

Internet of Packaging and the Bridge Between Digital Marketing and Physical Retailing

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INTRODUCTION

In the past decades, the world has experienced the quite significant rate of change and speed of advancement in the consumer market (Mason, 2010). In order to fulfill growing consumers' demand and requirements, businesses are not only increasing their capacity of production (Aarnio & Hämäläinen, 2008), but also the means to sustain their competitive advantage among others. Consequently, the growing competition has led to the expansion of diverse marketing and branding techniques applied in both digital and physical retail environments. Traditionally, before the industry has begun to shift from information age to communication and interaction, advertising was referred as the principal method for marketing (Ford et al., 2012). However, the conventional mass media approaches were becoming less effective due to decreased impact on consumers and reduced budgets (Clarke, 2017; Ampuero & Vila, 2006). Therefore, businesses were in need to come up with other promising and preeminent marketing tools.

Underwood (2003) and Loucanova et al. (2017) claim that the potential of product's packaging has been largely overlooked in terms of brand symbolism and communication. Overall, it is the packaging that attracts the consumer's attention at first (Asgari et al., 2014). It is evaluated that 50-70% of shoppers make their decisions in-store (Lamey et al., 2018). Likewise, 73% rely on packaging, whether to purchase a product or not at the supermarket (Sudbury-Riley, 2014). Krishna et al. (2017) contribute to authors and add that package is the outfit of the product and can directly affect the perception of its quality and functionality, consumer attention and comprehension of offered value; thus packaging cannot be longer used only for preservation and handling purposes. According to the authors, the industry of Consumer Packaged Goods (CPG) packaging is heading to different designing directions due to new trends in enabling technologies, sustainability, functionality, and consumer engagement. Regarding the latter, both Krishna et al. (2017) and Lamey et al. (2018) agree that businesses should manage and design their product development and innovation processes including consumer preferences that is well-defined in the concepts of shopper marketing and sensory marketing. The development of product's packaging with more sensory-based engaging and interaction frames a unique consumer experience with the aim to create additional value that affects the formation of long-lasting brand-consumer relationships (Krishna et al., 2017).

On the other hand, traditional consumer packaging is placed in the physical retail environment. Although retail is one of the world's biggest industries regarding employment and revenue, more and

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more products are nowadays marketed and sold via digital platforms. According to Tambo (2015), the development rate of e-commerce is significantly higher than physical retailing that is largely at a stand-still. As a result, the phenomenon of omni-channel retailing (ability to browse, test, buy and return goods using all conceivable sales channels e.g. e-commerce, shops, markets, games, etc) has emerged aligning both physical and digital retail channels with the help of advanced technologies to provide complete consumer experience and operational effectiveness across the processes (Tambo, 2015). For instance, technological capabilities of augmented reality merge digital and physical experiences by introducing interactive fitting rooms and mirrors, image tracking digital boxes, and tablet computing in the stores (Bodhani, 2012). Likewise, the traditional consumer packaging that used to communicate with consumers in monologues, e.g. how to consume, store or dispose the product, has evolved and started to create conversations and dialogues with consumers (Krishna et al., 2017; Mumani & Stone, 2018). The latest technologies of the smart interactive packaging industry allow to actively sense the status of goods and wirelessly communicate it to logistics participants (Kang et al., 2014), as well as guide product innovation and marketing due to gained feedback from consumers (Krishna et al., 2017). Smart interactive packaging has a potential to connect both online and in-store retailing in order to improve and act as an intermediary between the brand and consumer due to advanced level of knowledge distribution.

According to Kaivo-oja et al. (2015), the intelligence and smartness provided by enabling technologies have an influence on changes in organizational cultures, especially in knowledge management, including knowledge development, transfer, and usage. Weaven et al. (2014) describe knowledge management as an activity that encompasses coordination, cooperation, and learning exchange to contribute to innovation and create value. Authors define knowledge management as the main source of competitive advantage, and therefore if brands are keen to sustain their market positioning, they have to create an environment of effective knowledge sharing. Kaivo-oja et al. (2015) concur that the critical part of management systems is knowledge integration. In relation to retailing, goods are known digitally until they leave the factory door, enters the store or leave the store, and thereby it is important to notice that the very most of CPGs are created and marketed digitally. Consequently, there is a massive knowledge creation related to demand planning, sourcing, product replenishment, visual merchandising that is done long before a product reaches a shelf. Furthermore, brand promotion, consumer profiling, consumer loyalty and campaigns are mostly executed digitally along with e-commerce practices. As a result, this as-is situation of CPG as being fully virtualized before they become physical make the smart interactive packaging a logical next step by making the knowledge created on digital platforms coherent with knowledge presented on physical product's packaging. Smart interactive packaging suggests retaining the digital tracking of the individual product. In a context of customer experience, data of interest for the consumer can be utilized just as much as data of interest for retailers, brand owners, marketing analysts.

As of today, interactive packaging can tell small stories and connect the consumer with the brand using URL's, QR-codes, identification tags and other. In line of numerous consumer products from light bulbs to toothbrushes to building comfort to smart watches, it is expected that also packaging will be more 'intelligent' with wireless connectivity at large to the surround environments of retail and consumer networks. However, the potential distribution of knowledge offered by this technology is not well explored. Defined by the concept Internet of Packaging (IoP), it is expected that CPG packaging encompassing active elements of digital technologies will not only enable greater interactivity between consumers and products but also introduce a bridge between existing digital and internet-based representations of products. Therefore the aim of this work is to discuss, define and analyze a set of perspectives and potentials of smart interactive packaging applied to CPGs to fill up the space between marketing and physical retailing in terms of knowledge distribution. This research is a qualitative study of Internet

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