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## **Barriers and Facilitators for Innovation in the Grocery Retail Sector:**

### **Cooperating with the customer. A Case Study**

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*This paper attempts to analyse the obstacles and drivers of innovation in the retail industry. An exhaustive literature analysis has been carried out. Furthermore, it reports on an original case study of product innovation from a major Spain grocery retailer. The company, Mercadona, has effectively introduced a first co-innovation initiative with its customers to bring them to the company's co-innovation laboratories and having them appraise in a home context, how they use the firm's products and what suggestions they have for alternative methods, improvements, or entirely new developments. The study findings concluded that a confluence of client focus culture, brand creation, and supplier collaboration was essential to the project's achievement. Technology contributed a complementary tool of communication with the firm customers. The method followed a new and unique ethnographic approach.*

### **1. Introduction**

When we analyse innovation in the consumer retail sector, especially the grocery retail sector, it takes place primarily in areas related to infrastructures such as settings, product arrangement, or information technology, but rarely in new product development. The reasons lie mainly in the conflictive relationships that exist between retailers and their suppliers, the risks, and the usual multinational structure of the latter (Esbjerg et al., 2016; Hall & Wengel, 2014; Shankar et al., 2011). However, food retailers across Europe have a significant influence on the nature of innovations in their sector (Trott & Simms, 2016).

Additionally, the literature has pointed out the different paradigms of customer innovation and orientation in this industry and the elements that have an evident influence on this strategic direction (Pantano, 2014a). Whether consumers are innovative and their potential adoption of innovations has been discussed in the literature (Heiskanen et al., 2007; Sundström & Reynolds, 2014). A fourth specific aspect, which has drawn the attention of academia, is the alternatives and methods that retail organizations have to involve their consumers in their innovation arena (Pantano et al., 2017).

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Thus, we would propose the following research questions: How can retailers, especially those in the grocery sector, carry out product innovation despite the field being dominated by large, multinational (food and cleaning) producing firms? What are the critical barriers and facilitators for retail product innovation? Moreover, how can retailers efficiently involve consumers in their innovation activity?

We are discussing in this article a distinctive and fruitful innovation experiment set up in Spain by a large grocery retailer. The innovation strategy of this company involved the deployment with their clients of a co-innovation program. We will analyze the launch of the program, the motivations of their customers, their profile and how they were selected, and how the firm linked the program to its value chain by transferring the outcomes to its suppliers who created and implemented product changes and suggestions for the launch of the supermarket retailer.

The paper will also address how this initiative is consistent with the company's culture, style of leadership, and governance of the value chain, as well as its global strategy for innovation. The main contribution of this article will be a literature analysis of innovation barriers and drivers in the retail sector and an analysis of a case study of co-innovation with consumers in the grocery retail sector, their motivation, profile, and selection process. We mainly highlight how a retailing firm can develop product innovation by solving the link with their suppliers, who are usually the leaders in the retail sector innovation effort.

## **2. Theoretical Framework**

### *2.1 Context: Retail and grocery store innovation*

The relevance of innovation in the EU retail and grocery food consumer market has frequently been outlined by recent literature (i.e., Trott & Simms, 2016; OXRIM, 2014). Grocery retailers basically rely on three critical innovation areas: multichannel retailing, finding efficiencies in the supply chain, and gaining insight from data (Salsberg et al., 2015). The academic literature has also identified certain emerging shopper marketing innovations such as digital and multichannel marketing as well as store organization and atmospherics while recognizing that the field of the shopping cycle is an underexplored issue (Pantano & Viassone, 2015; Reynolds & Sundström, 2013; Shankar et al., 2011). Retailers are more likely to engage in incremental innovation rather than radical innovation (OXRIM, 2014). Furthermore, retailers are more likely to engage in open, collaborative innovation and place a higher emphasis on non-technological than technological innovation such as online shopping, electronic data interchange, virtual reality, electronic shelf labels, automated checking points, etc.

(OXRIM, 2014; EU, 2014b; Reynolds & Sundström, 2014).

On the other hand, the role of leading innovators is allocated to producers (Hall & Wengel, 2014), and the relationship between retailers and their suppliers is conflictive, while the closing of the manufacturing retailer collaboration gap through adequate integration in the value chain is a key managerial challenge to innovation (OXRIM, 2014; Albors, 2015; Consumers International, 2014; Hammond, 2017; Shankar et al., 2011; Grimmer, 2018).

## 2.2 Barriers and drivers for retail and grocery innovation

It has been pointed out how grocery retailers can act as both supporters or barriers for innovation, especially radical innovation (Esbjerg et al., 2016). The European reports on retailing show a rather complex scenario according to the geographical or sectoral situation (Reynolds & Sundström, 2013, 2014; OXRIM, 2017). Nevertheless, researchers point out that retailers are not less innovative than other sectors in the western economy, and their innovation levels have risen in the last 10 years (Hristov & Reynolds, 2015; Reynolds & Hristov, 2009).

The following table summarizes the literature findings on innovation barriers and facilitators of retailing innovation.

**Table 1. Barriers and facilitators or drivers of retail innovation.**

<b>Barriers</b>	<b>References</b>	<b>Drivers/ Facilitators</b>	<b>References</b>
Markets change & turbulence	Reynolds & Hristov, 2009; Reynolds & Sundström, 2013, 2014	Market changes & Competition	Hristov & Reynolds, 2015; Reynolds & Sundström, 2013, 2014; Lewrick et al., 2015; Pantano 2016b
Appropriateness of Innovations; Ease of copying	Reynolds & Hristov, 2009; OXRIM, 2014; Quinn et al., 2013		
Conflicts with suppliers	OXRIM, 2014, Grimmer, 2018; Shankar et al., 2011; Albors, 2015	Relationships & strategic alignment with suppliers	Reynolds & Sundström, 2014; OXRIM, 2014; Londoño et al., 2016; Grimmer, 2018; Shankar et al., 2011; Reynolds & Sundström, 2013
Risk & uncertainty of new products & technology	Pantano, 2014a; Reynolds & Hristov, 2009; Reynolds & Sundström, 2013; Pantano, 2016b	Consumer centric focus, Emotional links with consumers	Reynolds & Sundström, 2014; Luceri et al., 2017; Pantano 2014a; 2016; Albors, 2015; Lin, 2015; Mukerjee, 2013, Hammond, 2017.
		Measurement of Innovation difficulties	Hristov & Reynolds, 2015
Financing risks and costs	Reynolds & Hristov, 2009; Reynolds & Sundström, 2013; 2014; OXRIM, 2014	Private shop brands facilitators of price integrity. Shop formats	OXRIM, 2014; Reynolds & Sundström, 2011; Londoño et al., 2016; <i>Retail</i> , European

			Union, Luxembourg. Rubio et al., 2017; Albors, 2015; Shankar et al., 2012; Hassan et al., 2014; Botschen & Wegerer, 2017; Huang & Huddleston, 2009; Reynolds et al., 2007
Lack of skills & leadership	OXRIM, 2014; Reynolds & Hristov, 2009; Shankar et al., 2011; Reynolds & Sundström, 2013	Team group management: Management & employees skills development	Shankar et al., 2011; ; Albors, 2015; Reynolds & Sundström, 2013
Excess of data on markets & customers. Lack of market knowledge	Reinartz et al., 2011; Reynolds & Hristov, 2009	Refining & developing data analysis, prediction of consumer acceptance	Reinartz et al., 2011; Pantano 2014a; Pantano et al., 2017;
Regulatory problems	Reynolds & Hristov, 2009; OXRIM, 2014; Reynolds & Sundström, 2013, 2014;	Regulatory drivers enabling innovation	Reynolds & Sundström, 2013, 2014
Lack of awareness & policymakers of retailers	Reynolds & Sundström, 2013; 2014	Technology: social media, Augmented (AR) and Virtual Reality (VR); collaboration with shoppers; obtaining information from customers; post purchase follow-up; intelligent technologies	Pantano, 2014a; 2016; Shankar et al., 2011; Hassan et al., 2014; Reynolds & Sundström, 2014; Pantano et al., 2017; Reynolds & Sundström, 2013; Patroni et al., 2016; Moorhouse et al., 2017; Pantano et al., 2019
Aversion to cooperation of enterprises	Reynolds & Sundström, 2013	Tendency to open collaboration	OXRIM, 2014
		Smart technologies, In store experience; Store atmospherics & shop environment, Improving shop experience	Shankar et al., 2011; Reynolds & Sundström, 2014; Mohan et al., 2014; Pantano 2014a; Pantano et al., Priporas, Sorace, & Iazzolino, 2017; Pantano et al., 2017; Pantano & Timmermans, 2014, Pantano & Naccarato, 2010
		Consumer-retailer-employees interaction moderated by technology	Pantano & Miglianese, 2014
		Multichannel integration	Pantano & Viassone, 2015; Reynolds & Sundström, 2013
Technology acceptance	Pantano, 2014a; 2014b	Lean management in supply chain	Fernie & Sparks, 2018; Barratt, 2016

We summarize the findings in the following paragraphs.

### Technology

The predominant school of thought in the retailing area supports the idea that technology is the main facilitator for retail innovation, but also its adoption resistance might be one of the main barriers (Pantano, 2014a; 2014b). Technologies supporting self-service, mobile applications, marketing investigation, new shopping experiences, and recommendation systems were considered innovation drivers (DiPietro et al., 2014; Pantano 2014a). Other innovative technology applications were those

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supporting customer demand, market dynamics, or new store formats and storefront windows (Pantano, 2014b; Pantano & Naccarato, 2010; Pantano et al., 2019).

Smart technologies, virtual reality (VR), and augmented reality (AR) have been posed as examples for enhancing customers' emotional engagement in shopping contact points, user friendly interactive interfaces, and simulation scenarios, thus enhancing innovation (Moorhouse et al., 2017; Pantano & Timmermans, 2014; Pantano et al., 2017).

It has also been outlined how technology can support multichannel integration (Pantano et al., 2017; Pantano & Viassone, 2015; Reynolds & Sundström, 2013). Technologies supporting social media are critical by facilitating ex-ante and ex-post communication with shoppers (Luceri et al., 2017; Pantano & Miglianese, 2014). Additionally, technology can support innovation in stores' atmospherics and design, enhancing emotional engagement with customers (Shankar et al., 2012; Hasan, et al, 2014; Reynolds, & Sundström, 2013; 2014).

Although less discussed in the retail literature, technology support in the supply chain facilitates lean management innovation and improves customer service and knowledge on demand (Ferne & Sparks, 2018; Barratt, 2016).

*Appropriateness of innovations: Ease of copying*

One of the most relevant barriers for innovation, especially in the retail sector, is the difficulty of registering innovation and the ease with which many retail innovations can be copied. Thus, once the innovation secrecy of development has vanished, launching it becomes public domain (Reynolds & Hristov, 2009; OXRIM, 2014; Quinn et al., 2013). A consequence is a focus on incremental and softer aspects of innovation (OXRIM, 2014; Quinn et al., 2013).

*Lack of skills and leadership on the retailer side*

Global studies (OXRIM, 2014; Reynolds & Sundström, 2013, 2014; EU, 2014) pointed out how the lack of pertinent skills, team management, and leadership in the retailer's organizations posed a barrier to retailer innovation or could be a facilitator when developed. Reynolds and Hristov (2009) identified them as crucial barriers for innovation, and Albors (2015) discussed a successful case in which employees' training efforts were crucial for launching new innovation experiments. For Shankar et al. (2011), employees' education posed a managerial challenge for retailers in this respect.

*Markets' change, uncertainty, turbulence, and competition*

Some authors (Hristov & Reynolds, 2015) see innovation less focused on technology changes but

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more about continuous change and adaptation to market changing needs. Lack of adequate information sources on market change seems to be a significant barrier (Reynolds & Hristov, 2009). However, market changes and especially consumer changing behaviours act as an innovation driver as well (Hristov & Reynolds, 2015; Reynolds & Sundström, 2013). Pantano (2016b) showed how, although first moving innovators in the retail business face higher risks, they tend to achieve competitive advantages. Some authors have outlined how innovation capabilities vary according to the retailer firm maturing cycle in a contingent cycle (Lewrick et al, 2015).

#### Regulatory problems

Global studies have pointed out that regulations, especially in the food sector, can be relevant barriers but might also be innovation drivers, for example in functional food (Reynolds & Hristov, 2009; OXRIM, 2014; Reynolds & Sundström, 2013; 2014).

#### Financial risks

As in other sectors, the risks involved in innovation from a financial focus have also been cited as relevant barriers in most of global retailing studies (Reynolds & Hristov, 2009; Reynolds & Sundström, 2013, 2014; OXRIM, 2014).

#### Lack of awareness of retailers and policymakers toward the sector

Again, global European studies have pointed to a lack of awareness amongst policymakers and retailers of the potential contribution of retail innovation to competitiveness as well as a lack of encouraging mechanisms that might help retail firms identify specific opportunities to engage in innovation (Reynolds & Hristov, 2009; OXRIM, 2014; Reynolds & Sundström, 2013).

#### Innovation types and measurement

Some authors have analysed the difficulties inherent to measuring innovation and its specific meanings in the retail sector, which constitute a barrier (Hristov & Reynolds, 2015). There are many and varied key performance indicators (KPIs) utilized by retail firms.

#### Conflicts with suppliers versus strategic alignment with suppliers

Grimmer (2012) studied the relationship of Australian grocery chains with their stakeholders and discovered how the relationship between retailers and their suppliers was crucial in the former outcome including their innovation efforts. Other authors have defined the challenging relationship between suppliers and retailers as co-competition (Bobot, 2011; Kim et al., 2013). Shankar et al. (2011)

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studied innovations in shopper marketing and found agreements with manufacturers, which was crucial in the launch of product innovation at the retailer level. Londoño et al. (2016) proposed a retailer-manufacturer partnership as crucial for retailer innovation and consumer loyalty. Finally, European studies such as those carried out by OXRIM (2014) and Reynolds and Sundström (2013, 2014) pointed out how partnership between retailers and their suppliers could be a driver for the former innovation activities.

#### Private shop brands

The development of private retailer brands has undoubtedly contributed to innovation in new products (OXRIM, 2014; Reynolds & Sundström, 2013, 2014). It has contributed to channel equity (Londoño et al., 2016) facilitating innovation as well as to price integrity (Shankar et al., 2011; Rubio, 2017; Hassan et al., 2014). Retailers with strong customer participation, innovation, and shop brand orientations tend to possess a higher product advantage (Huang & Huddleston, 2009). Brand approach can be a unique approach to product innovation in groceries (Albors, 2015). Sometimes shop brands are associated with shop formats (Reynolds et al., 2007). Finally, brand-driven innovation has been signalled as a holistic approach to product innovation in retailing involving the retailer's firm culture (Botschen & Wegerer, 2017).

#### Information on markets and customers

The lack of market information or the excess of data on markets and customers has been brought to attention as a significant problem for retail innovation (Reynolds & Hristov, 2009; Reinartz et al., 2011). On the contrary, refining and developing data analysis and methods developed for prediction of consumer acceptance facilitate innovation (Reinartz et al., 2011; Pantano 2014a; Pantano et al., 2017).

#### Consumer-centric focus: Emotional links with consumers in retailing

Retail innovates by staying ahead of new consumer trends (Sorescu et al., 2011). A customer-centric attitude from retail managers and owners has been identified as a driver for innovation while a lack of this attitude is a barrier (Reynolds & Sundstrom, 2014; Luceri et al., 2017), and the retailer focus on consumer needs is essential (OXRIM, 2014). A strong retail culture centred on the consumer has been identified as the main driver for innovation (Albors, 2015). Pantano (2014a) points out three main vital drivers for innovation within the retail industry: customers' demand for innovation, including technologies supporting interactivity; availability of new tools for market research, including those to match customer behaviour; and the uncertainty of adopting innovations. This



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customer centred orientation bestows the adequate context for innovation (Mukerjee, 2013). Consumers tend to observe the retailer innovation activities and judge their innovation ability. This perception has a positive correlation with consumer satisfaction and purchasing intentions (Lin, 2015). It has been outlined how world-leading retailers have developed a people orientation and an adequate organizational culture to motivate employees (Hammond, 2017).

### *2.3 Direct involvement of consumers in innovation*

How can we involve consumers in our innovation efforts?

The relevance of consumers in the early phase of discovery and the importance of crowdsourcing ideas and applied ethnography in innovation has been outlined (Janssen & Dankbaar, 2008; Schenk & Guittard, 2011). Some authors (Busse & Siebert, 2018; Helminen, Ainoa, & Mäkinen, 2016) revealed how the use of toolkits facilitated product concept translation between design and production in the food product development industry. However, some food retailers regard product innovations as something to provide *to* consumers rather than achieve *with* consumers (Beckeman & Olsson, 2011).

The previous methods were based on the lead user concept. These are defined as those users who “face needs that will be general in a marketplace ... months or years before the bulk of that marketplace encounter them, and ... are positioned to benefit significantly by obtaining a solution to those needs” (Von Hippel et al., 2011). The concept is challenging to apply in the retail (especially the grocery) sector.

Some multinationals such as P&G have developed alternative experiences to test consumers’ needs from a worldwide ethnographic perspective, the “new-growth factories” program, which has been successful in developing and sustaining innovations by carrying out fieldwork with consumers (Brown & Scott, 2011).

A most recent and applicable concept for incorporating users into innovation is that of living labs, which have been applied primarily to ICT innovation and later to social innovation (Cossetta & Palumbo, 2014; Albors et al., 2015). Living labs are built settings similar to real life where users can test, propose, and develop innovations.

User involvement in innovation requires ex-ante consumer connection with the precise product domain field. Similarly, other authors found that, although product innovativeness enhances product advantages, the lack of consumer familiarity with the new product characteristics could act as a

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barrier to its adoption and subsequent success (Calantone et al., 2006; Chao et al., 2012). Consequently, a recent issue of the International Journal of Electronic Commerce has dealt with this emerging approach in the retail sector through the use of smart interaction technologies which facilitate emotional and collaborative scenarios (Pantano et al., 2017). A new model of marketing 3.0 was proposed to analyse customer behaviour (Bassano et al., 2017) and user and behavioural profiling were analysed successfully with the use of gamification platforms (Leclercq et al., 2017).

It could be concluded that, despite some academic streams of thought, there is a challenge and ample room for consumer involvement in innovation. There is a minority of consumer goods producers who methodically research consumer-developed innovations and learn effectively to identify consumer needs and consequently research alternative ways of developing successful new product concepts (Schenk & Guittard, 2011).

### **3. Research Method**

We have based our methodology on the analysis of a single case study. This research method is recommended when “analysing a contemporary phenomenon within a real-life context” (Yin, 2009, p. 65). Moreover, the size of the firm, its market penetration, and the singularity of the ethnographic research approach justify the method (Creswell, 2013, p. 185). This field study was carried out in two stages: from June 2014 to July 2015 and from March to September 2017.

In our case, we visited more than 35 supermarket units, selecting a representative sample based on size and social class of the surroundings (based on local home unit income). There we observed the environment, how customers interacted in the context, how employees dealt with clients, and how innovative products were exhibited. We interviewed personnel (monitors and managers) directly involved in the innovation process. This was based on structured interviews to analyse the co-innovation process, how participants were selected, the goals of the project, and the method followed for the co-innovation sessions where we participated as observers in 2015 and 2017, and we spoke with the participants and enquired about their motivations and expectations. A content analysis approach was followed to interpret the interviews and the observation results.

From the social network aspect, during the first semester of 2017, we searched and navigated as active participants among YouTube, Facebook, and Twitter pages to analyse how Mercadona customers interact in internet networks. We carried out a similar exercise among Mercadona’s competitors’ social networks.

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In addition, we visited 10 supplier firms selected among those more active in the co-innovation projects and interviewed their R&D managers to analyse their roles in the process and their view. The program managers also provided sufficient data on the program and the outcomes. The company provided ample information and reports on the innovations developed during the last six years, which we examined and evaluated.

However, part of the data supplied by the company was competition-sensitive, and we were asked to deal with it carefully. Also, we investigated numerous national and international journal and news clippings as well as various business school case studies dealing with the firm (HBR, Insead, IESE, Wharton, etc.), which constituted secondary sources. Additionally, we examined Dunn Bradstreet database and Kantar World Panel national reports as well as the company's annual reports from 2010 to 2016.

#### 4. Case Study

##### *The firm, the context, and the corporate culture*

Mercadona is a firm privately owned. The major shareholder, Juan Roig, acquired the firm, a small outfit, from his family in 1981. By December 2018, they had a total of 1,636 local supermarkets, 87,000 employees and they account for 24.6% of the market share of total food retail space in Spain's market (Kantarworldpanel, 2018). Mercadona ranked 47<sup>th</sup> in the Deloitte 2018 list of global retailers (Deloitte, 2018).

The success of the firm is due to a particular culture and the development of flexible strategies throughout the business's life. The company's culture could be defined by a statement made by Roig: "An office is a wrong place from which to view reality. If the customers and the employees are at the grocery store and if you, as the employee, want to learn, innovate, and stay ahead of the customers' needs, you need to be near them, listening to them and watching them" (Blanco & Gutiérrez, 2008, Ton & Harrow, 2010).

In 1993, Mercadona adopted total quality management. There are five vital essentials in their culture. First, they consider the customer as the "boss" at the top of their organigram. Prices are a crucial service to serve them and, consequently, should be kept as low and as stable as possible. "Prices are always low" became a company slogan following a similar statement of Walmart. The company established a standard daily shopping cart composition, and its price became a standard to stabilize their prices (Blanco & Gutiérrez, 2008; Miguel & Santiago, 2010). It has been their innovative format

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versus their competitors (Reynolds et al., 2007).

The company launched initially a toll-free customer service line, to manage suggestions and complaints from customers. In 1996, they introduced “Hacendado,” a store brand and flagship of the firm (Blanco & Gutiérrez, 2008; Ton & Harrow, 2010). A backbone of their product innovation.

A second element is a focus on employee relations, with some policies that emphasize having committed employees. Mercadona dedicates more resources than any of its competitors to employee training and its management-by-objectives schemes (Ton, 2011). Two US retailers known for their innovative drive, Wholefoods (Pearson, 2012) and Wegmans (Green & Spadaro, 2014), have been cited as following similar human resource approaches.

Suppliers are a critical element in the innovation process. Mercadona has 2,000 suppliers of which approximately 125 are integrated suppliers. The latter have exclusive agreements with the company such as long-term agreements and cooperation in innovation, cost-control support, procurement services, logistics, etc. As a counterpart, they have exclusivity agreements with Mercadona. The firm holds an annual meeting with its integrated suppliers where new policies and experiences are discussed (Albors et al. 2015b). These suppliers have a unique role in the co-innovation effort, as will be discussed later (Institut Cerdá, 2016). These integrated suppliers play a crucial role in the Mercadona innovation system. Their cooperation has promoted growing innovation activity. A recent study outlined that these firms (of which 39% are SMEs) showed outstanding innovation ratios compared to their average Spanish counterparts. in the same sector (Institut Cerdá, 2016).

Society is the fourth element in the firm’s culture. Mercadona considers it a relevant stakeholder and part of its social strategy including environmental practices, neighborhood relationships, philanthropy, and social policies. Finally, capital constitutes the fifth element since Mercadona is based on long-term profitability, and its growth relies on profit reinvestment (López-González et al., 2013).

Mercadona shows culture traits characterized by involvement, team orientation, employee development, consistency, customer focus, core values, adaptability, and flexibility, all of which outline a performance-enhancing culture. Additionally, the company’s strong internal promotion guidelines and its levels of autocracy have been relevant in the setting and maintenance of Mercadona’s innovation systems (Ton & Harrow, 2010).

*Mercadona’s initial innovation approach*

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Roig defined the mission of the firm as “recommending the necessary solutions so their customers can do all their shopping.” Mercadona has traditionally been a leading innovator in food retailing. It was the first in Spain to incorporate the use of barcode scanners in 1981. Between 2005 and 2008, invested 600 million Euros to equip its stores and logistics chain with the latest technology. It was also the first to incorporate the concept of dedicated store sections (i.e., butchers, fish counter, bakery, fruit and vegetables, cosmetics, deli, and cleaning supplies) with their ambiance. Their approach has been pointed out as an authentic and emotionally engaging form of brand communication (Albors, 2015; Albors et al., 2015; Hammond, 2017). Logistics are based on a pull system (Hanna, 2010).

The initial innovation emphasized innovation concepts (related to marketing), processes, technology (primarily logistics), and redeveloping new products. Furthermore, in their 2010 annual report, the company claimed the redesign and improvement of 600 products and a reduction in inventory and resource consumption such as pallet redesign, improvements in reduced packaging, fewer product losses, an extension of product lifetime, and the incorporation of a new logistics centre (López-González et al., 2013; Mercadona, 2011).

Innovation suggestions were made by employees and managers or integrated suppliers. In 2009, the company created the role of the monitor to strengthen the close relationship with its customers following a new strategy to face the economic crisis (Vaquero & Calle, 2012; Mercadona, 2010). These monitors interacted with customers periodically in private sessions and learned to improve and innovate. In 2010, more than 250 monitors were commissioned to maintain close contact with customers, “observing their preferences on the spot, their needs, their wishes and values, and their likes and dislikes,” according to the Innovation Manager (López-González et al., 2013).

In 2013, Mercadona also initiated six innovation laboratories. Located in the retail shops, these are test benches where new initiatives are tried and supported by the experience of customers and employees. The results obtained are evaluated and analyzed (both successes and failures) before decisions were made for implementation. An example is butcher and deli sales counters, where meat and other deli products are served on demand instead of in fixed-size packaging as has been done traditionally (Mercadona, 2014).

Additionally, Mercadona has a customer service system dedicated solely to the activity of channeling all of the concerns raised by customers, initially via email or a telephone service and later with social networks. Recently it has revamped their online shopping system.

*A new experience: Co-innovation with customers*

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The so called “Apron Strategy” was initiated in 2011 from their innovation department, which is in charge of the monitors mentioned above. According to the company, “Mercadona has put on an apron to do the cooking, cleaning, washing, and pet care along with its customers” (Mercadona, 2012). Through this strategy, the company intended to learn about the specific uses made by their clients of their products. The strategy of the company is to innovate, improve, and launch new products. For this purpose, new facilities were designed within some of its stores, dedicated exclusively to this purpose.

The innovation program relies on the 250 monitors working in the innovation department. Of these, there are 90 working in dry products, and the rest in fresh perishable products (meat, deli, fish, and vegetables). Their functions are to capture, define, and communicate users’ needs. They are experts in the products they are managing. Their job includes carrying out surveys and interviews to quantify the bosses’ habits. Sometimes they will also visit the bosses’ homes to get first-hand information regarding their habits and routines relating to the products in question (Mercadona, 2016).

Nineteen co-innovation centres in Spain and Portugal have specialized in various products such as cooking and preparing food, personal hygiene, cosmetics, textile cleaning and home maintenance, breakfast, aperitifs and snacks, baby and child care, water and soft drinks, pet care, and clothing and shoe care. These centres replicate a home environment to recreate everyday situations in which the bosses interact with the products. For example, the personal hygiene and cosmetics centre resembles a mix of a home bathroom and a hairdressing salon. The company has invested more than 28.5 million euros in them since their launch (Mercadona, 2018).

The process begins at the retail store. Two monitors explained the process saying: “First we have to differentiate between buyers and consumers. It involves locating those who buy products to consume themselves, not for others to consume.” The monitors explained that later a conversation is established with the consumer to find out if she or he is “in love” with a particular product, consumes it frequently, and is willing to “seek out the product” instead of changing products. They continued: “They are the most knowledgeable on each product, and when you talk with them you get an enormous amount of information.” With the increasing utilization of Facebook in Mercadona’s social network, many new consumers want to join the initiative, and they must follow the same routine to prove they are consumers “in love with the product.”<sup>3</sup>

Consumers who are “in love” might be invited to co-innovation centres located far away or even in another town. In the case that they are unreasonably far, the consumers’ travel and accommodation

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expenses are taken care of. Otherwise, they are not paid and receive no other compensation. “They clearly are willing to participate in our co-innovation sessions,” argues a monitor. There is a certain emotional connection here, as it has been outlined that “to compete for consumer preference, retail must give people more reasons to connect emotionally to their business and brand” (Morrison & Humlen, 2013). These consumers’ profiles show “fidelity, brand knowledge, and commitment.” According to one coordinator, “that is the reason...their selection proves to be critical in the process.”

From this point, these bosses (consumers) are invited into the centre of co-innovation. Products are placed as they are on the linear shelves. Then Mercadona monitors evaluate in detail how these bosses buy and how they consume to provide them with the best products and everything they need. Sessions are typically individual or with a maximum of two consumers. Everything is tested including new recipes, new packaging designs, format and sizing variations, and so on. After testing the product, these bosses communicate their impressions to the monitors. Subsequently, the captured information is interpreted and organized, and the need related to the relevant suppliers. In general, two monitors participate in each process; one helps the customer while the other observes and takes notes. The procedures are standardized, so there are routines that are reproduced in each co-innovation centre.

The success indicators set up for an innovated product are threefold. Sales ratios must increase the existing product line, marketing quota must also increase its current percentage (i.e., if the marketing quota is 15%, the new product should achieve 18-20%), and savings must be achieved in the product firm wholesale (see Griffin & Page, 1996, p. 491; Lilien et al., 2002, p. 22).

It must be emphasized that these co-innovation meetings generate a significant amount of tacit information. One participant related to the authors the following: ‘...they asked me to use the product as if I was at home and observed how I did it, taking note of all my movements, including how I opened the coloring capsules, and asked about ways to improve and change their design.’ Interpreting the consumer comments has proven to be sometimes difficult.

Integrated suppliers play a relevant role in interpreting and implementing the product concepts that are pointed out in the co-innovation sessions. It is also critical that integrated suppliers have distinct innovation skills. Additionally, integrated suppliers contribute to 30% of the ideas and concepts tested in the co-innovation labs. An integrated supplier noted, “the information provided in the co-innovation sessions is very valuable for our innovation process ... especially the feedback in the second and third round.”

**Figure 1. Action in the personal care and desserts co-innovation centres.**



The ideas are developed in the co-innovation centre and transformed into prototypes by the integrated suppliers and then brought back to the co-innovation centres for trial following an iterative process, which includes 8–10 cycles. Finally, once the prototype is in its final form, tests are carried out with 20 consumers, and if they approve it, the new product is commercially launched. An idea might take 1–6 months to implement, depending on its complexity. However, there are cases of urgent innovation, usually concerning products for seasonal or festivity sales such as for Christmas, Halloween, or summer. Others have a short sales span such as those based on fashion trends or fads. New product scopes range from (a) product improvements to (b) new to the company or (c) new to the market products (Kahn, 2012, p. 109; Lilien et al., 2002).

Following the marketing department registered data, based on the sector statistics (Kantar World Panel, Consumer Spain, 2017), we have estimated a success rate of 70% (Kleinknecht, 2016) with those innovations that increase the previous product marketing share (in the first year) of the product category in which they are included in the case of newness to the firm and that achieve customer acceptance (minimum shelf renovation) in the case of newness to the market (Griffin & Page, 1996, p. 489). According to Hall and Wengel (2014), 82% of the innovative products introduced on the shelves by Mercadona during 2012–2015 remain successfully on the shelves after 48 weeks compared to the 24% average in the retail consumer market.

Failures are not uncommon, either. However, risk and failure acceptance are part of the firm's culture according to the innovation department manager.

There are many examples of the power of the initiative to connect demand with innovation. After two years of work with 300 tests, the co-innovation centre for personal hygiene and cosmetics has developed a new line of products related to hair coloring. As a consequence, spin-off firms were



created from existing companies to work exclusively for Mercadona and to develop these new products in the cosmetics sector.

Why would a customer participate in the experience? Customers have clearly mentioned intrinsic motivations. We discussed this question with a consumer taking part in the personal care co-innovation centre, and she said, “I want a hair color that is long-lasting and will look good and that makes my home haircolouring easier, and I hope Mercadona will develop it... I don’t mind doing my hair coloring here if I can contribute to it. Furthermore, I leave the shop with that task done... They do care about my problem and will come back with improvements... because I feel committed to the brand... The co-innovation centre is clean and well equipped.” The motivation for these consumers is high, sometimes capable of overcoming their potential embarrassment. The participants often feel that their self-esteem is reinforced in these sessions. One of them told the authors, “...my opinion is relevant for Mercadona ... this keeps me coming back to the sessions.”

#### *Findings and results of the experience to date*

The experiences and results since the June 2011 launch are shown in Table 1. The data supporting this table were provided by the company and the Kantar World database.

A measure of success could be the number of products that make the Innovation Radar Spain 10 most innovative list of the Kantar World Panel. This organization analyses the 1000–1500 Stock-Keeping Unit (SKU) new launches in grocery retailing in Spain every year. A new launch is considered when the product provides a new attribute on its category. Success is measured in the way it improves the market penetration average in that category. A very successful launch would improve more than 2.5 times per year penetration of its category. It must be noted that this list is normally made up of 95% producers, and seldom do retailer brands make it.

**Table 1. Results of co-innovation (Mercadona annual reports and Kantar World Panel).**

Year	2011	2012	2013	2014	2015	2016	2017	2018
Consumer participation/ sessions	1,200	7,000	9,000	9,000	8,000	6,000	8,000	9,000
Total no. innovations Developed (newness to the firm) (Reynolds & Hristov, 2015)	100	150	400	450	400	520	240	300
Innovations from co-innovation (newness to the market)	24	34	91	100	101	150	105	110
New products that made “Radar Innovation” Kantar 10 most successful launches	1	1	3	2	0	2	2	2

As has been mentioned, the strategic objectives of the new innovative products must increase or sustain their market share in their product categories, and they should contribute to lowering the price of the standard purchase cart. For example, the home-fried tomato sauce Hacendado<sup>i</sup> contributed to

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maintaining the share in fried tomato sauces at 70%, lowered the shopping cart price by 0.4 million euros/month and sold 35 units/day/shop (the previous figure was 30 units/day/shop). The ice cream based on cookies, Hacendado for children, sold 15 units/day/shop versus the average of 13 for children's ice cream sales figures.

It must be noted that social networks play a relevant role in this experience as a support for the whole innovation effort. During 2016, Mercadona had 600,000 followers on Facebook, 160,000 on Twitter, and 940,000 views on their YouTube channel (Mercadona, 2018). In many cases, consumers reinforce a product launch or comment on certain attributes. Twitter shows clearer messages, which can be supportive ("Well done for the new icecream cones!") or suggestive ("When will there be a new cleansing cream for sun-affected skins?"). In general, social networks function from a top-down approach, as only 20% of messages are the firm's suggestions or answers to questions, and 80% are comments from consumers, recommendations among them, or requests from them.

## **Conclusions**

The academic literature and economic reports reviewed explain that product innovation in the grocery retail sector is scarce and is driven primarily by producers' brands. Furthermore, consumers are unaware of the efforts of food retailers in this direction. However, when they observe the retailers effort, as in our case, it becomes a source of fidelity (Reynolds and Sundström, 2013; 2014; Lin, 2015). Our research shows that product innovation is feasible in the grocery retail sector with a certain level of success. In this case, Mercadona first mover role becomes a source of competitive advantage as Pantano (2016b) has pointed out.

We could conclude that the case is an excellent example of a firm capable of overcoming innovation barriers with a successful strategy. In the first instance, TQM influential culture set up the base for the firm long-term commitment toward its customers, placing them as the top priority as "the boss." This same culture drove the staff focus, and proper motivation of the employees as some authors suggest (Hammond, 2017). In the same token skills were developed with continuous training and this culture generated team and leadership growth confirming previous literature findings (Reynolds & Hristov, 2009; Reynolds & Sundström, 2013; Shankar et al., 2011; Albors, 2015).

The research case corroborates that retail firms can leverage from market changes and turbulence (Hristov & Reynolds, 2015; Reynolds & Sundström, 2014; Lewrick et al., 2015; Pantano 2016b). Mercadona launching of its permanent low prices strategy, the inventory reduction, its cost reduction programs, and innovation strategy encouraged by the 2008 crisis let the firm expand its competitive

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position in the Spanish market.

Being a family owned firm and an adequate financial policy of profit reinvestment facilitated the firm independence of external financing and then avoiding financial risk and uncertainty perception of their innovation projects (Reynolds & Hristov, 2009; Reynolds & Sundström, 2013; 2014; OXRIM, 2014). Again, some barriers were turned into innovation drivers.

Technology innovation, in this case, substantiates most of the literature findings. Although Mercadona did not incorporate smart or sophisticated technologies, VR or AR, it has been a technology innovator from their start. Its logistics and supply chain advanced technologies played a crucial role in their lean approach are proposed as examples (Ferne & Sparks, 2018; Hanna, 2010). Their pull approach to the supply chain is crucial in their management of data on consumer habits and acceptance, validating what we advanced in the first section (Reinartz et al., 2011; Pantano 2014a; Pantano et al., 2017). Interactivity and new tools to match customers' needs as well as employee-consumer interaction, in this case, confirm Pantano's (2014) and Pantano & Miglialnese (2014) views. Their increasing and successful use of social networks as support of their innovation projects validates also previous literature (Pantano, 2014a; 2016; Shankar et al., 2011; Hassan et al., 2014; Reynolds & Sundström, 2014; Pantano et al., 2017; Reynolds & Sundström, 2013; Patroni et al., 2016; Moorhouse et al., Dieck & Jung, 2017; Pantano et al., 2019). Finally, their criticized website for online shopping merited the owner statement in 2017 that ... "Our web is crap.. and we will change it". Since 2017 Mercadona is launching a completely new online system ("The Hive" with their own logistics structure. They are thus completing their multichannel approach confirming literature proposals (Pantano & Viassone, 2015; Reynolds & Sundstrom, 2013) again.

The case illustrates how this firm solved two significant barriers to retail innovation suggested by the literature: The conflicting situation with suppliers (Londoño et al., 2016; Grimmer, 2018; Shankar et al., 2011; Hall & Wengel, 2014; Hammond, 2017) and the appropriateness of innovations (Quinn et al., 2013). This by involving their customers in their innovation activity (Schenk & Guittard, 2011). Their co innovation program, while its relationships with their integrated suppliers, assures innovations exclusivity and confidentiality. As a matter of fact some suppliers protect and register the innovations thorough brand, design or patent protection. Additionally, the private shop brand system supports the system.

The firm is also careful to comply with regulations. In case of reports from consumer associations Mercadona reacts quickly by removing the incumbent products from their shelves, On the other hand

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their portfolio offers a variety of products allergenic, sugar or gluten free,

The customers must have a strong perception that their experience will be worthwhile, and their time will not be wasted, making this a motivation factor. The program must be a bottom-up approach. It is also necessary to have relatively fast feedback on product redevelopment or innovations that make the customers feel like they are part of the process. It must be emphasized that although their participation in the ideation phase is important, the customers also have a fundamental role in the validation and even in the commercialization phase since they also participate in the merchandising aspect of the improvements (Mukerjee, 2013).

Co-innovation has been successful because it is a natural evolution of the firm innovating culture, and it has been incorporated into their innovating value chain alongside the research and development departments of integrated suppliers and the chain's innovation department. The ethnographic approach is also very appropriate for collecting information of a tacit nature. This creative approach suggested by some authors (Banović, Krystallis, Guerrero, & Reinders, 2016) has been a significant factor.

### **Managerial implications**

The analysis of this case shows real alternatives for approaching the retailing challenges, bringing clear implications for management. In the first instance, this analysis shows an alternative to involve customers in the innovation process from the very beginning involving them in the value chain process.

Two organizational culture dimensions, total quality management and customer focus, play a critical role in the co-innovation program. Conceivably, a strong business culture reinforces the mission of serving the consumer, which is denoted "the boss" in this case. Both dimensions, organizational culture and a lean approach are critical for the replication of this program.

Commitment to this mission will support those above. The commitment must be supported by human resources, investment, training, and adequate tools and routines. This third aspect will complete the dimensions above.

Technology innovation supports the whole scheme: social media, information management, shop ambience, online shopping and logistics.

Mercadona's managers mentioned the main challenges: (a) be attentive to listen to the customer, (b) the staff should have an attitude of self-criticism and challenge, (c) ability to accept, recognize

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and analyse failure, (d) prioritize objectives among costs, quality, focus, and novelty, (e) be aware of space limitations, (f), be careful in the interpretation of customer demands and, (g), properly manage the massive quantity of gathered information.

Finally, this co-innovation action must be integrated into the innovation system of the firm (the suppliers' research and development departments). Therefore, fluid communication between these will be crucial in the process.

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