become a competitive advantage against the inevitable excess of options that exists nowadays. Thus, these authors advocate that less is better, both in the number of options actually available and in the positioning and packaging of those options.

Other research suggests that very large assortments lead to consumer confusion and increased search costs, which do not lead to more purchases. Kök et al. (2009) conclude that very large assortments, with a wide variety of products, have reached a certain level of saturation and that, nowadays, reduce assortment may even lead to increase the profits of the retailer.

Meanwhile, and delving into this idea, Miller (1956) states that the average human mind cannot process more than seven units at once. For this reason, seven is a very frequent number in the lists to remember. Simon (1997) establishes the concepts of limited rationality and sufficiency, according to which people have problems when making decisions, when many factors intervene and the flow of information is excessive; thus, it raises the concept of limited rationality as a practical approach: since the optimal solution to a problem is not known exactly, a solution is chosen that reaches a certain level of acceptability.

Retailers are aware of the dynamic nature of the assortment management problem. Assortment planning addresses the need for periodic review by retailers and appropriate changes, even assuming that changing the assortment is an expensive process that incurs certain fixed costs (Caldentey and Caro 2010). There are several factors that require a change in the assortment (Kök et al. 2009), such as the inclusion of seasonal products, the introduction of new products and changes in consumer preferences. Product categories at different stages of their life cycle, categories with seasonal products, or even products with different growth potential, are strategic considerations that require different assortment planning approaches.

Many retailers test the initial assortment in some stores so that they can obtain early information, before the sale season, on consumer trends, as well as possible gaps in the portfolio, in order to redesign the assortment. However, most academic papers consider future consumer preferences to be stable (Kahn and Lehmann 1991) and analyze assortments as static. In that case, the main reason for offering variety in an assortment is to appeal to the heterogeneity of preferences of the target population. The assumption

of stability naturally leads to a static assortment policy. However, stable preferences should not be taken for granted. More recent works consider the assortment management problem as dynamic planning (e.g. Caro and Gallien 2007; Caldentey and Caro 2010; Ulu et al. 2012; Sauré and Zeevi 2013).

Assortment planning, therefore, represents an opportunity for the academic world to contribute to improving retail practice, although a dominant solution to such planning has not emerged yet. What the “perfect assortment mix” would be remains unclear to most retailers (Bauer et al. 2012).

## References

- Ailawadi, K.L., Keller, K.L.: Understanding retail branding: conceptual insights and research priorities. *J. Retail.* **80**(4), 331–342 (2004)
- Bauer, J.C., Kotouc, A.J., Rudolph, T.: What constitutes a “good assortment”? A scale for measuring consumers’ perceptions of an assortment offered in a grocery category. *J. Retail. Consum. Serv.* **19**, 11–26 (2012)
- Betancourt, R., Gautschi, D.: The economics of retail firms. *Manag. Decis. Econ.* **9**(2), 133–144 (1988)
- Betancourt, R.: *The Economics of Retailing and Distribution*. Edward Elgar Publishing Ltd., Londres (2004)
- Bruel, O., Saint Cricq, J.: *Merchandising*. Ediciones Pirámide, Spain (1975)
- Caldentey, R., Caro, F.: Dynamic assortment planning. Working paper, University of California, UCLA Anderson School of Management, Los Angeles (2010)
- Caro, F., Gallien, J.: Dynamic assortment with demand learning for seasonal consumer goods. *Manag. Sci.* **53**(2), 276–292 (2007)
- Cristol, S.M., Sealey, P.: *Simplicity Marketing: End Brand Complexity, Clutter, and Confusion*. The Free Press, New York (2000)
- Esteban, A., Lorenzo, C. (coord.): *Dirección Comercial*. ESIC Editorial, Madrid (2013)
- Goodman, C.S.: Comment: on output measures of retail performance. *J. Retail.* **61**(3), 77–82 (1985)
- Grewal, D., Levy, M., Mehrotra, A., Sharma, A.: Planning merchandising decisions to account for regional and product assortment differences. *J. Retail.* **75**(3), 405–424 (1999)
- Gruen, T.W., Shah, R.H.: Determinants and outcomes of plan objectivity and implementation in category management relationships. *J. Retail.* **76**(4), 483–510 (2000)
- Ingene, C.H.A.: Productivity and functional shifting in spatial retailing. *J. Retail.* **60**, 15–36 (1984)
- Kahn, B.E., Lehmann, D.R.: Modeling choice among assortments. *J. Retail.* **67**, 274–299 (1991)
- Kahn, B.E.: Introduction to the special issue: assortment planning. *J. Retail.* **75**(3), 289–293 (1999)
- Koelemeijer, K., Oppewal, H.: Assessing the effects of assortment and ambience: a choice experimental approach. *J. Retail.* **75**(3), 319–345 (1999)
- Kök, G., Fisher, M.L., Vaidyanathan, R.: Assortment planning: review of literature and industry practice. In: *Retail Supply Chain Management*. International Series in Operations Research & Management Science, vol. 122, pp. 99–153 (2009)
- Kunkel, J.H., Berry, L.L.: A behavioral conception of retail image. *J. Mark.* **32**(4), 21–27 (1968)
- Lindquist, J.D.: Meaning of image: a survey of empirical hypothetical evidence. *J. Retail.* **50**, 29–38 (1975)
- Mantrala, M.K., Levy, M., Kahn, B.E., Fox, E.J., Gaidarev, P., Dankworth, B., Shah, D.: Why is assortment planning so difficult for retailers? A framework and research agenda. *J. Retail.* **85**(1), 71–83 (2009)

- Mazursky, D., Jacoby, J.: Exploring the development of store images. *J. Retail.* **62**(2), 145–166 (1986)
- McGoldrick, P.J.: *Retail Marketing*. McGraw-Hill, London (2002)
- Miller, G.A.: The magical number seven, plus or minus two: some limits on our capacity for processing information. *Psychol. Rev.* **63**, 81–97 (1956)
- Mollá, A., Ruiz, M.E., Vallet, T.: El surtido como variable de clasificación: una aplicación a la distribución de cerámica y materiales de construcción en España. *ESIC-Market* **136**, 143–172 (2010)
- Oi, W.: *A New Theory of Retailing Costs*. European Economic Review, vol. 17. North Holland Publishing Company (1992)
- Peng, L.: *Assortment factors and category performance: an empirical investigation of Australian organic retailing*. Doctoral thesis. The University of New South Wales, Sydney, Australia (2008)
- Sánchez, M., Estrella, A., Ruiz-Real, J.L., García, A.: La distribución comercial en Europa: Situación actual y tendencias. *Revista de Estudios Empresariales*. Segunda época **2**, 67–95 (2011)
- Santesmases, M.: *Marketing. Conceptos y estrategias*. Ediciones Pirámide. Madrid (1999)
- Sauré, D., Zeevi, A.: Optimal dynamic assortment planning with demand learning. *Manuf. Serv. Oper. Manag.* **15**(3), 387–404 (2013)
- Simon, H.A.: *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations*, 4th edn. Paperback (1997)
- Simonson, I.: The effect of product assortment on buyer preferences. *J. Retail.* **75**(3), 347–370 (1999)
- Stassen, R.E., Mittelstaedt, J.D., Mittelstaedt, R.A.: Assortment overlap: its effect on shopping patterns in a retail market when the distribution of prices and goods are known. *J. Retail.* **75**(3), 371–386 (1999)
- Tordjman, A.: El marketing del distribuidor. In: *Consellería de Industria, Comercio y Turismo* (ed.): *Estrategias de Distribución Comercial, En Busca de la Excelencia*, Generalitat Valenciana, pp. 41–78 (1991)
- Ulu, C., Honhon, D., Alptekinoglu, A.: Learning consumer tastes through dynamic assortments. *Oper. Res.* **60**(4), 833–849 (2012)
- Van Ryzin, G., Mahajan, S.: On the relationship between inventory costs and variety benefits in retail assortments. *Manag. Sci.* **45**(11), 1496–1509 (1999)



# Sorry, Your Order Has a Substitution: The Effects of Substitution Policy in Online Grocery Retailing

Dong Hoang<sup>1(✉)</sup> and Els Breugelmans<sup>2</sup>

<sup>1</sup> Leeds Beckett University, Leeds, UK  
D.hoang@leedsbeckett.ac.uk

<sup>2</sup> KU Leuven, Leuven, Belgium  
Els.breugelmans@kuleuven.be

**Abstract.** Post-purchase out-of-stock (OOS) often happens in an online store context, where products appear to be available at the time a consumer makes an order and checks out, but then become OOS when the order is to be dispatched. To mitigate negative responses from consumers, online grocery retailers often provide consumers a substitution alternative to the OOS item. This paper investigates the effects of two substitution policies where we focus on different matching strategies of the substitution with the OOS item. In policy one, we measure the effect of matching on the dominant attribute (brand vs. flavour). In policy two, we test the effect of matching with a product from the consumers' past purchase portfolio. We investigate these two substitution policies and their interaction in two categories that differ on the level of differentiation (i.e., the degree to which distinctions are objectively measurable – vertical differentiation/VD vs. not easy to evaluate – horizontal differentiation/HD). Our dependent variable is the probability to accept the substitute. The study employs a computer-simulated purchase experiment, using two product categories: margarine (VD) and cereals (HD). 2,113 UK consumers representative of general UK shopper profile participated. Findings show that in the margarine category where brand is the dominant attribute, the same brand substitution is more likely to be accepted than the same flavour substitution. In contrast, in the cereal category where flavour is more likely to be the dominant attribute, same flavour substitution is more likely to be accepted than same brand substitution. The results also show that, in both categories, matching the substitution product with a product from consumers' past purchase portfolio is more likely to be accepted than offering a substitute that consumers have not bought before. We also found a significant interaction between the two policy types but for cereals only. The effects of two substitution policies are mediated by perceived fairness of the substitution. The paper discusses contributions and implication for future research.

**Keywords:** Online grocery · Online retailing · Out-of-stock · Substitution

## 1 Introduction

Product unavailability is a common problem that consumers face when grocery shopping both in store and online. In a physical store context, an out-of-stock (OOS) product becomes immediately apparent in the purchase decision process and consumers can react straight away on how to deal with the OOS situation (Campo et al. 2000; Sloot et al. 2005). In an online store context, where the phase of purchase (ordering) and receiving (pick up/delivery) are separate, an OOS is not always apparent to the consumers. Products may appear to be available on the online shelves at the time a consumer makes an order and checks out, but then become OOS when the order is picked up/delivered. Market surveys have shown that post-purchase OOS is one of the top three drawbacks of the shopping experience for online grocery shoppers in the UK (Poulter 2011). When such post-purchase OOS occurs, online grocery retailers often replace the OOS item with an alternative as a substitute, leaving customers the option of either accept or reject the substitution at the doorsteps when receiving the product at home (Severs 2014). The goal of such a substitution policy by retailers is to mitigate consumers' dissatisfaction with the online grocery retailers' service (Cocozza 2019) and to prevent loss of sales. The distinctive nature of post-purchase OOS compared to prior-to-purchase OOS in an online store context is that online retailers can follow a strategy to select a suitable substitution to the OOS item on behalf of the customers.

The choice of substitution alternative in the context of a post-purchase OOS poses two important challenges for an online grocery retailer (Cocozza 2019). Firstly, the remaining assortment to choose a substitution alternative from is oftentimes large, and existing literature has not offered a full understanding of which product attributes are determinant in selecting a substitution alternative in a given product category. Is it more important to select a substitution alternative that is similar on flavour or on brand? If you select the same flavour of another brand, does it matter whether the substitution is a NB or PL? Does the determining attribute for the substitution alternative, flavour or brand, depend on category characteristics? And, how (if at all) can online retailers that have the record of consumers' past purchases, use this as a decisive factor in their substitution policy? Secondly, retailers must be wary of consumers' reactance towards the substitution if the selected substitution alternative is incongruent with their consideration set (Fitzsimons and Lehmann 2004) or when shoppers are suspicious of retailers recommending higher priced items (Breugelmans et al. 2006). As such, retailers should question what effects their substitution policies have on consumers' fairness perceptions.

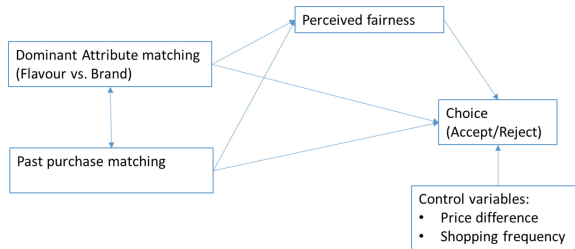
Our first objective is to investigate consumers' behavioural response to two substitution policies on the probability to accept the alternative. In a first polity, we test the effects of (not) selecting the dominant attribute by manipulating a substitution alternative that matches the OOS item on brand vs. flavour. Note that matching on brand implies another flavour whereas matching on flavour implies suggesting another brand. For the latter, we also examine the difference between suggesting the same flavour of another national brand (NB) vs. the same flavour of the private label (PL). In a second policy, we explore the effect of offering a substitution alternative that was bought by consumers in the past. Our second objective is to compare whether the effects of the two substitution policies and their interaction are the same across two product categories that vary on the differentiation strategy (focus on the price/quality dimension vs. the flavour/variety



dimension). We speculate that the latter may be instrumental in determining the dominant attribute. Our third objective is to examine the underlying mechanism via the role of perceived fairness of the policies and its effects on the probability of consumers' acceptance of the substitute.

## 2 Conceptual Framework

Previous research has shown that when considering an alternative, consumers tend to focus on a number of factors such as: a) whether the alternative is similar to the intended to purchase items (Campo et al. 2003); b) whether they are familiar with or have experienced the alternatives in the past (Bronnenberg and Vanhonacker 1996); and c) the perceived equity in terms of cost, quality and value of the alternatives compared to the OOS item (Xia et al. 2004). Drawing on these key factors, we develop a conceptual framework as follow, where a) and b) are captured by policy 1 and 2 respectively while c) is controlled for in the analyses (Fig. 1).



**Fig. 1.** Substitution policies conceptual framework

### 2.1 Policy 1: Similarity of Dominant Attribute

Similarity is defined by common attributes or characteristics between the substitution alternative and the OOS item (Tversky 1977). Research using phantom effects has established that similar alternatives are preferred to dissimilar alternatives when a preferred (phantom) is not available (Pratkanis and Farquhar 1992). This is because similarity reduces the cognitive effort of decision making (Fitzsimons 2000). Thus, similarity indicates an interchangeable choice option (Tversky 1977; Arens and Hamilton 2016). Similarity appeals are not homogeneous amongst various attributes such as flavour, variety, brand and price (Campo et al. 2003; Breugelmans et al. 2007; Arens and Hamilton 2016). Prior research has indeed suggested that in some product categories an attribute might carry more weight than other attributes (Batra et al. 2001). For example, some studies in food categories suggest that taste and nutrition value weight more than brand and packaging in influencing food choice (Onwezen et al. 2012). Another study also suggests that consumers optimise their choice by prioritising which attribute to consider first, either a quality-based or a type-based attribute (Shao 2015). Hence, we expect that an alternative that is similar to the OOS item in an attribute that is seen as more dominant

or important in that category will likely be more favourable than one that is similar in a less dominant or less important attribute. We speculate that what the dominant attribute is, differs across product categories.

In this research, we focus on categories that differ on the degree of differentiation. Literature on differentiation has established two differentiation strategies: horizontal and vertical differentiation (Hauser and Shugan 1983; Sayman et al. 2002). Horizontal differentiation (HD) suggests that no brand is uniformly better than the other brands, hence, competing brands have different strengths (Hotelling 1929; Hauser and Shugan 1983). Products in the horizontal differentiation are differentiated in features or attributes which cannot be objectively ordered, such as colour, style, variety or flavour (no one style, colour, variety or flavour is uniformly better than another one). Differences in consumers' tastes lead to consumers buying a certain style, colour, variety or flavour and not the other (Spiller and Belogolova 2017). Breakfast cereals is a typical example of a HD category (Hotelling 1929; Hauser and Shugan 1983) as it is often dominated by few brands offering a large number of flavours targeting different taste preferences (adult, kids, chocolate, honey or natural flavour etc....) (Mintel 2018). In contrast, vertically differentiation (VD) indicates that products can be ordered because these products tend to differ on the level of quality and performance (Spiller and Belogolova 2017). Therefore, consumers choose certain products mostly because of differences in perceptions of overall quality and price. We consider margarine as an example of a VD category, because the category has a range of national brands positioning from standard to premium while offering just one or two varieties (original or lighter/less fat) (Mintel 2017b). Consumers tend to prefer expensive brand of margarine over the cheaper ones due to perceived superior taste quality (Orchant 2013).

Applying this to a setting of substitution policy in an OOS situation, we expect that in a category where assortment variety is horizontally differentiated, attributes such as flavour and type are more likely to be dominant over brand. In contrast, in a category where products are mainly vertically differentiated, the brand attribute, which reflects differences in quality and price (Etgar and Malhotra 1981) is more likely to be dominant. Considering the above, we predict that, in a HD category, substitutes are likely to be more similar if they match flavour rather than brand, while in a VD category, similarity is higher if the substitutes match on brand rather than another attribute. Thus:

- H1a:** In a predominantly VD category substitution alternatives of the same brand have a higher probability of being accepted relative to substitution alternatives of the same flavour.
- H1b:** In a predominantly HD category substitution alternatives of the same flavour have a higher probability of being accepted relative to substitution alternatives of the same brand.

When offering a substitution alternative that matches the flavour/type of the OOS item, retailers need to decide whether they offer the same flavour of a PL or the same flavour of a NB as substitution alternative. Retailers might be motivated to use the PL as the substitute because it generates higher margin than NB (CBinsights 2018). Prior studies suggest that the strength of preference of PL may differ depending on the category (Choi and Coughlan 2006), which is why we speculate there might be differences between predominantly VD vs. HD categories in this respect. In a VD category, consumers tend to evaluate

alternatives based on brand/price and quality perception (Render and O'Connor 1976), suggesting that a NB substitute is more preferred than a PL substitute. Indeed, the presence of a PL makes a NB become a compromise or middle option in terms of quality in the retailer's assortment (Geyskens et al. 2010). Compromise choice indicates the product obtains a relatively larger utility and choice probability. Hence, we postulate that in a VD category, same flavour NB substitution is likely to be preferred to the same flavour PL substitution. In contrast, for HD categories, retailers tend to introduce PL products that are very similar to leading NBs by making their packaging, sizes, typeface, and labelling as close as possible to the NBs in order to signal to the consumers that the PL is physically similar and has a comparable quality at a lower price than the NBs (Choi and Coughlan 2006). As consumers' choice in a HD category depends more on taste preference of certain product flavours or types than on brand attribute, PL's mimicking strategy would make it more appealing to consumers in terms of value for money and more similar in terms of important attributes when offered as substitute. Hence, we hypothesize as follows<sup>1</sup>.

- H2a.** In a predominantly VD category, a private label of the same flavour as substitution alternative has a lower probability of being accepted than a national brand of the same flavour as substitution alternative.
- H2b.** In a predominantly HD category, a private label of the same flavour as substitution alternative has a higher probability of being accepted than a national brand of the same flavour as substitution alternative.

## 2.2 Policy 2: Familiarity with Past Purchased Item

Literature of choice heuristics suggests that prior knowledge and experience of a product influence the types of information processed in making comparisons and choices (Wedel et al. 1998). When consumers face an OOS situation and are given a familiar substitution item, which has been purchased and consumed by the consumers in the past, they will most likely use their memory of previous experience to aid the decision (Hoeffler and Ariely 1999). Established research suggest that the likelihood of choosing familiar products is higher than unfamiliar ones because familiarity eases the choice decision (Fitzsimons 2000) while unfamiliar products signal uncertainty and increase complexity of the decision making process (Dhar 1997). In addition, literature on the consideration set suggests that consumers often have a set of alternative products in mind which equally satisfy their needs (Hamilton et al. 2014). Compositions of a consideration set could include member products with varying attributes such as brands and product features like flavour or type (Roberts and Lattin 1991; Hamilton et al. 2014). Member products may have different attribute weight but being in a consideration set indicates their overall utilities meet or exceed the consideration threshold by the consumers, hence, are likely to be purchased (Roberts and Lattin 1991). We therefore posit

---

<sup>1</sup> When testing the differential effects of a NB vs. PL substitution, we control for price differences between the substitution alternative and the OOS item, to rule out that the effects we find are driven by price perception differences rather than attribute similarity.

that a substitution alternative, which was historically bought by a household will more likely be accepted than the one that consumers have had no experience with. Thus:

**H3.** In both predominantly VD and HD categories, past purchase-matching substitutions have higher probability of being accepted than non-matching substitutions.

### 2.3 Interaction Between Both Policies

While we expect in general that product familiarity has a positive effect, there are indications in the literature that the interaction between product familiarity (policy 2) and dominant attribute similarity (policy 1) may differ between a HD vs. VD category. In a VD category where brand is expected to be the dominant attribute, consumers can evaluate a substitution alternative from extrinsic cues such as brand communication, packaging and price (Render and O'Connor 1976). Their past purchase of certain products tends to indicate these products are of acceptable quality to the consumers (Hamilton et al. 2014). Therefore, we do not expect different past purchase-matching effects between same flavour vs. same brand substitutions. In contrast, in a HD category where flavour is expected to be the dominant attribute, consumers rely on past consumption experience to evaluate the substitution alternative (Hoeffler and Ariely 1999). Their experience of different flavours could indicate trial and error (Drewnowski 1997), as such, past purchase of different flavours would indicate those flavours are satisfactory. We posit that familiarity will be more important for the same flavour substitution policy compared to the same brand substitution policy. Hence:

**H4a.** In a predominantly HD category, past purchase-matching of the same flavour substitutions have higher probability of being accepted than past purchase-matching of the same brand substitutions.

**H4b.** In a predominantly VD category, there is no difference in the effect of past purchase-matching between the same flavour vs. the same brand substitutions on the probability of being accepted.

### 2.4 Mediating Effects of Perceived Fairness

Post-purchase OOS signals a service failure of the retailer being unable to deliver the product that customers have ordered and paid for (Poulter 2011). We argue that the underlying mechanism which partly explains consumers' decision to accept or reject the substitutes offered by the retailer lies at consumers' perception of fairness of the substitution. The mechanism which explains the role of perceived fairness rests on two accounts. Firstly, in a service failure situation like post-purchase OOS, consumers experience a loss (e.g. time, effort and motivation) (Smith et al. 1999). A fair substitution would be the one that the consumer believes equitably makes up for the loss (Deutsch 1985). Offering substitutions which match consumers' preference (e.g. flavour or brand) or within their choice set from past purchase likely offset that loss and positively impact on the fairness perception. Secondly, when the choice restriction occurs post purchase,

consumers often expect the service provider to have adequate consideration and knowledge about their customers when resolving the service failure (Lind 1995). Therefore, a substitution offered by the retailer is likely to be judged by the consumers on the ground of how fair the substitution is (Grewal et al. 2008). Hence, we propose:

- H5.** There are significant mediating effects of perceived fairness of substitution policies on the probability of being accepted.

### 3 Method

To collect data for the study, we use a computer-simulated purchase experiment that mimics a realistic online grocery store (Breugelmans et al. 2006). We test our hypotheses using two product categories: a VD category, margarine (16 SKUs) and a HD category, cereals (23 SKUs). A chi-square test of goodness-of-fit was performed to determine a dominant attribute (brand, flavour and others) in each category. The result shows brand (flavour) is significantly more important in margarine (cereals) ( $\chi^2_{2m}(2) = 11.918$ ,  $p = .003$ ;  $\chi^2_{2c}(2) = 12.979$ ,  $p = .002$ ). 2,113 UK consumers representative of the general UK online grocery shoppers (Mintel 2017a) participated in the experiment of which 959 and 1,154 shopped for margarine and cereals respectively. The procedure includes three parts: first participants answered initial survey questions in order for the data to be captured and feed into the purchase simulation in the second stage. This includes questions about what products in the assortment consumers have purchased in the past 12 months (past purchase portfolio) and their general shopping frequency (control variable). In the simulation part, participants were asked to conduct an online shopping in one of the two product categories depending on whether they have shopped with the category in the past (those who have purchased items in both categories were randomly assigned to one category). After participants select products, booked for delivery and completed their shopping, they were notified an item (margarine or cereal) was OOS and being replaced by a substitution alternative which falls in one of the 6 experimental conditions: 3 dominant attribute (same brand  $\times$  same flavour NB  $\times$  same flavour PL)  $\times$  2 past purchase (yes vs. no). Participants were then asked to decide if they want to accept or reject the substitution. In the flavour matching condition, we paired the product with similar flavour but from a different brand NB or PL (e.g. Lurpak Lighter Spreadable was substituted by Anchor Lighter Spreadable or by the private label option). In the same brand condition, we allocated substitutes within the same brand assortments. As there is a wide variety of cereals flavours within the same brand, we paired the products with similar healthiness/tastiness aspect using the categorisation from the UK National Health Service (NHS)<sup>2</sup> and the availability in the supermarket assortment (e.g. Family cereals and Healthier cereals). For example, the same brand substitution for Kellogg's Special K can be Kellogg's Cornflakes as they are different in flavour but within the healthier cereals group. Matching with past purchase was conducted as a posterior measure. The final parts include survey questions which capture perceived fairness and demographic data.

<sup>2</sup> NHS Eat well. Fat. <https://www.nhs.uk/live-well/eat-well/different-fats-nutrition/> NHS Eat well. Sugar. <https://www.nhs.uk/live-well/eat-well/how-does-sugar-in-our-diet-affect-our-health/>.

## 4 Results

The result shows, in line with our expectations, an opposing trend for both categories: the majority of margarine buyers is more likely to accept a substitution alternative when it is of the same brand (65%) than when it has the same flavour (56%), while cereals buyers seem more likely to accept the substitution that is of the same flavour (41%) rather than the one that is of the same brand (21%). The difference in dominant attribute across these two categories is in line with observations from prior research where consumers in these two categories made a own choice of a replacement item for an OOS item in a physical store context (Campo et al. 2003). Checking the acceptance rate within the subset of same flavour substitution, margarine shoppers seem to be more likely to accept NB than PL flavour substitution (58.70% vs. 47.80%), while cereal shoppers have higher acceptance rate for PL than for NB flavour substitution (44.50% vs. 39.50%). The results on past purchase matching show, again in line with the expectations, that most respondents in both categories accept a substitution alternative that matches with what they have bought in the past 12 months compared to non-matching alternatives (84% vs. 50% for margarine; 64% vs. 29% for cereals).

In the binary logit model where we test the effects of the substitution policy, we control for price difference between a substitute and OOS item as well as household purchase frequency both of which are expected to have impact on the probability of acceptance (Campo et al. 2000; Xia et al. 2004). The main effect of the dominant attribute policy using same flavour substitution (vs. same brand) shows a negative coefficient in the margarine category ( $\beta_m = -.452$ ,  $p = .013$ ) while a strong positive coefficient is observed in the cereal category ( $\beta_c = 1.126$ ,  $p = .000$ ). This confirms H1a,b. If we focus on flavour substitution only (so reducing the data to this subset only), we find the opposite reaction between margarine and cereals: an NB flavour substitution (vs. PL flavour substitution) returns a positive (negative) coefficient in the margarine (cereal) category ( $\beta_m = .391$ ,  $p = .097$ ;  $\beta_c = -.850$ ,  $p = .001$ ), supporting H2a,b be it at the 10% level.

As to the policy where the retailer matches on whether products were bought in the past, we found that buyers in both categories positively reacted to substitutes that match one of their past purchased items in the same category ( $\beta_m = 1.675$ ,  $p = .000$ ;  $\beta_c = 1.631$ ,  $p = .000$ ). This confirms H3 and suggests that when consumers have had an experience with the product in the past, matching substitute product to their past purchased item will significantly increase the probability of the substitution being accepted. Turning to the interaction between the past purchase policy and the dominant attribute policy, we find no significant interaction in the margarine category, as expected in H4b, while a positive significant interaction was observed in the cereal category ( $\beta_m(\text{past purchase} \times \text{same flavour}) = .495$ ,  $p = .381$ ;  $\beta_c(\text{past purchase} \times \text{same flavour}) = .797$ ,  $p = .041$ ), as expected in H4a. This suggests that past purchase matters more for HD than for VD category.

To test the mediating effects of perceived fairness, we apply the PROCESS bootstrapping mediation computation method proposed by Hayes (2017). The results are in support of H5, showing significant mediating effects of perceived fairness on the effects of the two substitution policies on the probability of acceptance of substitutes across two product categories. We find evidence for full mediation on the dominant attribute policy

in the margarine category while partial mediation is observed in the cereals category. This suggests a higher sensitivity of fairness when switching brand in the VD category like margarine.

## 5 Conclusion

Using a computer-simulated experiment of a representative sample of UK consumers, we test the effectiveness of two types of substitution policies in the context of post purchase OOS in online grocery retailing. In contrast to the previous research's claim that most shoppers when facing OOS at the point of purchase either in store or online would tend to buy a replacement item straightaway rather than dropping the purchase (Campo et al. 2000; Sloot et al. 2005), our findings show the acceptance rate of cereal substitution ranges from 21% to 64% for cereals and from 48% to 84% for margarine, depending on the substitution policies – indicating that substitution policies matter. Indeed, implementing a suitable policy could increase the acceptance rate by 43% in cereals and 36% in margarine.

This study contributes to the online grocery retailing and substitution literature in several ways. First, to the best of our knowledge, this is the first study to investigate post-purchase OOS responses where retailers are in the position to select a substitution alternative to compensate for the inconvenience that an OOS generates. In the context of growing significance of online grocery retailing, our findings offer valuable insight to retailers in developing a suitable substitution strategy. Second, the post-purchase OOS context enables the advancement of a theoretical and managerial understanding of the role product attributes (brand vs. flavour) and category differentiation type (VD and HD) play in substitution decision. Existing literature have often studied these two concepts separately and our study by bringing them together has enabled a better understanding of OOS response. As demonstrated by Gabel et al. (2019), retailers could use data analytics and machine learning to identify dominant attributes in a category. Third, our study also offers an insight into how online retailers could use their knowledge of consumers' historical purchase portfolio to assist substitution decision. Although the use of past purchase in predicting behaviour has been commonly used in previous studies, none has examined consumers' past purchase as retailers' strategy to mitigate OOS response, which is especially pertinent given our online store context. Fourth, previous studies have flagged up the issue of consumers reactance to retailers' product recommendation in an OOS situation (Fitzsimons and Lehmann 2004; Breugelmans et al. 2006) but have not explained the underlying mechanism of such reactance. +We include perceived fairness as the mediating variable, which is not studied in previous research, to provide further understanding of the underlying mechanisms. Last, but not least, the method employed by our study - using computer-simulated shopping experiment on a large representative sample of UK consumers – increases the realism and generalisability of the research result compared to survey or scan data methods used in previous research.

## References

- Arens, Z.G., Hamilton, R.W.: Why focusing on the similarity of substitutes leaves a lot to be desired. *J. Consum. Res.* **43**(3), 448–459 (2016)



- Batra, R., Homer, P.M., Kahle, L.R.: Values, susceptibility to normative influence, and attribute importance weights: a nomological analysis. *J. Consum. Psychol.* **11**(2), 115–128 (2001)
- Breugelmans, E., Campo, K., Gijsbrechts, E.: Opportunities for active stock-out management in online stores: the impact of the stock-out policy on online stock-out reactions. *J. Retail.* **82**(3), 215–228 (2006)
- Breugelmans, E., Campo, K., Gijsbrechts, E.: Shelf sequence and proximity effects on online grocery choices. *Mark. Lett.* **18**(1–2), 117–133 (2007)
- Bronnenberg, B.J., Vanhonacker, W.R.: Limited choice sets, local price response and implied measures of price competition. *J. Mark. Res.* **33**(2), 163–173 (1996)
- Campo, K., Gijsbrechts, E., Nisol, P.: Towards understanding consumer response to stock-outs. *J. Retail.* **76**(2), 219–242 (2000)
- Campo, K., Gijsbrechts, E., Nisol, P.: The impact of retailer stockouts on whether, how much, and what to buy. *Int. J. Res. Mark.* **20**(3), 273–286 (2003)
- CBinsights: Private Labels Rising: How Retailer's Own Products Are Taking Off And Transforming The CPG Industry. CBinsights (2018). <https://www.cbinsights.com/research/private-label-s-disrupt-cpg-retail/>. Accessed 2018
- Choi, S.C., Coughlan, A.T.: Private label positioning: Quality versus feature differentiation from the national brand. *J. Retail.* **82**(2), 79–93 (2006)
- Cocozza, P.: Are these the worst supermarket substitutions ever? *The Guardian*. <https://www.theguardian.com/lifeandstyle/shortcuts/2019/may/08/are-these-the-worst-supermarket-substitutions-ever>. Accessed 05 Aug 2019
- Deutsch, M.: *Distributive Justice: A Social-Psychological Perspective*. Yale University Press, New Haven (1985)
- Dhar, R.: Consumer preference for a no-choice option. *J. Consum. Res.* **24**(2), 215–231 (1997)
- Drewnowski, A.: Taste preferences and food intake. *Annu. Rev. Nutr.* **17**(1), 237–253 (1997)
- Etgar, M., Malhotra, N.K.: Determinants of price dependency: personal and perceptual factors. *J. Consum. Res.* **8**(2), 217–222 (1981)
- Fitzsimons, G.J.: Consumer response to stockouts. *J. Consum. Res.* **27**(2), 249–266 (2000)
- Fitzsimons, G.J., Lehmann, D.R.: Reactance to recommendations: when unsolicited advice yields contrary responses. *Mark. Sci.* **23**(1), 82–94 (2004)
- Gabel, S., Guhl, D., Klapper, D.: P2V-MAP: mapping market structures for large retail assortments. *J. Market. Res. (JMR)* **56**(4), 557–580 (2019)
- Geyskens, I., Gielens, K., Gijsbrechts, E.: Proliferating private-label portfolios: how introducing economy and premium private labels influences brand choice. *J. Mark. Res.* **47**(5), 791–807 (2010)
- Grewal, D., Roggeveen, A.L., Tsiros, M.: The effect of compensation on repurchase intentions in service recovery. *J. Retail.* **84**(4), 424–434 (2008)
- Hamilton, R.W., Thompson, D.V., Arens, Z.G., Blanchard, S.J., Häubl, G., Kannan, P.K., Khan, U., Lehmann, D.R., Meloy, M.G., Roese, N.J., Thomas, M.: Consumer substitution decisions: an integrative framework. *Mark. Lett.* **25**(3), 305–317 (2014)
- Hauser, J.R., Shugan, S.M.: Defensive marketing strategies. *Mark. Sci.* **2**(4), 319 (1983)
- Hoeffler, S., Ariely, D.: Constructing stable preferences: a look into dimensions of experience and their impact on preference stability. *J. Consum. Psychol.* **8**(2), 113–139 (1999)
- Hottelling, H.: Stability in competition. *Econ. J.* **39**(153), 41–57 (1929)
- Lind, E.A.: Justice and authority relations in organisations. In: Kacmar, K.M., Cropanzano, R. (eds.) *Organisational Politics, Justice, and Support: Managing the Social Climate*, pp. 83–96. Greenwood Publishing Group, Westport (1995)
- Mintel: *Online Grocery Retailing UK - March 2017* (2017a)
- Mintel: *Yellow Fats and Edible Oils - UK - 2017*. Mintel Group Ltd., London (2017b)
- Mintel: *Breakfast Cereals - UK - 2018*. Mintel Group Ltd., London (2018)



- Onwezen, M.C., Reinders, M.J., van der Lans, I.A., Sijtsema, S.J., Jasiulewicz, A., Guardia, M.D., Guerrero, L.: A cross-national consumer segmentation based on food benefits: The link with consumption situations and food perceptions. *Food Qual. Prefer.* **24**(2), 276–286 (2012)
- Orchant, R.: Best Butter Taste Test: Can You Tell The Difference Between Cheap And Expensive? Huffington Post. [http://www.huffingtonpost.com/2013/05/31/best-butter-taste-test-cheap-expensive\\_n\\_3361785.html](http://www.huffingtonpost.com/2013/05/31/best-butter-taste-test-cheap-expensive_n_3361785.html). Accessed 02 Sept 2017
- Poulter, S.: It's back to the shops! Why we're fed up with buying groceries online. *The Daily Mail*, 21 June 2011 (2011)
- Pratkanis, A.R., Farquhar, P.H.: A brief history of research on phantom alternatives: Evidence for seven empirical generalizations about phantoms. *Basic Appl. Soc. Psychol.* **13**(1), 103–122 (1992)
- Render, B., O'Connor, T.S.: The influence of price, store name, and brand name on perception of product quality. *J. Acad. Mark. Sci.* **4**(4), 722–730 (1976)
- Roberts, J.H., Lattin, J.M.: Development and testing of a model of consideration set composition. *J. Mark. Res. (JMR)* **28**(4), 429–440 (1991)
- Sayman, S., Hoch, S.J., Raju, J.S.: Positioning of store brands. *Mark. Sci.* **21**(4), 378–397 (2002)
- Severs, J.: Analysis: breaking down the barriers of online retail *RetailWeek*, 30 Sept 2014 (2014)
- Shao, X.-F.: Product differentiation design under sequential consumer choice process. *Int. J. Prod. Res.* **53**(8), 2342–2364 (2015)
- Slout, L.M., Verhoef, P.C., Franses, P.H.: The impact of brand equity and the hedonic level of products on consumer stock-out reactions. *J. Retail.* **81**(1), 15–34 (2005)
- Smith, A.K., Bolton, R.N., Wagner, J.: A model of customer satisfaction with service encounters involving failure and recovery. *J. Mark. Res. (JMR)* **36**(3), 356–372 (1999)
- Spiller, S.A., Belogolova, L.: On consumer beliefs about quality and taste. *J. Consum. Res.* **43**(6), 970–991 (2017)
- Tversky, A.: Features of similarity. *Psychol. Rev.* **84**(4), 327–352 (1977)
- Wedel, M., Vriens, M., Bijmolt, T.H.A., Krijnen, W., Leeflang, P.S.H.: Assessing the effects of abstract attributes and brand familiarity in conjoint choice experiments. *Int. J. Res. Mark.* **15**(1), 71–78 (1998)
- Xia, L., Monroe, K.B., Cox, J.L.: The price is unfair! a conceptual framework of price fairness perceptions. *J. Mark.* **68**(4), 1–15 (2004)



# Price or Quality? Comparing Consumers' Perceptions of Competing Private Labels – An Illustrative Analysis in Food Retailing

Mika Yrjölä, Harri Hokkanen<sup>(✉)</sup>, Ella Määttänen, and Hannu Saarijärvi

Faculty of Management and Business, Tampere University, Tampere, Finland

Harri.Hokkanen@tuni.fi

**Abstract.** Private labels, i.e. products that are produced and marketed by retailers themselves, are today an important vehicle for food retailers' strategic positioning – both in terms of price and quality image. The question of how private labels can deliver and differentiate through these images is an important element in the overall retail offering. Consequently, the purpose of this study is to identify and explore how consumers' perceptions of national private label brands differ in terms of price and quality images. To address this, we focus on two competing private labels and identify how consumers perceive their differences. As a result, we explore these differences along two dimensions, price image and quality image, and consequently, identify and discuss three varying consumer groups. Our illustrative analysis contributes to prior literature especially by enriching qualitative understanding of price and quality perceptions of private labels and extending analytical focus from manufacturer vs. private label toward comparing two private labels instead.

**Keywords:** Private label · Price image · Quality image · Competitive advantage

## 1 Introduction

Private label (PL) products, i.e. products that are produced and marketed by retailers themselves (DelVecchio 2001), are key differentiating elements of many retailers' strategies (Calvo and Levy-Mangin 2016). Retailers use PLs for competitive differentiation and to drive foot traffic and loyalty (Ailawadi and Keller 2004). Further, retailers can leverage an improved negotiation power over manufacturers, economies of scale, and higher margins, as well as create savings in operations (Ailawadi et al. 2008). For consumers, PL products represent a low-price alternative to manufacturer brands as well as unique products not found in competing retail chains (Dick et al. 1996).

Recently, the share of PLs in food retailing has increased and channel power has shifted from manufacturers to retailers (Derqui and Occhicupo 2019; Beckeman et al. 2013). However, there is a high degree of variety between countries. For example, in Europe, PL's share lies between 16 (Greece) and 52 (UK and Spain) percent, while some estimates put the average PL share in the EU at about 40% (Dawes and Nenycz-Thiel 2013). This is due to many reasons: cultural differences, food industry structure,

manufacturer power and innovations, varying consumer behaviours, and the magnitude of food retailers' negotiation power are examples of factors that influence the nature and role of PLs in respective food markets (Derqui and Occhicupo 2019).

Altogether, PLs are an important vehicle for food retailers' positioning – both in terms of price and quality image. Consequently, how PLs can deliver and differentiate through these images is an important element in the overall retail offering (Alberti and DeFanti 2019). Nonetheless, how consumers eventually differentiate between food retailers' PLs has remained underexplored area of research, especially in markets where there are only a few competing retailers. Consequently, the purpose of this study is to identify and explore how consumers' perceptions of national PL brands differ in terms of price and quality images. Price and quality were selected for analysis, because previous research shows that price is a key purchase motivation for PL products and that consumers make distinctions between PL products through quality (Ailawadi and Keller 2004; Dick et al. 1996). To achieve the study purpose, we focus on Finnish food retail market that is among the most concentrated in the world: only two food retailers (S Group and Kesko Corporation) represent approximately 85% of the market (Finnish Grocery Trade Association 2019). The high market concentration is characteristic for food retailing market in the Nordic countries. Further, PL penetration in Finland is approximately 25% (Statista 2019) – well below the EU average.

## 2 Price and Quality Perceptions of Private Label Brands

Early studies have characterized consumers of PL products as price conscious, low- or middle-income consumers who purchase in terms of price and do not distinguish quality differences between products (e.g. Ailawadi and Keller 2004; Kwon et al. 2008). PLs have been perceived as inferior, cheaper alternatives to manufacturer products, with good value for money (Richardson et al. 1994). Consumers might not make distinctions between different PL brands, but can be “loyal” to PLs in general (Richardson 1997).

In terms of price, consumers tend to categorize products as either ‘cheap’ or ‘expensive’ relative to competition – a phenomenon known as price image. If a PL brand has a favourable price image, consumers might not engage in comparisons but merely buy the brand considered the cheapest. While price image is always relative to competition, it also involves consumer perceptions of product or brand attributes (Ailawadi and Keller 2004). Quality image, on the contrary, is the result of consumers' subjective perceptions of a brand or product (Beneke 2010). Quality image influences overall perceptions of customer value and drives loyalty (Beneke et al. 2015). While evaluating the objective quality is difficult, consumers turn to cues, heuristics and associations to form a perception of product quality (Dick et al. 1996).

More recently, food retailers have developed their PLs beyond price image (Beneke 2010). Today, many retailers are introducing new PLs with lower price but at a level of quality comparable to manufacturer brands (Kwon et al. 2008). In that respect, PLs as strategic positioning devices for food retailers. Accordingly, PL products' stigma of inferior quality has lessened over the decades and, as a result, consumers tend to buy a mix of PL and manufacturer brand products (Cuneo et al. 2019; Derqui and Occhicupo 2019).

Many consumers make purchase decisions based on some ratio of perceived price and quality (Jin and Suh 2005). In some instances, price and quality image are interrelated. For instance, price can be seen as a cue for product quality (Beneke et al. 2015): a high price signals higher quality. For these reasons, we include both price and quality image in our analysis of PL brands' competitive advantage.

Retailers can use PLs for positioning the store by meeting or even surpassing competitors on different criteria, such as price and quality (e.g. Ailawadi and Keller 2004; Kwon et al. 2008). In these efforts, two key terms are crucial: points of parity (POP) and points of difference (POD; Anderson et al. 2006). A POP is achieved when consumers perceive the PL brand to be at a similar level of price or quality than the competing manufacturer brand. Products reaching the level of parity are included in a consumer's consideration set. PODs, then, are traits or features in which the PL has an advantage over competition. Therefore, retailers must position PLs to at least have POPs, if not PODs, with manufacturer brands.

### 3 Methodology

Convenience sampling (e.g. Saunders et al. 2012) was used by administering a short survey to students on an introductory course to marketing in Finland – a market characterised by heavy retailer concentration and comparatively low PL penetration. First, respondents wrote their subjective perceptions of the two PL brands in focus (The selected PL brands are leading in terms of brand awareness and recognition, see Table 1 for more details). These open-ended questions were asked to gain qualitative insights into consumer perceptions. The survey started with open-ended questions to avoid biasing the responses (i.e. respondents were not “primed” into thinking about price and quality). In this part, demographics (age, sex) were also gathered.

**Table 1.** Comparison of the selected brands

	Brand A	Brand B
Assortment	Similar (Wide assortment, but approx. 80% in FMCGs)	
Pricing	Focus on low price	Multiple price points
Retailer brand image	Three main retail chains, all focusing more on price than quality image	Three main food retail chains, all focusing more on quality than price image
Store coverage	Similar (1100–1300 stores)	

Second, respondents evaluated the price and quality images for the two focal brands through established items measuring price image and quality image (such as “the [brand] is reasonably priced”, “...is of high quality”; and “...has consistent quality”; Beneke et al. 2015; Konuk 2018; Walsh and Mitchell 2010). Both constructs consisted of three items, and some items were reversed. Cronbach's alphas for the quality constructs were 0.746 for brand B and 0.756 for brand A, but for price image the values were below the

acceptable 0.70 level. Price images were nonetheless formed to allow for the illustrative analyses. We also included one statement that captured perceived level of difference between the two PL brands (DeVecchio 2001), and the responses matched our analysis (52,3% of respondent answered that there were no differences between the brands, while 42,3% rated the brands similarly in terms of price and quality). All items were measured on a 5-point Likert scale. The survey was piloted beforehand, and some questions were reworded based on the feedback.

The study sample was 111. In terms of age, the respondents were millennials, i.e. born between 1982 and 2002 (Sweeney 2006). 56,8% of respondents were female, while 42,3% were male (one respondent chose not to indicate their gender).

For the competitive analysis, respondents were grouped into categories based on their perceived price and quality images for the two PLs. One group, labelled as “the indifferent segment”, consisted of those who evaluated the two PLs to be roughly equal in terms of both price and quality (whether high or low). The other two groups were labelled “Advantageous to Brand A (or B)” and consisted of respondents who had evaluated Brand A (B) to have a favourable point of difference in relation to Brand B (A) in terms of price, quality, or both. (Note that this analysis excluded those 10% of respondents who had judged one brand to “win” on one dimension and to lose on another). Then, the resulting three consumer groups were analysed qualitatively. The qualitative data was analysed through a standard content analysis (Abbott and Mckinney 2013).

#### 4 An Illustrative Analysis of Competing Private Label Brands

For this purpose of identifying and exploring consumers' perceptions of two PL brands, the respondents were grouped into categories based on their perceived price and quality images for the two PLs (Fig. 1). The qualitative insights into these groups are presented next.

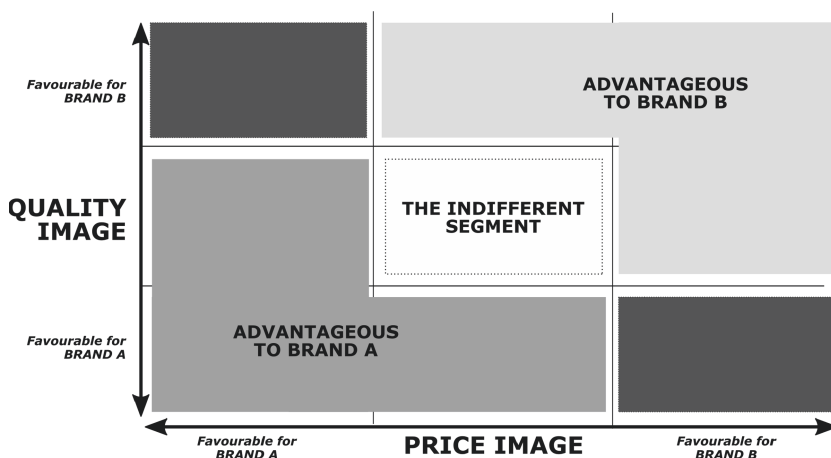


Fig. 1. An illustrative analysis of competing private label brands

#### 4.1 Similarities Between Private Labels: The Indifferent Segment

One segment evaluated the two PLs to be roughly equal in terms of both price and quality (whether high or low). We labelled this group as “The indifferent segment”. Themes emerging from the data regarding this segment were: low prices, wide assortment, country of origin, PL reputation, dependability, channel of purchase and packaging. Respondents made comparisons between PL brands and manufacturer brands in terms of pricing, quality, assortment, marketing, and packaging, and concluded that even though they do not perceive large differences between PLs, they do perceive a difference to manufacturer brands:

*[Brand B] is almost always cheaper than comparable manufacturer brand products. Quality is usually good, although it varies from one product category to another. This brand opens more options for consumers who are living on smaller budgets. (female, 18-21 years)*

The respondents remarked that PLs in general have a bad reputation. They reflected that this is likely due to inferior quality, outdated or unaesthetic packaging, and dubious origins. Some viewed PL products are unethical as retailers exert their power over small suppliers and farmers. Nonetheless, some respondents reported that they had sometimes been surprised to find the quality of PL products was higher than they had supposed.

#### 4.2 The Points of Difference Between Private Labels

The other two groups were labelled “Advantageous to Brand A (or B)” and consisted of respondents who had perceived a favourable point of difference in relation in terms or price, quality, or both for Brand A (or B).

*Advantageous to Brand A.* The favourable POD, according to those who preferred Brand A, were low prices, diverse and wide assortment, domesticity and the retail chain itself. As for their perceptions of the competing Brand B, some respondents had negative experiences:

*I had always thought that [Brand B] was cheaper than other brands' similar products, but sometimes I have noticed that [Brand B] in fact is not that cheap. (female, 22–25 years)*

One respondent remarked that, because the brands were sold at different chains, maybe the perceived differences were more due to the stores than the actual products themselves. Related to this notion, another respondent commented:

*As a member of [the retailer's customer loyalty program], I intuitively feel that Brand A is more appealing than Brand B. However, I can't recall ever buying a Brand A product for the brand name itself. After all, in many product categories, Brand A is the cheapest alternative in [the retailer's] stores. (male, 18–21 years)*

*Advantageous to Brand B.* Overall, Brand B was perceived to have a good price-to-quality ratio. Consumers felt that through better designed packaging and memorable

marketing slogans, Brand B had been successful in differentiating itself from other PL brands. Competing PLs were deemed as “bulk” or “mass-produced”, “undependable”, or “made in foreign countries”. Key PODs for Brand B were domesticity, product labels and product information, and the ability to keep up with consumer trends:

*[B] has all different kinds of products. [B] is also great at quickly introducing new products that match consumer “trends”. (female, 18–21 years)*

## 5 Discussion and Conclusion

Private labels are critically important for food retailers' competitive positioning. Despite the share of PLs continuing to increase, how consumers eventually perceive differences among competing PLs has remained underexplored, even if it would provide retailers with insights for building PL strategies. In line, the purpose was to identify and explore how consumers' perceptions of PL brands differ in terms of price and quality images. As a result, we discuss the following issues.

First, asking respondents to compare two distinct PLs was considered as an interesting and fruitful method for generating insight (Fig. 1). This type of a methodological approach to price and quality perceptions can help both scholars and practitioners to yield new insight into the ways differentiation among brand is eventually built in consumers' subjective evaluations.

Second, PLs' quality can go beyond the perception of product ingredients as such and instead encompass the trendiness of the products, package design or product origin. Prior literature has noticed that PLs usually play catch up compared to manufacturer brands that are forced to regularly introduce innovations in order to preserve their share and position in retailers' product categories (Derqui and Occhicupo 2019; Beckeman et al. 2013). However, as is exemplified by PL Brand B in study, PLs can build quality image themselves by introducing trendy and topical product innovations. Here, customer loyalty programs can provide unique opportunities for food retailers to introduce new product innovations already before manufacturer brands. These aspects of PL quality can be important for building retailer's competitiveness. We see these dimensions (e.g. domesticity, healthfulness, ecological) as potential future research directions.

In conclusion, we contribute to prior PL literature in two ways. First, while prior studies (e.g. Alberti and DeFanti 2019) have largely focused on exploring the differences between manufacturer and PL brand, the analytical focus was here placed instead on two distinct PLs from the two major food retailers in Finland. This type of approach for exploring PLs has so far been marginal. Second, most previous studies on PLs have been quantitative in nature (e.g. Konuk 2018; Dawes and Nencyz-Thiel 2013), our study explored PLs from a qualitative perspective. The illustrative examples extend the quality perception of PLs, for example, by putting forth the potential of introducing new product innovations.

The convenience sample in this study consisted of millennials, which might be overly homogenous, and should thus be regarded as a study limitation. Millennials' consumption behavior is markedly different from that of earlier generations (e.g. Sweeney 2006). Thus, we call for future studies to consider more heterogenous populations.

## References

- Abbott, M.L., McKinney, J.: *Understanding and Applying Research Design*. Wiley, Hoboken (2013)
- Ailawadi, K.L., Keller, K.L.: Understanding retail branding: conceptual insights and research priorities. *J. Retail.* **80**(4), 331–342 (2004)
- Ailawadi, K.L., Pauwels, K., Steenkamp, J.B.E.: Private-label use and store loyalty. *J. Mark.* **72**(6), 19–30 (2008)
- Alberti, B., DeFanti, M.: Investigating private labels' success against national brands in the men's razor category. In: Martínez-López, F.J., Gázquez-Abad, J.C., Roggeveen, A. (eds.) *Advances in National Brand and Private Label Marketing*, pp. 62–69. Springer, Cham (2019)
- Anderson, J.C., Narus, J.A., Van Rossum, W.: Customer value propositions in business markets. *Harvard Bus. Rev.* **84**(3), 91–99 (2006)
- Beckeman, M., Bourlakis, M., Olsson, A.: The role of manufacturers in food innovations in Sweden. *Br. Food J.* **115**(7), 953–974 (2013)
- Beneke, J.: Consumer perceptions of private label brands within the retail grocery sector of South Africa. *Afr. J. Bus. Manage.* **4**(2), 203–220 (2010)
- Beneke, J., Brito, A., Garvey, K.A.: Propensity to buy private label merchandise: the contributory effects of store image, price, risk, quality and value in the cognitive stream. *Int. J. Retail Distrib. Manage.* **43**(1), 43–62 (2015)
- Calvo-Porrá, C., Levy-Mangin, J.P.: Food private label brands: the role of consumer trust on loyalty and purchase intention. *Br. Food J.* **118**(3), 679–696 (2016)
- Cuneo, A., Milberg, S.J., del Carmen Alarcon-del-Amo, M., Lopez-Belbeze, P.: Private label and manufacturer brand choice in a new competitive reality: strategic directions and the future of brands. *Eur. Manage. J.* **37**(1), 117–128 (2019)
- Dawes, J., Nencycz-Thiel, M.: Analyzing the intensity of private label competition across retailers. *J. Bus. Res.* **66**(1), 60–66 (2013)
- DelVecchio, D.: Consumer perceptions of private label quality: the role of product category characteristics and consumer use of heuristics. *J. Retail. Consum. Serv.* **8**(5), 239–249 (2001)
- Derqui, B., Occhiocupo, N.: The interplay between manufacturer brands and private labels: radical innovation in consumer-packaged goods in Spain. In: Martínez-López, F.J., Gázquez-Abad, J.C., Roggeveen, A. (eds.) *Advances in National Brand and Private Label Marketing*, pp. 19–26. Springer, Cham (2019)
- Dick, A., Jain, A., Richardson, P.: How consumers evaluate store brands. *J. Prod. Brand Manage.* **5**(1), 19–28 (1996)
- Jin, B., Suh, Y.: Integrating effect of consumer perception factors in predicting private brand purchase in a Korean discount store context. *J. Consum. Mark.* **22**(2), 62–71 (2005)
- Konuk, F.A.: The role of store image, perceived quality, trust and perceived value in predicting consumers' purchase intentions towards organic private label food. *J. Retail. Consum. Serv.* **43**, 304–310 (2018)
- Kwon, K., Lee, M., Kwon, Y.: The effect of perceived product characteristics on private brand purchase. *J. Consum. Mark.* **25**(2), 105–114 (2008)
- Richardson, P.S.: Are store brands perceived to be just another brand? *J. Prod. Brand Manage.* **6**(6), 388–404 (1997)
- Richardson, P., Dick, A., Jain, A.: Extrinsic and Intrinsic cue effects on perceptions of store brand quality. *J. Mark.* **58**(4), 28–36 (1994)
- Saunders, M.N.K., Lewis, P., Thornhill, A.: *Research Methods for Business Students*, 6th edn. Pearson Education, Harlow (2012)



- Statista: Share of private labels out of consumer goods purchases quarterly in Finland from the first quarter 2015 to the first quarter of 2018 (2019). <https://www.statista.com/statistics/737153/share-of-private-labels-out-of-consumer-goods-purchases-quarterly-in-finland/>. Accessed 27 Feb 2020
- Sweeney, R.: Millennial Behaviors and Demographics, vol. 13, no. 3, pp. 10. New Jersey Institute of Technology, Newark (2006)
- The Finnish Grocery Trade Association (2019). [https://www.pty.fi/fileadmin/user\\_upload/tiedostot/Julkaisut/Vuosijulkaisut/FI\\_2018\\_vuosijulkaisu.pdf](https://www.pty.fi/fileadmin/user_upload/tiedostot/Julkaisut/Vuosijulkaisut/FI_2018_vuosijulkaisu.pdf). Accessed 20 Jan 2020
- Walsh, G., Mitchell, V.W.: Consumers' intention to buy private label brands revisited. *J. Gen. Manage.* **35**(3), 3–24 (2010)



# Types of Retailers, Brand Choice and New Products Trial: Challenges for the E-commerce of Consumer Packaged Goods

María Puelles<sup>1</sup>, Gonzalo Moreno Warleta<sup>2(✉)</sup>, and Marta Moreno<sup>3</sup>

<sup>1</sup> Facultad de CC. Económicas y Empresariales,  
Universidad Complutense de Madrid, Madrid, Spain  
mpuelles@ucm.es

<sup>2</sup> Facultad de CC. Ec. y Empresariales, Universidad Autónoma de Madrid, Madrid, Spain  
gonzalo.moreno@uam.es

<sup>3</sup> Richard A. Chaifetz School of Business, Saint Louis University, St. Louis, USA  
marta.moreno@slu.edu

**Abstract.** Around 20% of shoppers are now online shoppers in the Spanish Consumer Packaged Goods (CPGs) market. Pure online shoppers (those who “most frequently” conduct their shopping online) and those called “mixed” shoppers (those who “occasionally” do it) seem to differ in their preferences, choices and behaviors, when it comes to shopping for CPGs. From another perspective, shoppers who choose to buy in “pure players”, such as Amazon, and those who prefer to buy in “click-and-mortar” stores, such as Carrefour online, also seem to differ in their behaviors. In this new competitive context, both manufacturers and retailers must learn how to attract and retain customers; whether these come from their own physical stores, or from a competitive one.

Using an initial sample of 2,621 interviews, this paper explores the new online shopper types and behaviors from both abovementioned perspectives, while trying to find evidence of the differences in their choices between National Brands (NBs) and Retail Brands (PLs).

Lastly, we also explore the challenges to innovation caused by the barriers that the new online context may have created to newly created products and brands.

**Keywords:** E-commerce · Private labels · National brands · New products · Loyalty

## 1 Introduction

The online grocery market grows at a fast pace and generates new challenges to retailers at a global scale due to the peculiarities of the merchandise traded. The total volume in this sector surpassed \$632 Billion in 2018 globally (IBIS World 2018), while the 2020 foreseen volume for the US is \$70 Billion, and is expected to reach \$117 Billion in 2023 (Business Insider 2020). In Europe, the UK is expected to consolidate as the second largest online grocery market, after China, thanks to the entrance of some new

“pure players” (retailers that operate exclusively online), like Ocado and Amazon Fresh (Statista 2020). In Spain, online grocery sales were above 403€ Millions for the third quarter of 2019 (CNMC 2020).

Regardless of the cost that home delivery represents to retailers, this service is not optional anymore, being a real and growing demand of their customers in a highly competitive environment. Only around 1% of the Spanish population shops online regularly for fresh and packaged consumer goods, personal care and home-cleaning products, while around 18% does it occasionally. This percentage is very small compared to the UK and the US with above 5.8% and 10% of online shoppers, respectively (NPD 2020).

Fresh products seem to be the main barrier to this type of commerce, since consumers prefer to choose them personally in the store or distrust what they may end up receiving at home. The leading category, on the other hand, appears to be consumer packaged goods (CPGs), which may end up being the motivator that encourages consumers to try ordering fresh products through the Internet.

It appears that, in order to analyze the buyer behavior and subsequent growth of the online grocery market, it becomes a necessity to differentiate between two types of retailers (Turban et al. 2015): those who have a physical store (“brick & mortar”), thus becoming “click and mortar”; and those who don’t (“pure players”), such as the unquestionable and ever-growing market leader, Amazon. While the latter one relies on aggressive ecommerce capabilities and extreme deadline compliance and punctuality, the former, which can be exemplified by Carrefour, Walmart, Alcampo or Mercadona, rely on their physical infrastructure to serve their demand without needing external resources. Lastly, a third type in this classification would be those physical stores that rely on partnerships with specialists like Instacart, to develop their online business. Aldi and Kroger could be examples of these as well.

It is also worth mentioning (PLMA 2020) that “pure players” rely more, although not exclusively anymore, on National Brands (NBs), while the major “click & mortar” global players rely on their Home Brands (Private Labels or PLs). Thus, consumer’s choice for one or other online store will also influence the preference for one or other type of products and brands.

As of today, the online market for groceries is dominated by “click & mortar” (Coresight Research 2019); but “pure players” like Amazon – that offer mainly NBs (Progressive Grocer, 2020) – are catching up very rapidly.

Given these two different retail strategies, it would be interesting to see whether the election of one or other type of retailer influences the brand choice of the consumers, between PLs or NBs (Kopalle et al. 2009; Arce-Urriza and Cebollada 2018). In order to measure this, we would first need to determine the reasons why each consumer chooses one or other type of online vendor, since this choice will condition the subsequent brand election.

Furthermore, the fact that the number of online shoppers is growing, in a search for convenience (Meixian 2015) could influence the overall market exposure to new products and brands. A good example of a barrier is the use of pre-configured shopping lists (Supermarket News 2018; Forbes 2019): if online shoppers use them, they are hardly exposed to different products and brands, which could be an obstacle for the introduction of CPGs innovations or fully new products.

The aim of this research is, then, to shed some light on these issues, specifically on two: the relationship between retailer-choice and brand-choice, and the influence of the growth of the online shopping over the introduction of new products and brands.

## 2 Literature Review and Hypotheses

Customer loyalty to brands and stores is not a new topic in marketing research. Many authors have researched the relationship of consumers with NBs and PLs. The most recent studies (Gómez and Okazaki 2007; Allen and Rao 2000; Corstjens and Lal 2000; Diallo and Cliquet 2016; Kumar et al. 2016; Arce-Urriza and Cebollada 2018; Ruiz-Real et al. 2017; Belaid et al. 2019; Gendel-Guterman 2019; Rubio et al. 2019; Ruiz-Real et al. 2019) support the existence of these relationships. This research is relevant because it comes to fill a gap of knowledge about this issue in the context of the grocery industry (Arce-Urriza and Cebollada 2018).

A new paradigm and a set of challenges emerge from growing ecommerce of CPGs: strategies have to be reappraised by both, manufacturers and distributors, in order to remain competitive. The latest studies focus on the relationship that brands establish with customers over the Internet, and on if this new form of consumption affects the customer's choice for certain types of products and brands (Arce-Urriza and Cebollada 2012; Dawes and Nenycz-Thiel 2014; Boykova and Nikishin 2016; Nenycz-Thiel et al. 2016; Arce-Urriza and Cebollada 2018; Morales-Solana et al. 2018; Morales-Solana et al. 2019; Sit et al. 2019; Trachtman et al. 2019; Jagani et al. 2020; Pinar and Girardt 2020).

Few of these have mentioned the possibility to find differences in purchase behavior and brand choice that choosing a “pure player” or a “click and mortar” store may represent, though. And even fewer have analyzed how online shopping affects visibility and actual trial and adoption of new products and brands (Thakur and Srivastava 2015; Baskin and Olszyk 2018; Anesbury et al. 2016).

### Online Retailer Choice, and Previous Physical Store Experience

According to Dawes and Nenycz-Thiel (2014) and Melis et al. (2015), when customers switch from a physical store to an online one, they tend to choose the same retailer. A preference for “the known” store (the “click & mortar” choice) should appear in “mixed shoppers” (as opposed to “pure online shoppers”), in the first place, to corroborate the abovementioned theories. And this is the basis for our first hypothesis:

**H1.** A bias towards the preferred physical store appears in “mixed” (occasionally online) shoppers, when choosing an online retailer for groceries

### Retailer Choice Influence Over Brand Choice

Several studies approach the issue of brand-choice. It appears that consumers that are loyal to a specific retailer are more prone to purchase their PLs (Bonfrer and Chintagunta 2004). Others, like Arce-Urriza and Cebollada (2012, 2018) confirm the existence of an increased loyalty to both NBs and PLs in online shoppers, and even assert that PLs

increase their market share when consumers shop online. Furthermore, Koo (2006) and Verhagen and van Dolen (2009) also propose the notion that knowing an online retailer's assortment becomes determinant for store loyalty and purchase intention in online contexts; and the more similar assortment and prices are between a known physical store and its online presence, the higher the utility that the shopper perceives (Melis et al. 2015).

Lastly, Sawyer and Dickson (1984) and Jain and Dick (1996) studies, also backed-up by Girard et al. (2017), state that there are key matters to perceived risk reduction and PL perceived value increase, in the creation of Brand equity: trust in the retailer, familiarity with it, and the perceived quality of the products offered in it.

A fair conclusion of the abovementioned studies could be that knowing a retailer and its PLs better increases the likelihood of remaining loyal to it, when switching to the online environment; while those grocery shoppers who mainly shop online, and thus lack the required knowledge of the physical stores and/or their PLs, are more prone to trust NBs. This notion is depicted in our second hypothesis:

**H2.** A differentiated brand choice and behavior appears, as a function of the preferred type of grocery e-tailer ("pure player" or "click & mortar")

### **On the Influence of Online Shopping Over New Product Exposure and Purchase**

Our third and last hypothesis tackles an aspect we consider has been somewhat overlooked, to the best of our knowledge, but has a major interest and implications for the industry and retailers: how shopping online affects consumers' awareness of new products and, down the readiness stages funnel, their subsequent purchase.

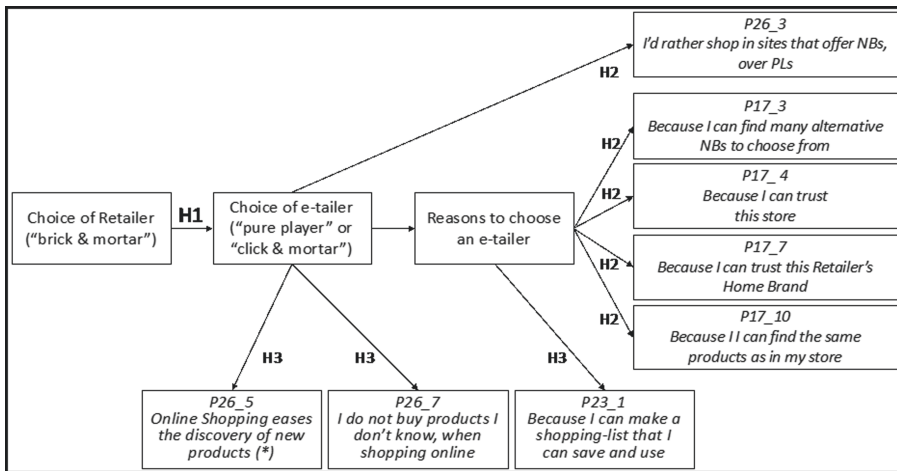
Grocery online shopping is quite different to other categories' (Hoyer et al. 2013; Melis et al. 2015). As was mentioned in the introduction, convenience is the main driver for change, while repetition develops knowledge and familiarity with the experience, resulting in a reduced effort or cost for the consumer (Johnson et al. 2004; Melis et al. 2015). Understanding convenience as a reduction of time, physical effort and mental dedication (Meixian 2015), all these are boosted by using pre-configured shopping lists. At the same time, these lists minimize the time and exposure to the assortment, and within it, any new product launch.

Uncertainty in a new online environment (Arce-Urriza and Cebollada 2018) may drive the buyer to ease the decision process and reduce perceived risk by using cues, such as familiarity with products they already knew in the offline channel (Corstjens and Lal 2000; Gefen et al. 2003; Melis et al. 2015; Girard et al. 2017). Should this be true, well-known brands (NBs or PLs) would be preferred to any novelty or innovation, as we propose in our third hypothesis:

**H3.** Internet shopping is a barrier to the market penetration of new products

Condensing all the previous notions, our model illustrates our intent to establish a relationship between the preferred offline retailer and the first choice for an online store (H1). We, then, test the motivators that influence the choice of an online retailer, with specific attention to its repercussions on the shopper's choice of NBs and PLs

(H2). Lastly, we test the notion that online grocery shopping represents a barrier in the awareness and purchase of new products (H3) (Fig. 1).



**Fig. 1.** Proposed Model and Hypotheses related to questions in survey (\*) This question is a composite of different statements for different respondent profiles.

### 3 Methodology

The kick-off of this project was an exploratory research conducted in 2018 and repeated in 2019, intended to describe the motivations and most usual behaviors when shopping for groceries online: 10 in-depth interviews were performed over individuals between 20 and 64 years old, always choosing decision-makers for the home groceries shopping.

Subsequently, 4 focus groups (2 in 2018 and 2 in 2019) were carried out, also with home purchase decision-makers, within the same age range.

ASEDAS (Spanish Association of Supermarkets and Self-Service grocery stores) assisted us during this process, through a panel of experts who advised on the differences between different storefronts and their product and value offerings. At the same time, these experts helped as vehicles to complete the fieldwork.

The exploratory phase helped design a survey that was administered online to home grocery shopping decision-makers living in main urban areas in Spain.

2,621 observations were collected in two waves, between October 2018 and February 2019, and between October 2019 and January 2020. The fieldwork is still on-going, attempting to complete two identical and consecutive sampling periods, as a starter of a set of projects with the common goal of better understanding the evolution of grocery online shopping in Spain and across Europe.

The final complete sample of online shoppers totaled 488 observations (18.6% of the total sample), where 84 were pure online shoppers (3.2% of total sample, 17.2% of online shoppers) and 404 were mixed shoppers (15.4% of sample, 82.8% of online

shoppers). These proportions match most of the previously analyzed reports, none of which is specific to grocery shopping, but to higher end categories, usually shopping and specialty products (Iab Spain, 2019; ONTSI, M° de Economía y Hacienda, February 2019)

While for H1 and H2 we differentiate the type of online retailer chosen by shoppers (“pure player” versus “click & mortar”), since we consider this first choice is key to their brand choice; there is no need to make this differentiation for H3, since this hypothesis refers to the online choice and purchase decision in general terms (regardless of the type of e-tailer). H3 intends to establish a relationship between online shopping and ease of recognition of new products (it should be a negative correlation, in the case of a barrier), reluctance to purchase unknown brands and products (positive correlation, should it be a barrier) and the repeated use of preconfigured shopping lists, which would, in fact, minimize the time and exposure to new brands and products, while reducing visualization and selection times of the basket content.

## 4 Main Results and Discussion

In order to test if there is a bias towards the preferred physical store in occasional online shoppers when choosing their online retailer, an ANOVA table was created including only the three main players in terms of customer choice (frequency). Figure 2 shows significant ( $p < 0.01$ ) differences of proportions in both directions in all the tested cases. Values with different subscripts in the table are significantly different in the bilateral test of equal proportions. The interpretation of this test is that *shoppers from a certain physical store are more prone to shop from that same supplier online* and *shoppers from a certain website most frequently come from the same supplier in its offline version*, as well.

WHERE DO ONLINE SHOPPERS COME FROM					WHERE DO OFFLINE SHOPPERS GO							
		Favorite Supermarket						Favorite Website				
		ALCAMPO	CARREFOUR	MERCADONA	OTHERS			ALCAMPO	AMAZON	CARREFOUR	MERCADONA	OTHERS
Favorite Website	ALCAMPO	18 <sub>a</sub>	0 <sub>i</sub>	3 <sub>b</sub>	8 <sub>b</sub>	Favorite Supermarket	ALCAMPO	18 <sub>a</sub>	7 <sub>b</sub>	1 <sub>b</sub>	0 <sub>i</sub>	3 <sub>b</sub>
	AMAZON	7 <sub>a</sub>	13 <sub>a</sub>	42 <sub>a</sub>	53 <sub>a</sub>		CARREFOUR	0 <sub>i</sub>	13 <sub>a</sub>	24 <sub>b</sub>	3 <sub>a,c</sub>	3 <sub>c</sub>
	CARREFOUR	1 <sub>a</sub>	24 <sub>b</sub>	5 <sub>a</sub>	16 <sub>a</sub>		MERCADONA	3 <sub>a,b</sub>	42 <sub>a</sub>	5 <sub>b</sub>	47 <sub>c</sub>	25 <sub>b,d</sub>
	MERCADONA	0 <sub>i</sub>	3 <sub>a</sub>	47 <sub>b</sub>	32 <sub>a</sub>		OTHERS	8 <sub>a</sub>	53 <sub>a</sub>	16 <sub>a</sub>	32 <sub>a</sub>	100 <sub>b</sub>
	OTHERS	3 <sub>a</sub>	3 <sub>a</sub>	25 <sub>a</sub>	100 <sub>b</sub>		Chi-Square statistic with 12 d.f. is 283.81 (p<0.01) * More than 20% of the cells had an expected frequency lower than 5, therefore the Chi-square value could not be valid.					

**Fig. 2.** H1 - test tables for difference of proportions (in rows) for provenance of online shoppers and destination of offline shoppers for the main storefronts

Our results confirm those by Dawes and Nencyz-Thiel (2014) and Melis et al. (2015), stating that store loyalty in “the offline to online migration” is a fact for most of the cases; but they also suggest that this loyalty is time-resistant, since CPGs online shopping can be considered a well established tradition in Spain, by 2020.

A follow-up to this line of thought could be that Amazon, the leading “pure player”, takes equal proportions of customers from all storefronts (no significant differences were found), suggesting that the motivation to switch to a “pure player” is independent of the store’s features and augmented services.

Moving on to our second hypothesis, and aiming to test if a differentiated brand choice and behavior appears, as a function of the preferred type of grocery e-tailer (“pure player” or “click & mortar”), we used difference of means tests between 2 groups of consumers: Those pure online and mixed consumers who choose a “pure player” and those who choose a “click and mortar” store. Figure 3 illustrates the significant differences found between both groups in their reasons to choose an e-tailer: When measuring the motivations to choose an online store, respondents were asked to express their agreement with the statement *I’d rather shop in sites that offer NBs over PLs* (this question was not asked to consumers that shop exclusively online, which explains the smaller sample size). Results suggest that online shoppers in “pure players” are significantly more inclined to buy NBs, than shoppers that use “click & mortar” sites.

	Pure Players		Click & Mortar	
	n	Mean	n	Mean
<i>I'd rather shop in sites that offer NBs over PLs</i>	117	2.82 <sub>a</sub>	291	2.43 <sub>b</sub>
<i>Because I can find many NBs to choose from</i>	133	3.93 <sub>a</sub>	328	3.44 <sub>b</sub>
<i>Because I can trust this store</i>	133	3.95 <sub>a</sub>	328	3.94 <sub>a</sub>
<i>Because I can trust this retailer's PL</i>	133	2.63 <sub>a</sub>	328	3.59 <sub>b</sub>
<i>Because I can find the same products as in my store</i>	133	3.32 <sub>a</sub>	328	3.86 <sub>b</sub>

Fig. 3. H2 - test tables for difference of means

Moreover, when asked about the reasons to choose their favorite online store, *Because I can trust this Retailer’s Home Brand* presents the largest and most significant difference ( $p < 0.0001$ ) between groups, pointing out that “click & mortar” store shoppers are much more PL-prone; and *Because I can find many alternative National Brands to choose from* (the third major difference), indicates that “pure player” store customers are, on the contrary, more prone to choosing NBs. Both these findings further supporting the previous notion.

Another interesting conclusion that could be inferred from Fig. 3 stems from the differences found in the importance of “... *find(ing) the same products as in my store*”, as their reason to choose an online retailer. “Pure player” store customers appear as more willing to change their brand of choice, as a trade-off for other forms of utility (convenience, service, etc.), whilst “click & mortar” store customers would choose the e-tailer that allows them to remain loyal to their favorite brands, above other considerations.

Lastly, while literature widely supports (Sawyer and Dickson 1984; Jain and Dick 1996; Bonfrer and Chintagunta 2004; Koo 2006; Verhagen and van Dolen 2009; Melis et al. 2015; Girard et al. 2017) the correlation between the trust in the store and the



choice of its home brand, both customer profiles exhibit no significant differences when evaluating the importance of “(...) *I can trust this store*”. This reason is equally important to both groups. Far from invalidating the hypothesis subject to the test, the lack of a difference in this respect simply reinforces the notion that customer trust is a key success factor for all retailers across the board.

In contrast with the previous results, which widely corroborate H1 and H2; the third hypothesis, “Internet shopping is a barrier to the market penetration of new products”, receives weaker support from statistical tests, when at all.

On one hand, to the questions merged as *Online Shopping eases the discovery of new products* (our sample included 2019 and 2020 pure online and mixed shoppers, with slight differences in the transcriptions for this question), as shown in Fig. 4, none of the groups showed an average significantly different from 2.5 (half-scale).

	Sample	n	Mean
<i>Online Shopping makes it easier to see and discover new products (agreement 1 to 4)</i>	2019 Online	26	2,50
<i>I pay more attention to new products, when I shop online (agreement 1 to 4)</i>	2019 Mixed	97	2,49
<i>Online Shopping makes it easier to see and discover new products (agreement 1 to 4)</i>	2020 Online	45	2,60
<i>I pay more attention to new products and I am more willing to try them, when I shop online (agreement 1 to 4)</i>	2020 Mixed	241	2,58

Fig. 4. H3 - tables for means

On the other hand, as shown in Fig. 5, when asked about their usual online shopping behavior (P26), the tests show a wide and significant agreement with the statement *I do not buy products I don't know when shopping online* meaning that, regardless of the reason, the Internet is, in fact, a barrier to product trial.

	n	Mean	S.E.	t-stat	p-value
<i>I do not buy products I don't know, when shopping online</i>	406	2,63	0,062	2,11	0,018

Fig. 5. H3 - table for test for mean value greater than 2.5 (agreement 1 to 4)

Lastly, and in relation to online store choices, it is worth mentioning a significant acceptance of the feature known as “permanent shopping lists” (Fig. 6). This fact could mean that these shoppers are less prone to the discovery of new products discussed previously, trading variety (assortment) for convenience (service) as a factor for choice.

In conclusion, and although it cannot be properly stated that there is a clear and significant influence of online shopping over the exposure to and/or the purchase of new brands and products, our results are streamlined with those by Corstjens and Lal

	n	Mean	S.E.	t-stat	p-value
<i>Because I can make a shopping-list that I can save and use</i>	173	3,73	0,091	2,53	0,006

**Fig. 6.** H3 - table for test for mean value greater than 3.5 (*importance 1 to 5*)

(2000), Gefen et al. (2003), Melis et al. (2015), Girard et al. (2017) y Arce-Urriza and Cebollada (2018), which encourages us to believe that the above described evidences should be considered a good exploratory research to foster researchers' curiosity, and encourage deeper research on the possible fact that the Internet works as a barrier to product innovation.

## 5 Conclusions and Managerial Implications

We now discuss the managerial implications for marketing management, using our hypotheses as a structure for discussion.

- According to the tests and validation of H1, store loyalty is the frequent trend, when switching from offline to online grocery shopping. This is a relevant fact for managers, since we have seen how customers remain loyal even to the most user-unfriendly online platforms. In these cases, the shoppers will overlook the difficulties and strive to remain loyal to their favorite store. High levels of store satisfaction, together with well-known and preferred assortments and, most importantly, including the store's PLs are determinant to this customer loyalty.
- The fact that all the tests conducted support H2 means that online shoppers that choose "pure player" online stores are more prone to NBs than PLs. It is apparent that if this trend is sustained, and so is the growth rate of Amazon (as the main representative of this type of online retailer), the market share of NBs that has suffered dramatic decrease over the last decades, could see an upturn. It is not to be overlooked, though, that these "pure players" have started developing their own PLs for PCGs, as Amazon Basics, Solimo, Amfit, etc. Lastly, about the apparent increment in the PL share of "click & mortar" players, it could well be the result of a larger exhibition of these products in the e-shelves.
- When it comes to debating the barrier effect that the Internet has on product and brand innovation, consensus is weak among the surveyed consumers. The fact that consensus is not strong does not mean that evidence does not suggest it, though. This is a fact of crucial importance to managers and practitioners, furthermore if we consider in the equation that one of the main motivations for online grocery shopping is convenience and time-saving. This time shortage minimizes the possibilities of discovering and trying new products and brands. The use of shopping lists seems to make this situation even more acute. Both, manufacturers and e-tailers must find ways to increase the visibility and attractiveness of their innovations, to avoid being harmed by online shopping habits.

## 6 Limitations and Further Research

Several questions arise from this analysis which must be considered relevant for future research:

- Deepen into the sources of customers for “pure players”: Which traditional stores are they abandoning, and why?
- What are the main behavioral differences between “click & mortar” and “pure player” shoppers? Online merchandising must discover these, in order to properly present the products to each customer profile.
- Why is online shopping a barrier to product innovation? Is it, really? If it is, does it constitute a growing trend, or should it be expected to decline?
- Are there behavioral differences in brand choice, among different CPGs?

## References

- Allen, D., Rao, T.: Analysis of Customer Satisfaction Data. ASQ Quality Press, Milwaukee (2000)
- Anesbury, Z., Nenycz-Thiel, M., Dawes, J., Kennedy, R.: How do shoppers behave online? An observational study of online grocery shopping. *J. Consum. Behav.* **15**(3), 261–270 (2016)
- Arce-Urriza, M., Cebollada, J.: Private labels and national brands across online and offline channels. *Manag. Decis.* **50**(10), 1772–1789 (2012)
- Arce-Urriza, M., Cebollada, J.: Assessing the success of private labels online: differences across categories in the grocery industry. *Electron. Commer. Res.* **18**(4), 719–753 (2018)
- Baskin, E., Olszyk, J.V.: Mergers and Expansions in the Grocery Industry: An Amazon/Whole Foods Market Case Study. SAGE Publications, SAGE Business Cases Originals, London (2018)
- Belaid, S., Behi, A.T., Belaid, D.F., Lacoeyuilhe, J.: Do we build store loyalty through store brands or store brands through store loyalty? In: Martínez-López, F., Gázquez-Abad, J., Roggeveen, A. (eds.) *Advances in National Brand and Private Label Marketing, NB&PL 2019*. Springer Proceedings in Business and Economics. Springer, Cham (2019)
- Bonfrer, A., Chintagunta, P.K.: Store brands: who buys them and what happens to retail prices when they are introduced? *Rev. Ind. Organ.* **24**(2), 195–218 (2004)
- Boykova, A.V., Nikishin, A.F.: The potential of private labels in the development of electronic trade. *Eur. Sci. Rev.* **9–10**, 259–261 (2016)
- Business Insider. Online Grocery Shopping Report 2020: Market stats and delivery trends for ecommerce groceries (2020). <https://www.businessinsider.com/online-grocery-report?IR=T>. Accessed Jan 2020
- CNMC Data. E-commerce statistics. Ventas online de supermercados, hipermercados y tiendas de alimentación. Comisión Nacional de los Mercados y la Competencia (2020)
- Coresight Research. Private Label To Drive Disruption in CPG (2019). <https://coresight.com/research/private-label-to-drive-disruption-in-cpg/>. Accessed Jan 2020
- Corstjens, M., Lal, R.: Building store loyalty through store brands. *J. Mark. Res.* **37**, 281–292 (2000)
- Dawes, J., Nenycz-Thiel, M.: Comparing retailer purchase patterns and brand metrics for in-store and online grocery purchasing. *J. Mark. Manag.* **30**(3–4), 364–382 (2014)
- Diallo, M.F., Cliquet, G.: Store image perceptions and customer knowledge cues in emerging markets. *Int. J. Retail Distrib. Manag.* **44**, 1182–1205 (2016)

- Forbes. Online Grocery Sales Predicted To Surge By 2021, But Where Will That Growth Come From? (2019). <https://www.forbes.com/sites/darrentristano/2019/03/21/online-grocery-sales-surge-through-digital-platforms-as-consumers-crave-convenience/#7d408c22b8fa>. Accessed Jan 2020
- Gefen, D., Karahanna, E., Straub, D.W.: Trust and TAM in online shopping: an integrated model. *MIS Q.* **27**(1), 51–90 (2003)
- Gendel-Guterman, H.: Comparison of consumer involvement across PLB categories in retail food. In: Martínez-López, F., Gázquez-Abad, J., Roggeveen, A. (eds.) *Advances in National Brand and Private Label Marketing. NB&PL 2019. Springer Proceedings in Business and Economics.* Springer, Cham (2019)
- Girard, T., Trapp, P., Pinar, M., Gulsoy, T., Boyt, T.E.: Consumer-based brand equity of a private-label brand: measuring and examining determinants. *J. Mark. Theory Pract.* **25**(1), 39–56 (2017)
- Gómez, M., Okazaki, S.: Estimating store brand shelf space: a new framework using neural networks and partial least squares. *Int. J. Mark. Res.* **51**(2), 243–266 (2007)
- Hoyer, W.D., MacInnis, D.J., Peters, R.: *Consumer Behaviour*, 6th edn. Cengage Learning, South Western (2013)
- Ibis. *Supermarkets & Grocery Stores Industry in the US - Market Research Report* (2020). <https://www.ibisworld.com/united-states/market-research-reports/supermarkets-grocery-stores-industry/>. Accessed Jan 2020
- ISO 690
- Jagani, K., Oza, F.V., Chauhan, H.: Customer segmentation and factors affecting willingness to order private label brands: an e-grocery shopper's perspective. In: *Improving Marketing Strategies for Private Label Products*, pp. 227–253. IGI Global (2000)
- Johnson, E.J., Moe, W.W., Fader, P.S., Bellman, S., Lohse, G.L.: On the depth and dynamics of online search behavior. *Manage. Sci.* **50**(3), 299–308 (2004)
- Koo, D.M.: The fundamental reasons of e-consumers' loyalty to an online store. *Electron. Commer. Res. Appl.* **5**(2), 117–130 (2006)
- Kopalle, P., Biswas, D., Chintagunta, P.K., Fan, J., Pauwels, K., Ratchford, B.T., Sills, J.A.: Retailer pricing and competitive effects. *J. Retail.* **85**(1), 56–70 (2009)
- Kumar, R.S., Gurunathan, K.B., Reddy, G.V.K.: Growth and prospects of private label brands in Indian retail industry. *Vidwat* **9**(1), 4 (2016)
- Meixian, L.: Convenience and online consumer shopping behavior: A business anthropological case study based on the contingent valuation method. *Anthropologist* **21**(1–2), 8–17 (2015)
- Melis, K., Campo, K., Breugelmans, E., Lamey, L.: The impact of the multi-channel retail mix on online store choice: does online experience matter? *J. Retail.* **91**(2), 272–288 (2015)
- Morales-Solana, D., Cotas, A.A., Esteban-Millat, I.: Buying from online supermarkets: the main factors influencing the experience of flow, purchase intent and e-loyalty. In: Martínez-López, F., Gázquez-Abad, J., Roggeveen, A. (eds.) *Advances in National Brand and Private Label Marketing. NB&PL 2019. Springer Proceedings in Business and Economics.* Springer, Cham (2019)
- Morales-Solana, D., Esteban-Millat, I., Cotas, A.A.: Flow and consumer behavior in an online supermarket. In: *Advances in National Brand and Private Label Marketing*, pp. 65–73. Springer, Cham (2018)
- Nenycz-Thiel, M., Romaniuk, J., Dawes, J.: Is being private better or worse online? Private labels performance in online grocery channel. In: *Advances in National Brand and Private Label Marketing*, pp. 63–65. Springer, Cham (2016)
- NPD. *U.S. Consumers Take an Omnichannel Approach When It Comes to Grocery Shopping* (2020). <https://www.npd.com/wps/portal/npd/us/news/press-releases/2018/us-consumers-take-an-omnichannel-approach-when-it-comes-to-grocery-shopping/>. Accessed Jan 2020

- Pinar, M., Girard, T.: Comparing private label brand equity dimensions of the same store: their relationships, similarities, and differences. In: *Improving Marketing Strategies for Private Label Products*, pp. 61–82. IGI Global (2020)
- PLMA. Store Brands facts (2020). <https://plma.com/storeBrands/facts2019.html>. Accessed Jan 2020
- Progressive Grocer. Amazon Go Opens 1st Full-Sized Grocery Store (2020). [https://progressivegrocer.com/amazon-go-opens-1st-full-sized-grocery-store?utm\\_source=PushEngage&utm\\_medium=push&utm\\_campaign=PushEngage](https://progressivegrocer.com/amazon-go-opens-1st-full-sized-grocery-store?utm_source=PushEngage&utm_medium=push&utm_campaign=PushEngage). Accessed Jan 2020
- Richardson, P., Jain, A.K., Dick, A.: The influence of store aesthetics on evaluation of private label brands. *J. Prod. Brand Manag.* **5**, 19–28 (1996)
- Rubio, N., Villaseñor, N., Yagüe, M.: The role of private label tiers and private label naming strategies in the relationship between private label brand equity and store loyalty. *J. Prod. Brand Manag.* **29**, 124–138 (2019)
- Ruiz-Real, J.L., Gázquez-Abad, J.C., Esteban-Millat, I., Martínez-López, F.J.: The role of consumers' attitudes in estimating consumer response to assortment composition. *Int. J. Retail Distrib. Manag.* **45**, 782–807 (2017)
- Ruiz-Real, J.L., Uribe-Toril, J., Gázquez-Abad, J.C.: Assortment and retailing: a trendy couple. In: *International Conference on Advances in National Brand and Private Label Marketing*, pp. 27–34. Springer, Cham, June 2019
- Sawyer, A.G., Dickson, P.R.: Psychological perspectives on consumer response to sales promotion. *Research on sales promotion: Collected papers*, 1–21 (1984)
- Sit, K., De Miranda Gonçalves, A.D., Pino, G., Memery, J.: Building trust in private label (PL) online: qualitative insights from home retail practitioners. In: Martínez-López, F., Gázquez-Abad, J., Roggeveen, A. (eds.) *Advances in National Brand and Private Label Marketing, NB&PL 2019*. Springer Proceedings in Business and Economics. Springer, Cham (2019)
- Supermarket News. Busy consumers open to new ways of grocery shopping (2018). <https://www.supermarketnews.com/consumer-trends/busy-consumers-open-new-ways-grocery-shopping>. Accessed Jan 2020
- Thakur, R., Srivastava, M.: A study on the impact of consumer risk perception and innovativeness on online shopping in India. *Int. J. Retail Distrib. Manag.* **43**, 148–166 (2015)
- Trachtman, C., Van Dop, M., Villas-Boas, S.: Understanding the influence of brand information in online purchase decisions for health product. In: Martínez-López, F., Gázquez-Abad, J., Roggeveen, A. (eds.) *Advances in National Brand and Private Label Marketing, NB&PL 2019*. Springer Proceedings in Business and Economics. Springer, Cham (2019)
- Turban, E., King, D., Kyu Lee, J., Liang, T., Turban, D.: *Electronic Commerce*. Springer Texts in Business and Economics, Springer, February 2015. 978-3-319-10091-3
- Verhagen, T., Van Dolen, W.: Online purchase intentions: a multi-channel store image perspective. *Inf. Manag.* **46**(2), 77–82 (2009)

# Author Index

## B

Breugelmans, Els, [30](#), [145](#)  
Brüggemann, Philipp, [39](#)

## C

Campo, Katia, [30](#)

## D

De Canio, Francesca, [115](#)  
Derqui, Belén, [90](#)  
do Vale, Rita Coelho, [123](#)

## E

Endrighi, Emiro, [115](#)

## F

Farah, Maya F., [22](#)  
Fischer, Fiorenza, [12](#)  
Fornari, Daniele, [130](#)  
Fornari, Edoardo, [130](#)  
Fota, Anne, [74](#)

## G

Gázquez-Abad, Juan Carlos, [137](#)  
Georges, Patrick, [97](#)  
Ghaffari, Mahsa, [90](#)  
Ghezzi, Alessandro Iuffmann, [130](#)  
Gustafson, Brandon, [1](#)  
Guterman, Hana Gendel, [90](#)

## H

Hamdane, Houssam, [22](#)  
Hekimoğlu, Mustafa, [50](#)  
Herédia-Colaço, Vera, [123](#)  
Hernández, Eva María González, [65](#)

Hoang, Dong, [145](#)  
Hokkanen, Harri, [156](#)

## J

Jolibert, Alain, [105](#)

## K

Kaushik, Kapil, [58](#)  
Kowalczyk, Liliana, [30](#)

## L

Lessassy, Léopold, [97](#), [105](#)  
Lick, Erhard, [12](#)  
Lomelí, Miguel Ángel López, [65](#)

## M

Määttänen, Ella, [156](#)  
Martinelli, Elisa, [115](#)  
Martínez-López, Francisco J., [137](#)  
Matos, Pedro Verga, [123](#)  
Meyer, Jan-Hinrich, [65](#)  
Mishra, Abhishek, [58](#)  
Moreno, Marta, [164](#)  
Mrad, Mona, [22](#)

## N

Nikolov, Atanas Nik, [1](#)

## O

Olbrich, Rainer, [39](#)

## P

Puelles, María, [164](#)

**R**

Ramadan, Zahy, [22](#)  
Röding, Tobias, [82](#)  
Rodrigo, Padmali, [90](#)  
Ruiz-Real, José Luis, [137](#)

**S**

Saarijärvi, Hannu, [156](#)  
Schramm-Klein, Hanna, [74](#), [82](#)  
Schultz, Carsten D., [39](#)

Steinmann, Sascha, [74](#), [82](#)

**W**

Wagner, Gerhard, [74](#), [82](#)  
Warleta, Gonzalo Moreno, [164](#)  
Wochele, Holger, [12](#)

**Y**

Yıldız, Sevde Ceren, [50](#)  
Yrjölä, Mika, [156](#)