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Understanding consumer's perception of co-creation in the cosmetic market.

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TITLE PAGE

Title

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Abstract

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Markets reward firms for their innovation capacity to create new products so more firms engage consumers to be a part of that process. This dissertation explores the consumer response to communicating co-created products. Literature demonstrates that customer brand perception plays an important role in defining the likelihood of purchase intention, of a co-created luxury and mainstream product. However, it lacks to explain how it is affected by labelling cosmetic products of luxury and mainstream brands as co-created. The hypotheses were tested in a survey measuring consumer's purchase intention, willingness to recommend and perception of quality and innovation of a co-created product in a luxury and mainstream cosmetic brand. In this study, we found that labelling products as co-created, results in different perceptions and behaviours of consumers, towards co-creation in cosmetic luxury and mainstream brands. It is notable that firm's reputation benefit from co-creation and it is a positive input to overcome the disconnection between businesses and potential customers. Hereby, this dissertation contributes to the literature, by establishing a relation between co-creation on consumer behaviour, but also, by linking the concept of co-creation with cosmetic luxury and mainstream brands. Indeed, we focused on developing the theoretical research on communicating co-creation in specific cosmetic brands, and existing literature is mostly focused in user-designed products.

Keywords: Innovation, Co-creation, Communication, Brands, Consumer Behaviour, Cosmetics, Purchase Intention, Reputation, Perception

Sumário

Os mercados recompensam as empresas pela sua capacidade de criar novos produtos de forma a que mais empresas envolvam os consumidores em fazerem parte desse processo. Esta dissertação explora a resposta dos consumidores à comunicação de produtos cocriados. A literatura demonstra que a perceção que os consumidores têm das marcas desempenha um importante papel em definir a probabilidade de intenção de compra de produtos de luxo e convencionais. No entanto, carece em explicar como esta é afetada pela comunicação de produtos cosméticos de marcas de luxo e convencionais enquanto produtos desenhados pelos consumidores. As hipóteses foram testadas num questionário, medindo a intenção de compra, vontade de recomendar, a perceção de qualidade e inovação em produtos cocriados de luxo e convencionais no mercado das marcas cosméticas. É notável que a reputação de empresas beneficia de cocriação e representa a capacidade de ultrapassar barreiras entre os negócios e potenciais clientes.

Deste modo, esta dissertação contribui para a literatura, por um lado, ao estabelecer uma relação entre cocriação e o comportamento do consumidor, por outro ao ligar o conceito de cocriação e marcas cosméticas de luxo e convencionais. Entretanto, focámos este estudo em desenvolver a pesquisa teórica sobre comunicação de cocriação em marcas cosméticas específicas, sendo que a literatura está mais focada em produtos desenhados pelo consumidor.

Palavras Chave: Inovação, Cocriação, Comunicação, Marcas, Comportamento do consumidor, Cosméticos, Intenção de compra, Reputação, Perceção

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1- Introduction

1.1- Problem Definition and Relevance

Former US President Obama acknowledged the importance of including consumers as a source of inspiration for companies' success. In a speech in the White House he pointed that it is fundamental for the thrive of the global market to be competitive and as such, firms have the responsibility to include consumers in their strategy (The White House, 2016). In fact, today's consumers are much more demanding about their needs and wants, and consequently, firms must build trust and meet consumer's expectations (Perkins & Fenech, 2014). However, it seems difficult for companies to be ahead of the overall trends without including consumers, since users are empowered by information and individual preferences (Perkins & Fenech, 2014). Several firms, like *Dell*, *Lego* or *Muji* (Nishikawa, Schreier, & Ogawa, 2013), have successfully adopted an inclusive approach towards consumers' input in generating ideas and developing products with firm's own designers (Dahl, Fuchs, & Schreier, 2015), which serves as a successful example of co-creation. The process of involving users in the firm's innovation process, is known as co-creation (Prahalad & Ramaswamy, 2002). Co-creation is the cooperation between consumers and firms for value exchanging, finding solutions and creating experiences (Prahalad & Ramaswamy, 2004), which suggests that companies that include consumers input in the generation of ideas, products and services are able to produce higher value (Ramaswamy & Ozcan, 2018).

In the traditional company-centric perspective, consumers are not involved in the value creation course, where firms control the entire process before the purchase (Prahalad & Ramaswamy, 2002). However, focusing on consumers' demand, the user is fundamental in the value creation process and for providing companies with the opportunity of co-creation (Prahalad & Ramaswamy, 2002). Also, it is of usual understanding that the innovation process is not exclusively done with companies own staff, and hence, nowadays, firms interact with consumers and other organizations for product innovation, for identification and recognition of new ideas (Piller, Ihl, & Vossen, 2010). It is critical for firms to connect products with consumers' preferences, and when successful, it results in a stronger relation between purchase intention and firm's revenues (Kazadi, Lievens, & Mahr, 2016). For instance, the aerospace company *Boeing*, shaped a "community" of participants involved in creating new ideas for the 787 aircraft (Matthew & Rindfleisch, 2010). Similarly, the case of *Threadless* is one of the most mentioned examples in the literature regarding crowd-sourcing and open innovation,

where product responsibility is all on *Threadless* customers (Piller, 2010). Also, the world-famous coffee shop *Starbucks* created an online community called *MyStarbucksIdea.com*, where customers and employees could acknowledge their ideas, and this way generate new input for the company, in order to improve services and products (Perepu, 2013). Likewise, firms as BMW, VW and Nivea prepare consumers to participate online, offering applications and software, that give the ability to introduce new solutions and mock ups (van Dijk, Antonides, & Schillewaert, 2014).

Literature has an amplitude of studies regarding users as innovators (Bogers, Afuah, & Bastian, 2010), however, limited research has analyzed how consumer behavior is influenced when users perceive co-created mainstream and luxury cosmetic brands' products. The present study aims to understand the purchase and recommendation intention of consumers, when learning about co-created products, and analyze whether quality and innovation perceptions have any influence on the outcomes of this analysis. Past research shows that purchase intention of observing consumers- the ones not participating in the co-creation process, simply perceive, learn and consume the final product (Dahl et al., 2015) - for user-designed brands and products is higher, in comparison to products exclusively created by firm's employees (Costa & Coelho Do Vale, 2018; Fuchs & Schreier, 2011). As such, understanding co-creation in the context of the fast-paced world we live in, becomes increasingly important. When engaging in co-creation, firms assume a strategic approach towards the fundamental role that a consumer has regarding product insights and social purposes (van Dijk et al., 2014). As a result, the customer is considered a source of information, (Boukhris, Fritzsche, & Möslein, 2017), a basis for innovation (Bogers et al., 2010) and creativity (Füller, Faullant, & Hutter, 2011). Also, the co-creation relation between firms and users has a strong potential for the growth of the consumer environment (Füller, 2010), and therefore, it is an alternative for companies to reduce costs in research and development, inventories and increase customer loyalty (Piller, 2010). When co-creating, a brand determines the degree of its commitment to the consumer's input, to preserve its uniqueness and competitive advantage (Fuchs, Prandelli, Schreier, & Dahl, 2013).

Perception of co-created products is subject to consumers' beliefs and preferences, such as self-identification towards a brand and products that derived from co-creation (Thompson & Malaviya, 2013). It is relevant to study luxury and mainstream brands to better understand the value of those brands, which results from the way consumers perceive them as the finest quality, guaranteeing that they benefit from the complete experience of high end products (i.e. fashion, cars and cosmetics) (Keller, 2003). Also, luxury brands are associated

with brand status, which is linked to the dimension of symbolic meaning (Keller, 2003), since luxury customers aim to communicate their wealth, and the restricted access to those products (Hung et al., 2011). Indeed, the luxury industry is an ongoing growing economy (Hung et al., 2011), as in 2016 it was estimated to value around 249 billion euros (Statista.com, 2018b). On the other hand, mainstream brands consist on more standard firms with reasonable prices, easy access for low income consumers and lower affiliation to the brand (loyalty) (Felix, 2012; Fuchs et al., 2013). Thereby, mainstream and luxury brands' products in the cosmetic market represent an interesting topic to study around the dimension of communicating co-creation.

Objective and Research Questions

This dissertation aims to understand the influence of labelling products as co-created, on purchase intention and willingness to recommend, by understanding perceptions of quality and innovation when the product is communicated as co-created. Accordingly, this thesis contributes to the evolving stream of research on co-creation as a competitive advantage (Cañas, 2014; Prahalad & Ramaswamy, 2004), opportunity for companies to grow technologically and within the industry (Payne, Storbacka, & Frow, 2008).

Taking this information into consideration, the following research question is addressed:

RQ1- How do consumers perceive the brand and product of companies that co-create?

We intend to test if communicating co-creation has any influence in the purchase intention and willingness to recommend of consumers. Labelling products as co-created also has some positive implications linked to consumers' preferences, such as the way consumers perceiving products and their demands towards those brand's products (Fuchs et al., 2013). However, we will test if communicating co-created products has any influence in consumer behavioral attitudes, depending whether the brand is mainstream or luxury. According to Fuchs et al., (2013), in the fashion industry we commonly observe the source of design, namely on the clothes tags, firm's websites and packages, just as campaigns promoting partnerships with celebrities.

Furthermore, we want to measure the degree of influence of labelling a product as co-created on consumers' perception of quality and innovation. Observing consumers perceive quality and innovation according to their preferences and awareness to a co-created product (Dahl et al., 2015). Hence, brands are important measures of consumers' identities

and self-awareness, this way firms are able to recognise what leads consumers to purchase or not a specific brand. Thus, this study's objective is to understand the changes in behaviors towards purchasing cosmetics in luxury and mainstream brands that engage in co-creation. As mentioned before, luxury brands are identities that generate products of high end layout, with premium status and exclusive access (Hung et al., 2011). In contrast, mainstream brands consist of affordable products, with average quality and are closer to the mass public (Fuchs et al., 2013; Lee, Motion, & Conroy, 2009). Therefore, it is important to consider how observing consumers- mainly potential users (Fuchs et al., 2013) - react to mainstream and luxury brands by engaging in co-creation, and generate a relevant input for companies to ponder whether communicating co-created products is beneficent for their brands.

Thesis Structure

The structure of this thesis is as follows: We first start by giving an introductory explanation of the relevance of the topic, just like its problem statement. Additionally, we present an analysis of the available literature and existing research on co-creation, followed by brand perception and consumer behaviour. Furthermore, a framework of analysis introduces the following chapter, which is the research methodology and data discussion, where we can analyse the study's outcome. Finally, we have some conclusions that outline managerial implications and suggestions for future research as a constructive input for the existing literature on co-creation.

2- Literature Review

2.1- The definition of Co-Creation

Markets have become highly competitive to the extent that firms cannot exclusively rely on internal knowledge and creativity to generate new products (Dahl et al., 2015). Nowadays, consumers are highly informed and possess more skills and expertise (Randall, Terwiesch, & Ulrich, 2005), leading to a higher predisposition to participate in the decision-making process of creating new products with brands (Prahalad & Ramaswamy, 2004). Prahalad and Ramaswamy's (2004) define co-creation as the creation of value resulting from a cooperative generation process between the company and the consumer (Prahalad & Ramaswamy, 2004).

The urge of co-creation of value is consistent with the way firms operate when creating new products or services, therefore, consumers expect their needs and wants to relate with the product experience of firms (Prahalad & Ramaswamy, 2002). Also, the concept of co-creation and its relevance are not only directly related with open innovation and new product development (NPD) (Bogers et al., 2010), but also with sharing resources, crowd-sourcing, mass customization and networking (Prahalad & Ramaswamy, 2002). Indeed, co-creation is also compared with co-production, which is associated with product development and innovation, leading to an increase in the consumer's experimentation sense about the products (Rowley, Kupiec-Teahan, & Leeming, 2008). Co-production is linked to the competitive effectiveness of consumers as co-producers, where firms use customers to develop its productivity (Bendapudi & Leone, 2003). Bendapudi and Leone (2003) suggest that not only firms, but also consumers gain from co-production. On a firms perspective, the essence behind co-producing is to lower costs and consequently reduce sale prices; on the a customer perspective, needs are accomplished and consumers are able to purchase products at a lower price (Bendapudi & Leone, 2003).

It is valuable to note that the consumer used to see the final product as it was presented by brands, yet now, the consumer is not only the co-creator, but also a co-producer (Vargo & Lusch, 2004). Consumers that participate in co-creation are crucial stakeholders in the process of conceiving strategies of companies that engage in co-creation (Ramaswamy, 2008). In fact, consumers have several reasons to participate in co-creation. The motivations behind consumers' willingness to participate can be described by Fuller (2010) as intrinsic- if users co-create assuming that the action itself will generate a certain pleasure and joy- and as

extrinsic- if users' participation relies on the results of the cooperation (Cañas, 2014; Füller, 2010). In addition, consumers' incentives to co-create vary between remunerations as monetary benefits, visibility and recognition, ability to learn and acquire specific knowledge, individual needs due to dissatisfaction and social identification to the brand (Cañas, 2014; Füller, 2010). Hence, consumers are motivated to co-create by the expectation to benefit from the user-innovate product, since these firms will be aware of customers' needs sooner, than if goods were strictly internally developed (Bogers et al., 2010).

Furthermore, literature also calls out the attention to the distinction between co-creation and co-production. Researchers state that co-production implies the production of an element of output, while, co-creation involves more stages, starting from the idea generation, to the sale point and to final product feedback (Vargo & Lusch, 2006). On a firm's perspective, the main goal is to create an innovative product. Thus, when engaging in co-creation with the consumers, firms aim to generate new products and create more value (Kristensson, Matthing, & Johansson, 2008). If brands can include customers in the innovation process of a product or service, it will guarantee its stronger positioning, leading to positive outcomes, as the reduction of costs and prices (Fuchs et al., 2013), clear financial efficiency and framing consumer's behaviour (Fuchs & Diamantopoulos, 2012). Moreover, engaging in co-creation represents a positive shift from a traditional marketing approach of value creation, which separated the producer/designer from the customer, turning him into the co-producer of new ideas and products (Vargo & Lusch, 2004). On the one hand, companies ask individual consumers to present ideas or feedback of products (Ramaswamy, 2008). On the other hand, firms are open to communities evaluations of their products and initiatives, which is the case of the sports brand Nike (Ramaswamy, 2008). In addition, firms like Wikipedia (Perkins & Fenech, 2014) benefit from consumer's altruistic reasons (i.e. own interest) to co-create, since users are self-motivated to contribute to content improvements (Füller, 2010). In conclusion to this idea, traditionally, the products' innovation cycle began with firms designing and producing goods resorting solely to internal knowledge, however, currently the consumer has more than just purchase power: it can engage with the form of designing new products to the final sale decision (Payne et al., 2008), that allow learning for both the brand and the consumer (Ballantyne, 2004).

The emergence of co-creation is a consequence of a globalized and connected world (Cho & Lee, 2015) where *Internet* and the technological knowledge of consumers sets out the "five powers of the connected consumer" of Prahalad and Ramaswamy (2002): Information Access, Global View, Networking, Experimentation and Activism (Prahalad & Ramaswamy,

2002)- which are relevant to understand the extent setting up co-creation that has no linear coherent process, but rather relies on diverse consumer involvement (Prahalad & Ramaswamy, 2002). Meanwhile, prior studies have explored the main characteristics and benefits of co-creation, just as the way brands like Lego (Tidd & Bessant, 2013), Swarovski (Füller, 2010) or Starbucks (Perepu, 2013), are profiting from a “new era of business creativity and opportunities”(Prahalad & Ramaswamy, 2002, p.12).

The broader market is no longer exclusively controlled by firms, instead, consumers have a much stronger influence in business decisions, transforming markets into forums of discussion, mainly because of the digital tools derived from the Internet (Prahalad & Ramaswamy, 2002). There are several examples of co-creation that we already mentioned, like *Lego* (Tidd & Bessant, 2013), *Muji* (Nishikawa et al., 2013), *Nike* (Ramaswamy, 2008) and *Threadless* (Piller, 2010), that reflect how overall consumers perceive this cooperation between firms and its users. Most importantly, it demonstrates how co-creation represents a communication strategy for many brands, and how consumers can expose their needs and preferences (Muñiz, Jr. & Schau, 2007).

2.2- Co-creation Community and Social Identification

Co-creation in customer communities result from the joint eagerness of consumers, to belong to a group of people that have the same interests and preferences about a certain brand (Rowley et al., 2008). Thus, the idea of sharing experiences in a community, encourage firms to engage consumers in co-creation among those members, which directly influences the product generation process, throughout exchange of ideas and joint feedback (Rowley et al., 2008). Consumers have a strong influence in developing brand communities, transmitting to companies the core values and co-creating public endorsement for the brands (i.e. Apple Newton’s brand) (Muñiz, Jr. & Schau, 2007). In this context, consumers perceive firms’ new products and services based on those communities’ feedbacks (Piller, 2010), and therefore, brands must acknowledge this learning process of communicating with the consumers through their products (Prahalad & Ramaswamy, 2004). Hence, it important to study how co-creation led to the creation of online communities. The fact that firms co-create is not exclusively about attracting consumers to purchase their products, it provides an opportunity of experience in a community of that brand (Prahalad & Ramaswamy, 2004).

In like manner, co-creation in customer communities is related to changes in consumer behaviour, as users identify themselves with a specific brand (Dahl et al., 2015). The feeling

of belonging to a certain community, where consumers compare each other's social status and solidarity, is defined by scholars as social identification (Dahl et al., 2015) or social comparison (Locke, 2003). It is relevant to create a customer-company relationship to achieve brand's loyalty, firm's positioning and products' advertisement (Bhattacharya & Sen, 2003). In fact, famous brands such as *Patagonia*, *Harley-Davidson* and *The Body Shop*, have strong stakeholders involved, also named as "*communicators of identity*", that are involved in building up those firms' values, principles and supporting new products according to their brand preferences (Bhattacharya & Sen, 2003). Furthermore, co-creating within these communities is an indicator for purchase intention towards that products (Dahl et al., 2015), and if consumers are willing to buy it, most likely will also recommend it, increasing brand loyalty (Felix, 2012).

2.3- Consumer Behaviour and Co-creation

Literature presents several analyses of changes in consumers' behaviour, and in this context, it explains the influence of observing customers in the purchase intention and willingness to recommend of co-created brand's products.

The purchase activity happens according to consumers perception of a certain product's value (Keller, 2012). This decision of purchase is also conditioned by other aspects, such as consumers price consciousness (Keller, 2012), overall brand perception (Cobb-Walgren, Ruble, & Donthu, 1995), brand performance (Keller, Sternthal, & Tybout, 2002), and brand positioning (i.e. luxury vs mainstream) (Fuchs & Diamantopoulos, 2012). In fact, customer-driven firms are observed by consumers as being closer to their needs and preferences, this leads to an increase in the final buying decision of a product labelled as "user-designed" (Dahl et al., 2015; Fuchs & Schreier, 2011). According to Armstrong and Kotler's (2015) "*Model of Buying Behaviour*", there are three elements affecting customers conduct: the circumstances (the environment), the buyer's main characteristics (the black box) and its buying response (Armstrong & Kotler, 2015). Therefore, the interaction between firms and consumers is directly related with the concept of co-creation, where users that observe co-creation sense a direct impact on a firm's decision process, which acts as a "stimulus" for consumers in the purchase moment (Dahl et al., 2015). On top of that, the fact that consumers are willing to participate in co-creation influences purchase intention for goods and services that were co-generated (Dahl et al., 2015).

2.4- Cosmetic Industry

Every day, people's self-esteem is influenced by the way they look, using various means such as expensive clothes, accessories or cosmetics (Fuchs et al., 2013). Cosmetics play an important role in defining beauty among regions around the world (Yee & Sidek, 2011). The history of cosmetics goes back to ancient times of the Egyptians, Greeks and Romans, where the use of such products was mainly for body decoration, skincare and social status (Jain & Chaudhri, 2009). Nowadays, the industry is growing on a large scale. In 2016, it was valued at 77 billion € at retail sales price in the European market, where cosmetics and personal care represented a significant market for many global brands, and in 2017 it grew 4% relative to the previous year (Cosmeticseurope.eu, 2018). Hence, the number of cosmetic brands has increased in the past decades, introducing new technology, products and ingredients, resulting in higher costs and more time put into research and development (Nagasawa & Kizu, 2015). Therefore, the urge of adopting new strategies of differentiation leads to new product development and individual marketing approaches, resulting from the fast-paced markets and new consumers' needs and wants (Piller, 2010). Thus, according to the international statistics portal, the cosmetic industry is constantly growing and changing according to market trends, just like fashion (Statista.com, 2018a).

2.4.1- The role of brands in the cosmetic sector and the source of design

The differentiation of luxury and mainstream brands relies on consumers perception of the company's value and on the global market positioning of the brand (Truong, McColl, & Kitchen, 2009). Luxury brands are defined as a labelled product that are cautiously produced, exclusive and displaying (Hung et al., 2011). In fact, price plays an important role in defining a barrier between premium priced brands and affordable ones (Truong et al., 2009). Therefore, demand for luxury products is conditioned by consumers income and socio-economic environment, leading to different purchase intentions and willingness to recommend those high-end products (Tynan, McKechnie, & Chhuon, 2010).

Nevertheless, willingness to recommend a co-created product is also an effect resultant from increase perception of firm's activities (Costa & Coelho Do Vale, 2018; Fuchs & Schreier, 2011). Indeed, in order to guide customers opinion of co-created products, managers must empower consumers with tolls, which lead them to easily recommend those items (Fuchs

& Schreier, 2011). Meanwhile, Fuchs (2013) explained to what extent labelling products as co-created impacts purchase intention and willingness to recommend of consumers of luxury brands. When luxury brands communicate co-created products as “user-designed” in its products, it has different impacts on purchase intention towards customers, compared to mainstream priced brands (Fuchs et al., 2013). The researcher gives the example of the Fiat 500 launch that was categorized with “user-designed” which was a success, but it is not likely that Jaguar clients perceive co-creation the same way (Fuchs et al., 2013).

Strong brands have a significant influence on consumers’ behaviour, brand perception, brand loyalty and willingness to purchase (Guthrie, Kim, & Jung, 2008). Also, big cosmetic corporations, such as *L’oreal* own a diversified group of other brands (Delbon, Filho, & Granado, 2015), that are both in the segments of mainstream (i.e. *Garnier*) and luxury (i.e. *Lancôme*), therefore, engaging in co-creation allows firms to use it as a differentiation strategy for their brands, labels and products (Hoyer, Chandy, Dorotic, Krafft, & Singh, 2010). However, brands communicating co-creation in mainstream and luxury segments have different outcomes (Fuchs et al., 2013), as items that are co-created require a design source closer to the real image of the brand (Nagasawa & Kizu, 2015) and this is surely more evident in luxury brands than in mainstream brands (Fuchs et al., 2013). Thus, our hypothesis is:

H1- Labelling a product as co-created has a higher effect on consumer’s purchase intention and willingness to recommend in mainstream cosmetic brands than in luxury brands.

2.5- Quality / Innovation Perception and the Source of Design

Regarding communicating co-creation, it has decisive managerial implications in the way consumers perceive the source of design based on labels (Fuchs et al., 2013). Labelling a product as co-created has effects on the consumers’ acceptance of product’s quality (Fuchs et al., 2013) and innovation (Schreier et al., 2012). Conceptually, recognition of quality is defined as “customers’ perception of the overall quality or superiority of a product or service related to relevant alternatives” (Fuchs & Diamantopoulos, 2012; Keller, 2012, p.159). In fact, relating to social identification, consumer behaviour towards quality perception results from the understanding of brand’s characteristics of personality and reputation (Keller, 2012). Also, perceiving quality of co-created products, is very much associated with the conscience of knowing the source of design (Fuchs et al., 2013). Thus, the notion of quality perception is defined by the reasoning of consumers about a product’s distinction and specifications

(Zeithaml, 1988). For instance, sports products are usually co-created by its users, since the using experience and the self-acquired knowledge is central to design specific products developed according to user's needs (Bogers et al., 2010).

To consolidate this idea, co-creation is a technique that expands the perception of brands within the cooperation with customers, by including them in the idea and product generation process, (van Dijk et al., 2014). Therefore, brand image is important for, not only companies but also customers, defined by Keller (1993) as “perceptions about a brand reflected by the brand associations held in consumer memory” (Keller, 1993, pp 4). Thus, brand image includes consumer's insight of a firm's product quality and innovation (van Dijk et al., 2014). Indeed, firm's capacity to innovate, by creating and developing new ideas, products and services, affect customer's perception (Schreier et al., 2012), and this is emphasized by the association of a brand with co-creation (Alves, Fernandes, & Raposo, 2016; Bogers et al., 2010). Users are seen as part of the idea development process, being considered co-innovators and the source of innovation (Bogers et al., 2010; Von Hippel et al., 1975). Consequently, Schreier et al, (2012) state that consumers purchase intention is higher for user-designed brand's products that are perceived as significantly more innovative.

The importance of cosmetics to consumers' daily life is extremely high (Kumar, 2005), and because of that, they carefully consider every purchase decision (the types of cosmetics include, skin care, deodorants, fragrances and haircare) (Nagasawa & Kizu, 2015). Markets have many cosmetic brands, ranging from affordable mainstream, such as *Dove*, *Kiko*, *Nivea* and *L'oreal*, to more expensive luxury brands, as *L'ancome*, *Calvin Klein*, *Chanel* and *Dior*. The way customers perceive cosmetics is not only related to the price of purchase, but also to individual's lifestyle (Nagasawa & Kizu, 2015). Consequently, when brands engage in co-creation, they must consider consumers reaction to the particular decision of labelling the products as “co-created” (Fuchs et al., 2013). In luxury brands, this strategy is taken into consideration due to the way it impacts observing consumers' perception of quality and purchase intention (Fuchs et al., 2013). In short, we argue that communicating co-creation through luxury and mainstream brands have different responses from consumers, where firms like Nivea (mainstream) are perceived as having less quality and innovation capacity, in comparison to brands like Chanel (luxury), by labelling its products as “co-created.” Thus, our second hypothesis is:

H2- Labelling a product as co-created has higher effects on consumer's perception of quality and innovation in luxury cosmetic brands than in mainstream and co-created brands.

In conclusion, this literature review presents a description of the importance of co-creation in developing new business models and creating a dimension of cooperative interaction between consumers and firms. Thus, we want to explain how communicating the source of co-created products affect customers choices. Additionally, the literature explains how co-creation affects consumer behaviour (Bogers et al., 2010) and brand perception (van Dijk et al., 2014) in respect to purchase intentions (Dahl et al., 2015), quality perception (Veryzer & De Mozota, 2005) and innovation (Alves et al., 2016).

Conceptual Framework

The conceptual framework of this dissertation is demonstrated below as a simplified explanation of the concept tested in the survey and that sustain the hypotheses. To this extent, we aim to understand consumers' perception of quality and innovation of co-creation in cosmetic luxury vs mainstream brands. Although, literature has extensive research regarding co-creation and consumer behaviour (Alves et al., 2016; Costa & Coelho Do Vale, 2018; Prahalad & Ramaswamy, 2004; van Dijk et al., 2014), however, it lacks to explain what influences the purchase intention and willingness to recommend a cosmetic brand's product in mainstream and luxury brands, labelled as "co-created".

Thus, the current study addresses individual characteristics of co-creation with general consumer behaviour. Our starting point is communicating the concept of co-creation and how it is observed by consumers (Fuchs et al., 2013). We want to test how perception of quality and innovation may lead to purchase intention and willingness to recommend of a user-designed product, which is controlled and moderated by the way consumers perceive brands that engage in co-creation. Prior research has shown that control questions are important to measure participants behaviour towards the relationship between independent and dependent variables (Perdue & Summers, 1986), that is why we ran several control variables to test on our hypotheses.

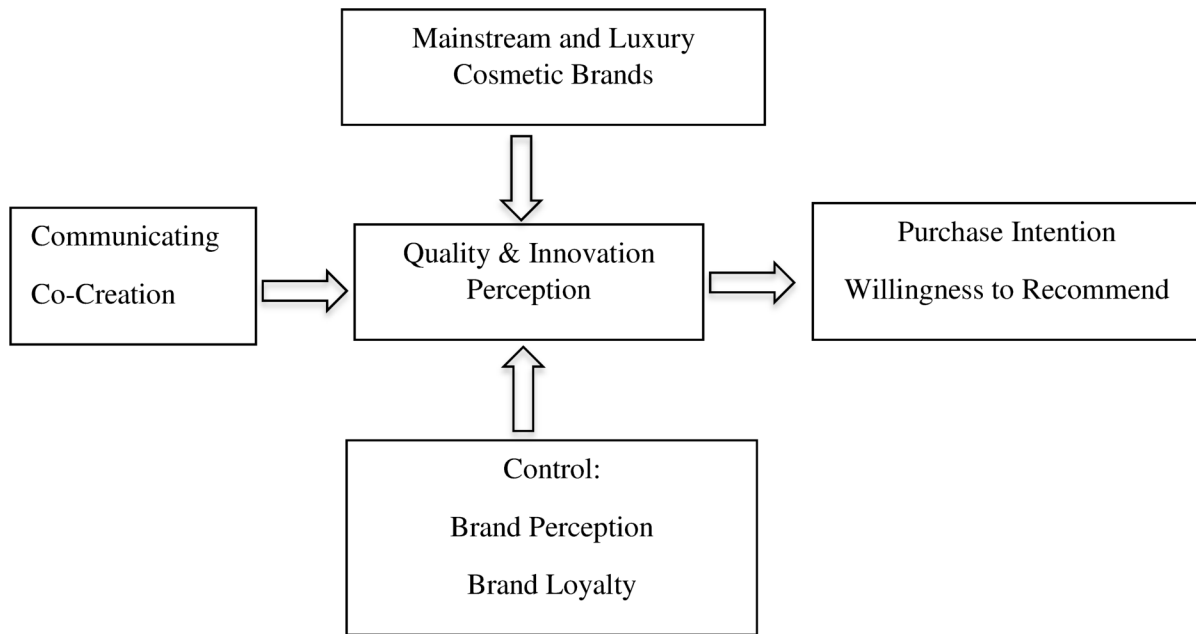


Figure 1- Conceptual Framework

3- Research Methodology and Data Collection

This chapter represents a sustained representation of the rationale of our topic's intuition and of the hypotheses presented in the literature review of our study. In addition, we designed two studies, a short pilot survey and a main study, which explore how communicating co-creation may influence purchase intention and willingness to recommend. With the aim of consolidating the data collection, we then present our main findings and results.

3.1- Overview of the Research Method

To develop our hypothesis, we wish to clarify that this dissertation aims to obtain a better comprehension on what makes consumers willing to purchase a co-created product and recommend it to other users. The research was designed on a quantitative basis of numeric data collection, with two questionnaires: a pilot study and the main survey. Both studies were distributed online using *Facebook* and direct email, considering that it was more suitable and the effective way to collect the data. The main benefits of using this type of quantitative research are the fast access to the survey, either on the computer or on the phone, which makes it straightforward to participants, has no related costs and no location constraints (Saunders, Lewis, & Thornhill, 2016). Indeed, it was important to develop a quantitative research, in order to complement the literature, test hypotheses and assure more credibility to the information conferred (Saunders et al., 2016).

3.2- Pilot Study

The purpose of the pilot study was to support the main study on how consumers perceive the main cosmetic brands, in terms of mainstream and luxury segments. Usually, scholars use pilot studies for a variety of reasons, such as to collecting exploratory data, mature a research question and to recognize potential problems that might derive in the main study (Van Teijlingen & Hundley, 2001).

This pilot was purposely not extensive, in order to validate which brands were more valuable for the survey. To provide an accurate choice to consumers, we visited several department/ retail stores (i.e. *El Corte Inglés* and *Douglas*) and approached cosmetic specialists to identify the most relevant brands in addition of choosing a range of brands that were more suitable for this study. The most mentioned brands to use in the pilot, by the

specialists were: (1) Mainstream brands- *Kiko, Sephora, Nyx, Boticário, Essence, Catrice, Nivea, L'Oréal Paris, Dove and Garnier*; (2) Luxury brands- *Yves Saint Laurent, Chanel, Dior, MAC, Elizabeth Aarden, Lâncome, Armani, Estée Lauder, Boss and Clinique*.

It was important for us to confirm the brand positioning of the ones we wanted to present in the main survey. Furthermore, it was also relevant to avoid misunderstandings during the execution of a survey, because many studies lose accuracy from mistakes such as confusion of the concepts (Saunders et al., 2016). In the event of not executing a pilot study, we could have faced detrimental consequences in our results, which methods and instruments would be invalid and inappropriate (Van Teijlingen & Hundley, 2001).

3.2.1- Pilot Study - Measures

In this table we present the measures used in the pilot survey, testing frequency of cosmetics, brand importance, brand perception on both mainstream and luxury brands, and finally a demographic question regarding gender.

| Variables | Items |
|--|---|
| Frequency of use of cosmetics (Thompson & Malaviya, 2013) | [1] Yes; [2] No |
| Brand Relevance (Felix, 2012) | Importance [of a brand] to the participants: [1]- Extremely important; [5]- Not important at all. |
| Brand Perception (Wernerfelt, 1988) -Mainstream Cosmetic Brands | Identification of the most accurate under the options given: [1] <i>Maybelline</i> ; [2] <i>Chanel</i> ; [3] <i>Sephora</i> ; [4] <i>Yves Saint Laurent</i> ; [5] <i>Nivea</i> ; [6] <i>L'Oréal Paris</i> ; [7] <i>Clinique</i> ; [8] <i>Dove</i> ; [9] <i>Garnier</i> ; [10] <i>Lancôme</i> ; [11] <i>Biotherm</i> |
| Brand Perception (Wernerfelt, 1988) -Luxury Cosmetic Brands | Identification of the most accurate under the options given: [1] <i>Maybelline</i> ; [2] <i>Chanel</i> ; [3] <i>Sephora</i> ; [4] <i>Yves Saint Laurent</i> ; [5] <i>Nivea</i> ; [6] <i>L'Oréal Paris</i> ; [7] <i>Clinique</i> ; [8] <i>Dove</i> ; [9] <i>Garnier</i> ; [10] <i>Lancôme</i> ; [11] <i>Biotherm</i> |
| Gender | [1] Male; [2] Female |

Table 1- Pilot study- Measures

3.2.2- Procedure and Findings

The pilot was conducted in English, using the software *Qualtrics* and it was shared on Facebook. Participants (N=30) were requested to answer a four questions' survey. First, we did a manipulation check with a 5-point scale (1- extremely important; 5- Not important at all). Regarding their frequency of use of cosmetics and their sensitivity to cosmetic brands. Then, participants were asked to select under a set of 11 brands, which would validate brand positioning of mainstream and luxury cosmetics brands. These questions were important to identify the brands that we used in the main survey. *Nivea* (21.29%), *Dove* (20.34%) and *Garnier* (16.95%) were the most mentioned brands for the mainstream range, and that *Chanel* (26.92%), *Yves Saint Laurent* (25%) and *Lancôme* (18.27%) were predominantly identified as luxury. Overall, participants [$M_{\text{female}}= 100\%$] considered cosmetic brands important in the moment of purchase, as 36.67% considered a brand very important and only 10% mentioned it to be slightly important.

In conclusion, the brand knowledge that consumers have towards a brand is related to their assumptions and connections of the brand's products (Swaminathan, Fox, & Reddy, 2001). Based on this, Nivea was considered by participants as a mainstream brand and Chanel as a luxury brand. We were able to conclude that Nivea and Chanel were the brands most selected to use in the main study, as part of the scenarios presented to the participants.

3.3 - Main Study

In this section we introduce the research methodology of the main study, with an overall explanation of the objective and overview of the study, followed by a description of the developed sample. Furthermore, we present the method in which it is possible to understand the consolidated structure of the main survey and confirmed by the findings and discussion of the results.

3.3.1 – Objective and Methodology

This study was developed under a type of experiment for data collection of 1 (source of design: co-creation) x 3 (brand replicates: No Brand vs Mainstream vs Luxury) within subject design, which measured how much a participant, from this sample, would change over the course of its participations in the survey (Field, 2013). By No brand we mean lesser-known firms (Hoeffler & Keller, 2003), that have no established brand, in opposition to luxury (Chanel) or mainstream (Nivea) brands that are strong positioned in the market (Hoeffler & Keller, 2003). Brands with less market share have the constraint of being less appealing to consumers, compared to brands that are easily recognized (Brown & Dacin, 1997; Hoeffler & Keller, 2003). Thus, we are measuring the extent to which an unknown brand (*No brand*) is a possible situation of co-creation in this study.

Therefore, the one group of participants was exposed to three scenarios, namely: [0] Mainstream, [1] Luxury and [2] No brand, and this method is known as repeated measures (Saunders et al., 2016). All participants answered the no brand scenario first, followed by a randomized option of either take mainstream or luxury second, but they would always answer to the three scenarios. (i.e. user A condition: No brand, Mainstream, Luxury; user B condition: No Brand, Luxury, Mainstream). This decision was important to manipulate the independent variables involving only one group and avoid participants' bias results.

Hence, we tested variance in consumer purchase intention and willingness to recommend for the same scenarios labelled as No brand, Mainstream and Luxury, confirming any other external influences by analysing the relation between dependent and independent variables. We also verified the variance in quality and innovation perception within the three scenarios of No brand, Mainstream and Luxury. To control the effect of the independent variables into the dependent variables, we designed control variables in our conceptual framework (Saunders et al., 2016), characterized as moderator variables (Field, 2013). The control variables of this study were: brand loyalty, familiarity with the concept of co-creation and frequency of use of cosmetics.

Procedure

We divided this survey into four parts. An introductory block to deploy attention of participants' in regard to receptiveness to cosmetics and brand loyalty toward a cosmetic product (Felix, 2012). We further aimed to verify whether participants knew what is co-creation. Thus, this was followed by between subject design measures of the three scenarios presented, that reduced the biases from rationalization leanings (Roggeveen, Tsiros, & Grewal, 2012). Finally, the last part was a demographic consolidation of the sample, that confirms the representativeness of the population, where we highlighted four questions about age, gender, nationality and current occupation (Saunders et al., 2016).

3.3.2 - Sample

For the purpose of this study, the sample was conducted under a level of measurement with categorical data, except for the mean that is numerical data (Field, 2013). Hence, the population of interest represented a sample profile of n=104 participants, mainly Millennials generation (generation Y) (Armstrong & Kotler, 2015) of age ranging between 18 and 24 years ($M_{age}=2.37$, $SD=.561$), 72% of the sample was female ($SD=.451$). The participants are mostly studying ($M=1.58$, $SD=.733$) with 52.9% and 40.4% fulltime employed. It was relevant for this study to diversify the participants nationalities (observed ones were: Portugal, Germany, Spain, France, Egypt, Denmark, Cape Verde and Brazil), since we can identify co-created products worldwide, however, 76% were Portuguese and 10.6% were German ($M=.65$, $SD=1.512$) [Appendix 3].

3.3.3- Measures

Similarly, to the pilot, we used a survey based experimental method conducted in Qualtrics and was distributed during the course of 10 days. The quantitative data used was numerical data with an interval scale.

To start, participants were asked, under a 5- point scale about their frequency of use of cosmetics (Thompson & Malaviya, 2013) (“How often do you use cosmetics?”) [1- always; 5- never] and the degree of brand loyalty (Felix, 2012) (“When buying cosmetics, how important is a brand to your decision?”) [1- extremely important; 5- Not important at all].

Then, we tested the familiarity with the concept of co-creation (Schreier et al., 2012) (“How familiar are you with co-creation?”) [1- extremely familiar; 5- not familiar at all] without supporting any explanatory information, in order to understand the knowledge of participants regarding co-creation.

Furthermore, in each of the scenarios (No brand, Mainstream and Luxury), participants were provided an explanatory introduction. First, respondents were exposed to a description of co-creation according to Prahalad & Ramaswamy (2004) definition, as the cross creation with the customers, participating in the development of new products and in firm's innovation process, taking over innovation activities traditionally executed by the firm. Likewise, in a random order (Fuchs et al., 2013), participants were exposed to the mainstream and luxury scenarios. Before answering, respondents were asked to picture themselves in a department store willing to purchase a skin care lotion. Here, we introduced a new product of Nivea/ Chanel labelled as co-created. In contrast, to the No Brand scenario, these two scenarios (mainstream vs luxury) tested brand perception regarding Nivea and Chanel as a manipulation check (Guthrie & Kim, 2009) (“How do you classify the brand Nivea/ Chanel?”) [1- Mainstream- 2- Luxury].

In all three within subject conditions, participants answered among a single item scale for each question (Bergkvist & Rossiter, 2007). Single item scales are as effective as multiple item measures, and in this study we constructed straightforward questions with independent meaning from each other (Bergkvist & Rossiter, 2007). In fact, single-item measures support reliability and validity of the results (Shamir & Kark, 2004). Respondents were asked to indicate their perception of quality (Fuchs & Diamantopoulos, 2012) (“How would you rate the quality of a co-created product?”) [1- Extremely Good/ 7- Extremely Bad] and innovation (Schreier et al., 2012) (“How innovative do you consider a brand / Nivea / Chanel that engages in co-creation?”) [1- Extremely innovative/ 5- Not innovative].

Finally, respondents were asked about their purchase intention (“How likely would you purchase a co-created product?”) (Fuchs & Diamantopoulos, 2012), and willingness to recommend (“How likely would you recommend a brand / Nivea/ Chanel that engaged in co-creation?”) towards a co-created brand and product [7- point liker scale] (Appendix 2).

| VARIABLES | MEASURE |
|---|--|
| Receptiveness to Cosmetics [5- point scale] <ul style="list-style-type: none"> • Frequency of use • Brand Loyalty | <ul style="list-style-type: none"> • How often do you use cosmetics? (Thompson & Malaviya, 2013) [1] Always- [5] Never • When buying cosmetics, how important is a brand to your decision? (Felix, 2012) [1] Extremely important - [5] Not at all important |
| Familiarity with Co-creation Scenario 2- No brand [Hypothesis 1] [5-point scale] | <ul style="list-style-type: none"> • How familiar are you with co-creation? (Schreier et al., 2012) [1] Extremely familiar – [5] Not familiar at all <p>In this section we are going to introduce you to a strategy that companies now use to come up with new products: co-creation. Co-Creation is a process of cross creation with the customers, where they participate and engage in the development of new products and in firm's innovation process, taking over innovation activities traditionally executed by the firm.</p> |
| Quality Perception [7- Point Scale] | <ul style="list-style-type: none"> • How would you rate the quality of a co-created product? (Fuchs & Diamantopoulos, 2012) [1] Extremely Good- [7] Extremely Bad |
| Innovation Perception [5-Point Scale] | <ul style="list-style-type: none"> • How innovative do you consider a brand that engages in co-creation? (Schreier et al., 2012) [1] Extremely innovative – [5] Not innovative |
| Purchase Intention [7-Point Scale] | <ul style="list-style-type: none"> • How likely would you purchase a co-created product? (Fuchs & Diamantopoulos, 2012) [1] Extremely likely – [7] Extremely unlikely |
| Willingness to Recommend [7-Point Scale] | <ul style="list-style-type: none"> • How likely would you recommend a brand that engages in co-creation? (Felix, 2012) [1] Extremely likely – [7] Extremely unlikely |
| Communicating Co-creation [Hypothesis 2 and 3] Scenario 0 -Mainstream Scenario 1 -Luxury | <p>Imagine you are at a department store looking for a skin care lotion. As you enter the cosmetic section you notice a new product released by Nivea / Chanel. As you pick it up you notice a different label. It mentions that the lotion was co-created with the consumer, meaning that the company reached out to the consumer to create a brand new product.</p> |
| Brand Perception [Manipulation Check] | <ul style="list-style-type: none"> • How do you classify the brand Nivea/ Chanel? (Guthrie & Kim, 2009) [1] Mainstream- [2] Luxury |
| Quality Perception [7- Point Scale] | <ul style="list-style-type: none"> • How would you rate the quality of this product? (Fuchs & Diamantopoulos, 2012) [1] Extremely Good- [7] Extremely Bad |
| Innovation Perception [5-Point Scale] | <ul style="list-style-type: none"> • How innovative do you consider Nivea/ Chanel when engaging in co-creation? (Schreier et al., 2012) [1] Extremely innovative – [5] Not innovative |
| Purchase Intention [7-Point Scale] | <ul style="list-style-type: none"> • How likely would you purchase this product? (Fuchs & Diamantopoulos, 2012) [1] Extremely likely – [7] Extremely unlikely |
| Willingness to Recommend [7-Point Scale] | <ul style="list-style-type: none"> • How likely would you recommend Nivea/Chanel? (Felix, 2012) [1] Extremely likely – [7] Extremely unlikely |
| Sample Age Gender Nationality Current Occupation | <ul style="list-style-type: none"> • [1] Male – [2] Female • [1] <18- [2] >45 • Open question • [1] Student; [2] Employed full time; [3] Employed part time; [4] Unemployed |

Table 2- Measures

3.3.4- Findings & Discussion

Preliminary analysis. We ran a course of ANOVAS in order to understand the group's differences among the scenarios of No Brand, Mainstream and Luxury. For the data analysis the software used was IBM SPSS, where we selected the most appropriate statistics to describe variables and test the relationship between the groups of No Brand, Mainstream and Luxury brands, and the variables of the data.

Manipulation Checks. The manipulation analysis was as expected, since Nivea and Chanel were identified as mainstream and luxury brands, respectively ($M_{\text{BrandPerception}}=100$). This secured the overall results validation, regarding our brand manipulation (Perdue & Summers, 1986).

After, we ran an analysis of variance ANOVA for the scenarios of No brand vs Mainstream vs Luxury, in regard to hypothesis 1 - purchase intention and willingness to recommend, and hypothesis 2 - quality perception and innovation perception.

Test of Hypotheses 1. First, participants revealed a similar purchase intention for the mainstream and no brands that co-create ($M_{\text{Mainstream}}= 2.47$, $M_{\text{NoBrand}} = 2.27$, $p > .05$), but there is an effect of co-creation for unknown brands ($p = .501$) significantly lower from the luxury brand ($M_{\text{Luxury}}= 3.40$, $p < .05$). This indicates that consumers display higher purchase intentions for luxury co-created products in a brand perceived as luxury than a co-created product from a mainstream brand. Likewise, the ANOVA analysis data showed that the willingness to recommend a mainstream brand and co-created product was the same ($M_{\text{Mainstream}}= 2.31$, $M_{\text{NoBrand}} = 2.25$, $p > .05$), but lower than luxury. Respondents are considerably more willing to recommend a product co-created by a luxury brand ($M_{\text{Luxury}}=3.10$, $p < .05$). Indeed, we tested whether introducing the control variable of brand loyalty to this analysis would influence the dependent variables. Results show that brand loyalty influenced purchase intention ($F(4, 307) = 3.99$, $p < .05$) and willingness to recommend ($F(4, 307) = 4.88$, $p < .05$). However, even if brand loyalty had an effect on purchase intention and willingness to recommend, the ANOVA results for our manipulations are still significant ($F(4,307)= 3.996$, $p < .05$), and therefore we have to reject hypothesis 1.

Test of Hypotheses 2. To test the degree of quality and innovation perception we also ran an ANOVA analysis of variance. Participants indicated that their perception of quality in mainstream ($M_{\text{Mainstream}}=2.18$) and luxury brands ($M_{\text{Luxury}}= 2.08$) was lower than in co-created brands ($M_{\text{NoBrand}} = 2.57$, $p = .003$). Respondents evaluated the quality of mainstream and luxury

brands as lower when they co-create. Interestingly, brands that co-created with no association of a specific established brand is perceived as having higher quality. Furthermore, results from innovation revealed that, unlike quality, consumers considered mainstream brands ($M_{\text{Mainstream}} = 3.73$, $F(2, 309) = 98.619$, $p < .05$) as more innovative than luxury brands ($M_{\text{Luxury}} = 2.12$) and co-created products ($M_{\text{NoBrand}} = 1.91$). This suggests that there is a different behaviour from our sample regarding innovation perception, towards this particular mainstream brand (Nivea). Finally, we can state that this analysis rejects hypothesis 2. (Appendix 5)

| Variable | N | Mean | | | F Value | P Value |
|--------------------------|-----|-------------|------------|--------|---------|---------|
| | | Co-creation | Mainstream | Luxury | | |
| Quality Perception | 104 | 2.57 | 2.18 | 2.08 | 6.00 | .003 |
| Innovation Perception | 104 | 1.91 | 3.73 | 2.12 | 98.61 | .000 |
| Purchase Intention | 104 | 2.27 | 2.47 | 3.50 | 26.90 | .000 |
| Willingness to Recommend | 104 | 2.25 | 2.31 | 3.10 | 13.13 | .000 |

Table 3- ANOVAS

Notwithstanding, we ran a linear regression (Appendix 6) to understand the specific design of the mediators (quality and innovation) and the dependent variables (purchase and recommend) (Fuchs et al., 2013). We previously mentioned that quality and innovation perception, purchase intention and willingness to recommend might be influenced by labelling products as co-created, for the situations of firms with no established brand, and mainstream and luxury co-created cosmetic brands. However, we ran linear regression tests to measure the causal relation of mediation between these variables. Mediating hypotheses measures the causal effect between the independent variables and the mediator itself, in order to establish the correlation (Baron & Kenny, 1986). It is, in fact, a way to explain how a variable is able to affect another variable (Mackinnon, Fairchild, & Fritz, 2007) and in this study we expected to test if quality and innovation could be mediators affecting the purchase intention and willingness to recommend. Hence, we concluded that quality perception ($M_{\text{quality}} = 2.28$) and innovation perception ($M_{\text{innovation}} = 2.59$) are not mediators for purchase intention ($M_{\text{purchase}} = 2.75$) and willingness to recommend ($M_{\text{recommend}} = 2.55$). From this linear regression (ANOVA) ($F_{\text{Recommend}}(2,309) = 31.24$, $P < .001$, $F_{\text{Purchase}}(2,309) = 16.14$, $P < .001$), we

concluded that there is no mediation effect (Baron & Kenny, 1986), as perception of quality and innovation remain independent variables.

Discussion. This quantitative research was based on Fuchs et al. (2013) research regarding the analysis of the effect of labelling products as co-created with no brand, mainstream and luxury products. Thereafter, the present study suggested that purchase intention and willingness to recommend for a no brand company, mainstream and luxury cosmetic brand's product were similar. In fact, we find that participants have a higher purchase intention and willingness to recommend for a given luxury brand that engages in co-creation. Therefore, we conclude that labelling a luxury cosmetic brand as co-created has a higher effect on consumer's purchase intention and willingness to recommend, than no brand products and mainstream cosmetic brand's products, which rejects hypothesis 1. Even when controlling for brand loyalty towards the brands (Chanel), but the effect of co-creation under no brand product, mainstream (Nivea) and luxury influence purchase intention more for products associated with luxury brands.

In addition, this study tested consumers' perception of quality and innovation of no brand products, mainstream and luxury cosmetic brands. We found that quality for a given luxury brand is not perceived as having higher quality, neither did a mainstream brand. Instead, a product with no specific brand was perceived as having higher quality. This means that unlike established brands as Nivea and Chanel, a firm with private label or no specific brand (i.e. a new venture) is perceived as having higher quality. Furthermore, innovation perception had an unexpected outcome, as mainstream cosmetic brands were perceived as more innovative than luxury cosmetics brands and products with unknown brands. This effect can also be explained due to the consumers' perception of Nivea and its legitimized market position regarding innovation. (Bilgram, Bartl, & Biel, 2011).

4- Conclusions

The objective of this dissertation was to explore the effect of communicating co-creation in the cosmetic industry, purchase intention, willingness to recommend, and quality innovation perception. The survey revealed some interesting results with reliable effects on tested variables. Also, this chapter outlines the main outcomes and final reflections of the present dissertation. We point out some managerial and theoretical implications, the limitations faced in the development of this dissertation and the future thoughts that can be expanded in the literature.

Firms are no longer generating content, new products and ideas are solely relying on internal employees input (Prahalad & Ramaswamy, 2002). Instead, consumers play an important role in co-creating value along with brand's willingness to innovate (Boukhris et al., 2017). Hence, consumers are crucial to improve products and efficient services (Boukhris et al., 2017), so when they are able to identify the source of design, it has decisive implications. Labelling brand's products as co-created influences purchase intention, improve brand positioning, motivate willingness to recommend perception of quality and perception of innovation.

Hence, we found that consumers are more likely to purchase and recommend luxury cosmetic brand's products when those firms communicate the source of design as "user-designed". This suggests that identifying the source of design in luxury cosmetic products, is a positive approach to increase sales and willingness to recommend. Also, we tested whether the luxury cosmetic brand Chanel was affected by the degree of loyalty that consumers have in order to purchase and recommend it, however it was not significant enough to justify that result. Thus, managers should highlight luxury brand's characteristics when engaging in co-creation, by labelling product's as "user-designed".

On the opposite side, luxury brands do not have the same evaluation regarding quality and innovation. Instead, unknown brands that engage in co-creation, such as *Startups*, have stronger perception of quality by observing consumers. Curiously, innovation outcome revealed higher results in mainstream cosmetic brands, which validates consumers perception of those firm's ability to co-create innovative products with the users. Therefore, well established mainstream brands as Nivea, are companies with the potential to engage in co-creation, due to its innovative character of introducing new products to the market, and co-creation is exactly that: generating new ideas with customer's support.

4.1- Managerial & Theoretical implications

All things considered, the present dissertation introduces important inferences and suggestions to businesses managers. As such, on a Marketing and Sales perspective, the study advises on how to communicate with consumers and prospects (potential customers). As an example, labelling brand's products as co-created influences purchase intention, improves brand positioning, motivate willingness to recommend perceptions of quality and of innovation. Furthermore, as findings suggest consumers are more likely to purchase and recommend luxury cosmetic brand's products when those firms communicate the source of design as "co-created". This implies that identifying the source of design in luxury cosmetic products, is a positive approach to increase sales and willingness to recommend. Also, we tested whether the luxury cosmetic brand Chanel was affected by the degree of loyalty that consumers have in order to purchase and recommend it, however it was not significant enough to justify that result. Thus, managers should highlight luxury brand's characteristics when engaging in co-creation, by labelling product's as "user-designed".

Additionally, the current study provides guidance in how to overcome the disconnections that are separating business from prospects and how to meet these consumers motives and goal more accurately. For instance, on a Research and Development perspective, presently firms are not relying solely on internal employees input for new products and ideas (Prahalad & Ramaswamy, 2002). Notably, consumers play an important role in co-creating value along with brand's willingness to innovate (Boukhris et al., 2017). Hence, consumers are crucial to improve products and efficient services (Boukhris et al., 2017).

Another key point, is the fact that co-creation can improve companies' reputation and perception in the market. Surprisingly, the results of the current study reveal that luxury brands do not have the same evaluation regarding quality and innovation. Instead, unknown brands that engage in co-creation, such as *Startups*, have stronger perception of quality by observing consumers. Curiously, innovation outcome revealed higher results in mainstream cosmetic brands, which validates consumers' perception of that firm's ability to co-create innovative products with the users. Therefore, well established mainstream brands as Nivea, are companies with the potential to engage in co-creation, due to its innovative character of introducing new products to the market, and co-creation is exactly that: generating new ideas with customer's support.

Theoretically, we followed Fuchs et al. (2013) research, by analysing how labelling products as co-created in luxury and mainstream fashion brands, influences several characteristics of consumer behaviour: purchase intention and quality perception. Although, we found different results, not only in the same behavioural characteristics, but also in willingness to recommend and perception of innovation. We developed the reasoning of research by analysing whether communicating co-creation is applicable to other businesses, such as the cosmetic industry through Mainstream and Luxury brands. In fact, in opposition to Fuchs et al. (2013) study, we found that co-created products of conventional brands as Nivea are perceived to be more innovative, and that premium brands like Chanel have a higher purchase intention and willingness to recommend from observing consumers.

4.2- Limitations

This dissertation presented some valuable input for the academic research but it also lacked on some aspects. The concept of co-creation is subjective and broad, which easily leads to dispersion and difficulty in narrowing the specific information. In addition, existing research extensively explains consumer behaviour, however it fails to explore more about purchase intention and willingness to recommend of co-created products. The cosmetic industry is also lacking research on its relationship with co-creation as a strategy and competitive advantage.

Regarding the use of quantitative data collection (questionnaires) in both surveys, we did not support the possibility for follow up interviews or focus groups. This could be an interesting qualitative method to measure co-creation in cosmetics by providing samples to participants and analysing different variables of effect (i.e. price, label layout, user's involvement). In addition, we did not provide a product's image, where respondents had the opportunity to observe the product and better understand the objective of the study. However, this suggests a possible methodology for future research.

Another limitation relies on how the sample was designed, since 72% of the participants were female. This particular sample gender is explained by the fact that the relationship with cosmetics was stronger for women (Kumar, 2005). Therefore, by choosing to determine the impact of communicating co-creation in cosmetic products, may have represented a limitation for 28% of the participants, since, as explained in our literature, women are more receptive to cosmetics. Nevertheless, 100% of the participants identified Nivea as mainstream and Chanel as luxury brands, which was still positive for this study.

Finally, with the drawbacks presented, this thesis is an exploratory document, that inspires more analysis in the future research, to overcome those limitations.

4.3-Future Research

In conclusion, co-creation is an interesting concept to study and it is possible to be applied in different businesses and industries (i.e. automobile, software, food, musical instruments). For instance, to develop the presented study ideas, future research can develop analysis on celebrities of different backgrounds (i.e. music, fashion and sports) engaging in co-creation, testing whether it has an impact on purchase intention, willingness to recommend and perception of quality and innovation.

Similarly, another input for future research is to test other possible outcomes, such as willingness to pay, user involvement, products' aesthetics and product's layout and to measure the feelings associated with engaging in co-creation. Taking this into consideration, there are clear opportunities to develop future research and to analyse consumer behaviour in other dimensions of co-creation. Lastly, it would be an important input for future literature to categorize the type of users involved in co-creation, regarding the ability to identify target customers to participate in cooperating with firms in the creation of new products and solutions.

Taking this into account, the present dissertation widens the extent of literature regarding the concept of co-creation, the development of co-created products and brands and its relationship with consumer behaviour.

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Appendixes

Appendix 1 – Pilot Study (Layout)

This survey is a pilot study that aims to validate brands positioning as perceived by independent sample of consumers.
This survey is confidential and anonymous.
Thank you very much for your time and availability to participate in this survey, your opinion is extremely important.



Do you use any form of cosmetics?

Yes

No



How important is a cosmetic brand to you?

Extremely important

Very important

Moderately important

Slightly important

Not at all important

From the following brands, please choose the ones you consider as Mainstream (Regular) (Choose at least 3).

Maybelline

Chanel

SEPHORA

Yves Saint Laurent

Nivea

L'oréal Paris

Clinique

Dove

Garnier

Lancôme

Biotherm

From the following brands, please choose the ones you consider as Luxury (Choose at least 3).

Maybelline

Chanel

SEPHORA

Yves Saint Laurent

Nivea

L'oréal Paris

Clinique

Dove

Garnier

Lancôme

Biotherm

What is your gender

Male

Female

→

Appendix 2- Main Survey (Layout)

This survey is part of a study for a Master thesis in Business at Catolica Lisbon School of Business and Economics. The focus of this research is the communication strategies of cosmetic brands.

This survey is confidential and anonymous.

Thank you very much for your time and availability to participate in this survey, your opinion is extremely important

→

How often do you use cosmetics?

Always

Most of the time

About half the time

Sometimes

Never

When buying cosmetics, how important is a **brand** to your decision?

Extremely important

Very important

Moderately important

Slightly important

Not at all important



How familiar are you with co-creation?

Extremely familiar

Very familiar

Moderately familiar

Slightly familiar

Not familiar at all

In this section we are going to introduce you to a strategy that companies now use to come up with new products: co-creation.

Co-Creation is a process of cross creation with the customers, where they participate and engage in the development of new products and in firm's innovation process, taking over innovation activities traditionally executed by the firm.

How would you rate the quality of a co-created **product** ?

Extremely good

Moderately good

Slightly good

Neither good nor bad

Slightly bad

Moderately bad

Extremely bad

How innovative do you consider a **brand** that engages in co-creation?

Extremely innovative

Moderately innovative

Slightly innovative

Neutral

Not innovative

How likely would you purchase a co-created **product**?

Extremely likely

Moderately likely

Slightly likely

Neither likely nor unlikely

Slightly unlikely

Moderately unlikely

Extremely unlikely

How likely would you recommend a **brand** that engages in co-creation?

Extremely likely

Moderately likely

Slightly likely

Neither likely nor unlikely

Slightly unlikely

Moderately unlikely

Extremely unlikely

Imagine you are at a department store looking for a skin care lotion. As you enter the cosmetic section you notice a new product released by Nivea. As you pick it up you notice a different label. It mentions that the lotion was co-created with the consumer, meaning that the company reached out to the consumer to create a brand new product.

How do you classify the **brand** Nivea?

Mainstream

Luxury

How would you rate the quality of this **product**?

Extremely good

Moderately good

Slightly good

Neither good nor bad

Slightly bad

Moderately bad

Extremely bad

How innovative do you consider Nivea when engaging in co-creation?

Extremely innovative

Moderately innovative

Slightly innovative

Neutral

Not innovative

How likely would you purchase this co-created **product**?

Extremely likely

Moderately likely

Slightly likely

Neither likely nor unlikely

Slightly unlikely

Moderately unlikely

Extremely unlikely

How likely would you recommend Nivea?

Extremely likely

Moderately likely

Slightly likely

Neither likely nor unlikely

Slightly unlikely

Moderately unlikely

Extremely unlikely

Imagine you are at a department store looking for a skin care lotion. As you enter the cosmetic section you notice a new product released by Chanel. As you pick it up you notice a different label. It mentions that the lotion was co-created with the consumer, meaning that the company reached out to the consumer to create a brand new product.

How do you classify the **brand** Chanel?

Mainstream

Luxury

How would you rate the quality of this **product**?

Extremely good

Moderately good

Slightly good

Neither good nor bad

Slightly bad

Moderately bad

Extremely bad

How innovative do you consider Chanel when engaging in co-creation?

Extremely innovative

Moderately innovative

Slightly innovative

Neutral

Not innovative

How likely would you purchase this co-created **product**?

Extremely likely

Moderately likely

Slightly likely

Neither likely nor unlikely

Slightly unlikely

Moderately unlikely

Extremely unlikely

How likely would you recommend Chanel?

Extremely likely

Moderately likely

Slightly likely

Neither likely nor unlikely

Slightly unlikely

Moderately unlikely

Extremely unlikely

Gender

Male

Female

Age

Under 18

18 - 24

25 - 34

35 - 44

>45

Nationality

Current Occupation

Student

Employed full time

Employed part time

Unemployed

Appendix 3- Main Study- Sample

Statistics

| | | Gender- Male -0 Female -1 | Age (1-5) | Nationality PT-0, DE-1, FR-2, EY-3, SP-4, DN-5, BR-6, CB-7 | Current Occupation (1-4) |
|----------------|---------|------------------------------|-----------|--|--------------------------------|
| N | Valid | 104 | 104 | 104 | 104 |
| | Missing | 0 | 0 | 0 | 0 |
| Mean | | ,72 | 2,38 | ,65 | 1,58 |
| Std. Deviation | | ,451 | ,561 | 1,512 | ,733 |
| Variance | | ,203 | ,314 | 2,287 | ,538 |
| Range | | 1 | 2 | 7 | 3 |

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation | Variance |
|--|-----|---------|---------|------|----------------|----------|
| Age (1-5) | 104 | 2 | 4 | 2,37 | ,561 | ,314 |
| Nationality PT-0, DE-1, FR-2, EY-3, SP-4, DN-5, BR-6, CB-7 | 104 | 0 | 7 | ,65 | 1,512 | 2,287 |
| Current Occupation (1-4) | 104 | 1 | 4 | 1,58 | ,733 | ,538 |
| Gender- Male -0 Female -1 | 104 | 0 | 1 | ,72 | ,451 | ,203 |
| Valid N (listwise) | 104 | | | | | |

Appendix 4- Control Variables

Descriptive Statistics

Dependent Variable: Purchase Intention athis co-created product (1-7)

| Scenario lux=1, Mainst=0, NB=2 | Statistic | Bootstrap ^a | | | | |
|--------------------------------|----------------|------------------------|------------|-------------------------|-------|-------|
| | | Bias | Std. Error | 95% Confidence Interval | | |
| | | | | Lower | Upper | |
| 0 | Mean | 2,47 | ,00 | ,10 | 2,28 | 2,68 |
| | Std. Deviation | 1,061 | -,006 | ,083 | ,883 | 1,221 |
| | N | 104 | 0 | 8 | 88 | 120 |
| 1 | Mean | 3,50 | -,01 | ,17 | 3,16 | 3,84 |
| | Std. Deviation | 1,768 | -,013 | ,099 | 1,561 | 1,946 |
| | N | 104 | 0 | 8 | 88 | 121 |
| 2 | Mean | 2,27 | ,00 | ,09 | 2,11 | 2,44 |
| | Std. Deviation | ,895 | -,005 | ,053 | ,785 | ,994 |
| | N | 104 | 0 | 9 | 88 | 121 |
| Total | Mean | 2,75 | ,00 | ,08 | 2,59 | 2,89 |
| | Std. Deviation | 1,402 | -,005 | ,070 | 1,259 | 1,528 |
| | N | 312 | 0 | 0 | 312 | 312 |

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Tests of Between-Subjects Effects

Dependent Variable: Purchase Intention athis co-created product (1-7)

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|------------------------|----------------------------|-----|-------------|---------|------|
| Corrected Model | 106,530 ^a | 3 | 35,510 | 21,680 | ,000 |
| Intercept | 354,681 | 1 | 354,681 | 216,549 | ,000 |
| BrandLoyalty15 | 15,908 | 1 | 15,908 | 9,713 | ,002 |
| Scenariolux1Mainst0NB2 | 90,622 | 2 | 45,311 | 27,664 | ,000 |
| Error | 504,467 | 308 | 1,638 | | |
| Total | 2965,000 | 312 | | | |
| Corrected Total | 610,997 | 311 | | | |

a. R Squared = ,174 (Adjusted R Squared = ,166)

Descriptive Statistics

Dependent Variable: Recommend a brand (nivea/chanel) no brand(1-7)

| Scenario lux =1, Mainst=0, NB=2 | Statistic | Bootstrap ^a | | | | |
|---------------------------------|----------------|------------------------|------------|-------------------------|-------|-------|
| | | Bias | Std. Error | 95% Confidence Interval | | |
| | | | | Lower | Upper | |
| 0 | Mean | 2,31 | ,00 | ,12 | 2,08 | 2,54 |
| | Std. Deviation | 1,191 | -,011 | ,093 | 1,001 | 1,354 |
| | N | 104 | 0 | 8 | 87 | 121 |
| 1 | Mean | 3,10 | -,01 | ,17 | 2,77 | 3,42 |
| | Std. Deviation | 1,715 | -,010 | ,107 | 1,487 | 1,903 |
| | N | 104 | 0 | 9 | 88 | 121 |
| 2 | Mean | 2,25 | ,00 | ,10 | 2,06 | 2,44 |
| | Std. Deviation | ,973 | -,008 | ,053 | ,854 | 1,067 |
| | N | 104 | 0 | 8 | 88 | 120 |
| Total | Mean | 2,55 | ,00 | ,08 | 2,39 | 2,70 |
| | Std. Deviation | 1,381 | -,004 | ,068 | 1,249 | 1,506 |
| | N | 312 | 0 | 0 | 312 | 312 |

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Tests of Between-Subjects Effects

Dependent Variable: Recommend a brand (nivea/chanel) no brand(1-7)

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|------------------------|-------------------------|-----|-------------|---------|------|
| Corrected Model | 73,709 ^a | 3 | 24,570 | 14,568 | ,000 |
| Intercept | 358,374 | 1 | 358,374 | 212,484 | ,000 |
| BrandLoyalty15 | 27,221 | 1 | 27,221 | 16,140 | ,000 |
| Scenariolux1Mainst0Nb2 | 46,487 | 2 | 23,244 | 13,781 | ,000 |
| Error | 519,471 | 308 | 1,687 | | |
| Total | 2624,000 | 312 | | | |
| Corrected Total | 593,179 | 311 | | | |

a. R Squared = ,124 (Adjusted R Squared = ,116)

Appendix 5- ANOVA analysis

Descriptives

Purchase Intention athis co-created product (1-7)

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum | Between-Component Variance |
|----------------|-----|------|----------------|------------|----------------------------------|-------------|---------|---------|----------------------------|
| | | | | | Lower Bound | Upper Bound | | | |
| | | | | | 0 | 104 | | | |
| 1 | 104 | 3,50 | 1,768 | ,173 | 3,16 | 3,84 | 1 | 7 | |
| 2 | 104 | 2,27 | ,895 | ,088 | 2,10 | 2,44 | 1 | 4 | |
| Total | 312 | 2,75 | 1,402 | ,079 | 2,59 | 2,90 | 1 | 7 | |
| Model | | | 1,298 | ,073 | 2,60 | 2,89 | | | |
| Fixed Effects | | | | ,381 | 1,11 | 4,39 | | | |
| Random Effects | | | | | | | | | ,419 |

ANOVA

Purchase Intention a>this co-created product (1-7)

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|--------|------|
| Between Groups | 90,622 | 2 | 45,311 | 26,906 | ,000 |
| Within Groups | 520,375 | 309 | 1,684 | | |
| Total | 610,997 | 311 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Purchase Intention a>this co-created product (1-7)

Tukey HSD

| (I) Scenario lux=1, Mainst=0, CC=2 | (J) Scenario lux=1, Mainst=0, CC=2 | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|------------------------------------|------------------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| 0 | 1 | -1,029* | ,180 | ,000 | -1,45 | -,61 |
| | 2 | ,202 | ,180 | ,501 | -,22 | ,63 |
| 1 | 0 | 1,029* | ,180 | ,000 | ,61 | 1,45 |
| | 2 | 1,231* | ,180 | ,000 | ,81 | 1,65 |
| 2 | 0 | -,202 | ,180 | ,501 | -,63 | ,22 |
| | 1 | -1,231* | ,180 | ,000 | -1,65 | -,81 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Purchase Intention a>this co-created product (1-7)

Tukey HSD^a

| Scenario lux=1, Mainst=0, CC=2 | N | Subset for alpha = 0.05 | |
|--------------------------------|-----|-------------------------|-------|
| | | 1 | 2 |
| 2 | 104 | 2,27 | |
| 0 | 104 | 2,47 | |
| 1 | 104 | | 3,50 |
| Sig. | | ,501 | 1,000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 104,000.

Oneway

Descriptives

Recommend a brand (niveal/chanel) co-creation (1-7)

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum | Between-Component Variance |
|----------------|-----|------|----------------|------------|----------------------------------|-------------|---------|---------|----------------------------|
| | | | | | Lower Bound | Upper Bound | | | |
| 0 | 104 | 2,31 | 1,191 | ,117 | 2,08 | 2,54 | 1 | 6 | |
| 1 | 104 | 3,10 | 1,715 | ,168 | 2,76 | 3,43 | 1 | 7 | |
| 2 | 104 | 2,25 | ,973 | ,095 | 2,06 | 2,44 | 1 | 4 | |
| Total | 312 | 2,55 | 1,381 | ,078 | 2,40 | 2,71 | 1 | 7 | |
| Model | | | | | | | | | |
| Fixed Effects | | | 1,330 | ,075 | 2,40 | 2,70 | | | |
| Random Effects | | | | ,273 | 1,38 | 3,73 | | | ,206 |

ANOVA

Recommend a brand (niveal/chanel) co-creation (1-7)

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|--------|------|
| Between Groups | 46,487 | 2 | 23,244 | 13,138 | ,000 |
| Within Groups | 546,692 | 309 | 1,769 | | |
| Total | 593,179 | 311 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Recommend a brand (nivea/chanel) co-creation (1-7)

Tukey HSD

| (I) Scenario lux=1, Mainst=0, CC=2 | (J) Scenario lux=1, Mainst=0, CC=2 | Mean Difference (I- J) | Std. Error | Sig. | 95% Confidence Interval | |
|---------------------------------------|---------------------------------------|------------------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| 0 | 1 | -,788* | ,184 | ,000 | -1,22 | -,35 |
| | 2 | ,058 | ,184 | ,948 | -,38 | ,49 |
| 1 | 0 | ,788* | ,184 | ,000 | ,35 | 1,22 |
| | 2 | ,846* | ,184 | ,000 | ,41 | 1,28 |
| 2 | 0 | -,058 | ,184 | ,948 | -,49 | ,38 |
| | 1 | -,846* | ,184 | ,000 | -1,28 | -,41 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Recommend a brand (nivea/chanel) co-creation (1-7)

Tukey HSD^a

| Scenario lux=1, Mainst=0, CC=2 | N | Subset for alpha = 0.05 | |
|-----------------------------------|-----|-------------------------|-------|
| | | 1 | 2 |
| 2 | 104 | 2,25 | |
| 0 | 104 | 2,31 | |
| 1 | 104 | | 3,10 |
| Sig. | | ,948 | 1,000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 104,000.

Descriptives

Quality Perception of a co-created/ Mainstream/Luxury product (1-7)

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum | Between-Component Variance |
|----------------|-----|------|----------------|------------|----------------------------------|-------------|---------|---------|----------------------------|
| | | | | | Lower Bound | Upper Bound | | | |
| 0 | 104 | 2,18 | 1,041 | ,102 | 1,98 | 2,39 | 1 | 5 | |
| 1 | 104 | 2,08 | 1,058 | ,104 | 1,87 | 2,28 | 1 | 5 | |
| 2 | 104 | 2,57 | 1,121 | ,110 | 2,35 | 2,79 | 1 | 7 | |
| Total | 312 | 2,28 | 1,091 | ,062 | 2,15 | 2,40 | 1 | 7 | |
| Model | | | | | | | | | |
| Fixed Effects | | | 1,074 | ,061 | 2,16 | 2,40 | | | |
| Random Effects | | | | ,149 | 1,63 | 2,92 | | | ,056 |

ANOVA

Quality Perception of a co-created/ Mainstream/Luxury product (1-7)

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 13,853 | 2 | 6,926 | 6,004 | ,003 |
| Within Groups | 356,442 | 309 | 1,154 | | |
| Total | 370,295 | 311 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Quality Perception of a co-created/ Mainstream/Luxury product (1-7)

Tukey HSD

| (I) Scenario lux=1, Mainst=0, CC=2 | (J) Scenario lux=1, Mainst=0, CC=2 | Mean Difference (I- J) | Std. Error | Sig. | 95% Confidence Interval | |
|---------------------------------------|---------------------------------------|------------------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| 0 | 1 | ,106 | ,149 | ,758 | -,24 | ,46 |
| | 2 | -,385* | ,149 | ,028 | -,74 | -,03 |
| 1 | 0 | -,106 | ,149 | ,758 | -,46 | ,24 |
| | 2 | -,490* | ,149 | ,003 | -,84 | -,14 |
| 2 | 0 | ,385* | ,149 | ,028 | ,03 | ,74 |
| | 1 | ,490* | ,149 | ,003 | ,14 | ,84 |

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Quality Perception of a co-created/ Mainstream/Luxury product (1-7)

Tukey HSD^a

| Scenario lux=1, Mainst=0, CC=2 | N | Subset for alpha = 0.05 | |
|-----------------------------------|-----|-------------------------|-------|
| | | 1 | 2 |
| 1 | 104 | 2,08 | |
| 0 | 104 | 2,18 | |
| 2 | 104 | | 2,57 |
| Sig. | | ,758 | 1,000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 104,000.

Descriptives

Innovation Perception brand (Nivea/Chanel) co-creation (1-5)

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum | Between- Component Variance |
|----------------|-----|------|----------------|------------|-------------------------------------|-------------|---------|---------|-----------------------------------|
| | | | | | Lower Bound | Upper Bound | | | |
| 0 | 104 | 3,73 | 1,125 | ,110 | 3,51 | 3,95 | 1 | 5 | |
| 1 | 104 | 2,12 | ,988 | ,097 | 1,92 | 2,31 | 1 | 5 | |
| 2 | 104 | 1,91 | ,946 | ,093 | 1,73 | 2,10 | 1 | 5 | |
| Total | 312 | 2,59 | 1,305 | ,074 | 2,44 | 2,73 | 1 | 5 | |
| Model | | | 1,023 | ,058 | 2,47 | 2,70 | | | |
| Fixed Effects | | | | ,575 | ,11 | 5,06 | | | ,982 |
| Random Effects | | | | | | | | | |

ANOVA

Innovation Perception brand (Nivea/Chanel) co-creation (1-5)

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|-------------------|-----|-------------|--------|------|
| Between Groups | 206,365 | 2 | 103,183 | 98,619 | ,000 |
| Within Groups | 323,298 | 309 | 1,046 | | |
| Total | 529,663 | 311 | | | |

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Innovation Perception brand (Nivea/Chanel) co-creation (1-5)
Tukey HSD

| (I) Scenario lux=1, Mainst=0, CC=2 | (J) Scenario lux=1, Mainst=0, CC=2 | Mean Difference (I- J) | Std. Error | Sig. | 95% Confidence Interval | |
|---------------------------------------|---------------------------------------|------------------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| 0 | 1 | 1,615 ^a | ,142 | ,000 | 1,28 | 1,95 |
| | 2 | 1,817 ^a | ,142 | ,000 | 1,48 | 2,15 |
| 1 | 0 | -1,615 ^a | ,142 | ,000 | -1,95 | -1,28 |
| | 2 | ,202 | ,142 | ,330 | -,13 | ,54 |
| 2 | 0 | -1,817 ^a | ,142 | ,000 | -2,15 | -1,48 |
| | 1 | -,202 | ,142 | ,330 | -,54 | ,13 |

^a. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Innovation Perception brand (Nivea/Chanel) co-creation (1-5)

Tukey HSD^a

| Scenario lux=1, Mainst=0, CC=2 | N | Subset for alpha = 0.05 | |
|-----------------------------------|-----|-------------------------|-------|
| | | 1 | 2 |
| 2 | 104 | 1,91 | |
| 1 | 104 | 2,12 | |
| 0 | 104 | | 3,73 |
| Sig. | | ,330 | 1,000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 104,000.

Appendix 6- Linear Regressions

Descriptive Statistics

| | Statistic | Bootstrap ^a | | | | |
|--|----------------|------------------------|------------|-------------------------|-------|-------|
| | | Bias | Std. Error | 95% Confidence Interval | | |
| | | | | Lower | Upper | |
| Purchase Intention a/this co-created product (1-7) | Mean | 2,75 | ,00 | ,08 | 2,59 | 2,90 |
| | Std. Deviation | 1,402 | ,000 | ,069 | 1,256 | 1,524 |
| | N | 312 | 0 | 0 | 312 | 312 |
| Quality Perception of a co-created/ Mainstream/Luxury product (1-7) | Mean | 2,28 | ,00 | ,06 | 2,15 | 2,40 |
| | Std. Deviation | 1,091 | ,000 | ,047 | 1,001 | 1,181 |
| | N | 312 | 0 | 0 | 312 | 312 |
| Innovation Perception brand (Nivea/Chanel) co- creation (1-5) | Mean | 2,59 | ,00 | ,07 | 2,44 | 2,73 |
| | Std. Deviation | 1,305 | -,002 | ,038 | 1,224 | 1,374 |
| | N | 312 | 0 | 0 | 312 | 312 |

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression | 57,790 | 2 | 28,895 | 16,140 | ,000 ^b |
| | Residual | 553,207 | 309 | 1,790 | | |
| | Total | 610,997 | 311 | | | |

a. Dependent Variable: Purchase Intention a/this co-created product (1-7)

b. Predictors: (Constant), Innovation Perception brand (Nivea/Chanel) co-creation (1-5), Quality Perception of a co-created/ Mainstream/Luxury product (1-7)

Bootstrap for Coefficients

| Model | B | Bootstrap ^a | | | | | |
|-------|--|------------------------|------------|-----------------|-------------------------|-------|-------|
| | | Bias | Std. Error | Sig. (2-tailed) | 95% Confidence Interval | | |
| | | | | | Lower | Upper | |
| 1 | (Constant) | 2,020 | ,005 | ,259 | ,001 | 1,541 | 2,551 |
| | Quality Perception of a co-created/ Mainstream/Luxury product (1-7) | ,389 | ,000 | ,080 | ,001 | ,226 | ,542 |
| | Innovation Perception brand (Nivea/Chanel) co- creation (1-5) | -,061 | -4,337E-5 | ,053 | ,247 | -,170 | ,041 |

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Descriptive Statistics

| | Statistic | Bootstrap ^a | | | | |
|---|----------------|------------------------|------------|-------------------------|-------|-------|
| | | Bias | Std. Error | 95% Confidence Interval | | |
| | | | | Lower | Upper | |
| Recommend a brand (nivea/chanel) co-creation (1-7) | Mean | 2,55 | ,00 | ,08 | 2,40 | 2,72 |
| | Std. Deviation | 1,381 | -,003 | ,066 | 1,244 | 1,508 |
| | N | 312 | 0 | 0 | 312 | 312 |
| Quality Perception of a co-created/ Mainstream/Luxury product (1-7) | Mean | 2,28 | ,00 | ,06 | 2,16 | 2,40 |
| | Std. Deviation | 1,091 | -,002 | ,046 | 1,005 | 1,181 |
| | N | 312 | 0 | 0 | 312 | 312 |
| Innovation Perception brand (Nivea/Chanel) co-creation (1-5) | Mean | 2,59 | ,00 | ,07 | 2,45 | 2,72 |
| | Std. Deviation | 1,305 | -,001 | ,038 | 1,229 | 1,380 |
| | N | 312 | 0 | 0 | 312 | 312 |

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression | 99,788 | 2 | 49,894 | 31,247 | ,000 ^b |
| | Residual | 493,392 | 309 | 1,597 | | |
| | Total | 593,179 | 311 | | | |

a. Dependent Variable: Recommend a brand (nivea/chanel) co-creation (1-7)

b. Predictors: (Constant), Innovation Perception brand (Nivea/Chanel) co-creation (1-5), Quality Perception of a co-created/ Mainstream/Luxury product (1-7)

Bootstrap for Coefficients

| Model | B | Bootstrap ^a | | | | |
|---|-------|------------------------|------------|-----------------|-------------------------|-------|
| | | Bias | Std. Error | Sig. (2-tailed) | 95% Confidence Interval | |
| | | | | | Lower | Upper |
| 1 (Constant) | 1,465 | ,000 | ,249 | ,001 | 1,014 | 1,989 |
| Quality Perception of a co-created/ Mainstream/Luxury product (1-7) | ,518 | ,001 | ,077 | ,001 | ,364 | ,663 |
| Innovation Perception brand (Nivea/Chanel) co-creation (1-5) | -,035 | -,001 | ,054 | ,519 | -,143 | ,063 |

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Correlations

Descriptive Statistics

| | Statistic | Bootstrap ^a | | | | |
|---|----------------|------------------------|------------|-------------------------|-------|-------|
| | | Bias | Std. Error | 95% Confidence Interval | | |
| | | | | Lower | Upper | |
| Purchase Intention at this co-created product (1-7) | Mean | 2,75 | ,00 | ,08 | 2,59 | 2,89 |
| | Std. Deviation | 1,402 | -,005 | ,071 | 1,252 | 1,531 |
| | N | 312 | 0 | 0 | 312 | 312 |
| Recommend a brand (nivea/chanel) co-creation (1-7) | Mean | 2,55 | ,00 | ,08 | 2,41 | 2,71 |
| | Std. Deviation | 1,381 | -,002 | ,067 | 1,247 | 1,506 |
| | N | 312 | 0 | 0 | 312 | 312 |
| Quality Perception of a co-created/ Mainstream/Luxury product (1-7) | Mean | 2,28 | ,00 | ,06 | 2,15 | 2,40 |
| | Std. Deviation | 1,091 | ,000 | ,045 | 1,010 | 1,184 |
| | N | 312 | 0 | 0 | 312 | 312 |
| Innovation Perception brand (Nivea/Chanel) co-creation (1-5) | Mean | 2,59 | ,00 | ,07 | 2,45 | 2,73 |
| | Std. Deviation | 1,305 | ,000 | ,036 | 1,228 | 1,375 |
| | N | 312 | 0 | 0 | 312 | 312 |

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples