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Is digital influencers' content more effective than your brands' in creating online brand related content?

The impact of perceptions regarding digital influencers as source of brand content on consumers' purchase intention of beauty brands.

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Master in Business Administration

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BUSINESS
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Abstract

The rise of social media content generated by consumers about beauty products/services has caught the attention of brands from that segment, where some consumers ascended to digital influencers - revealing to be effective in influencing purchase decisions. Considering this, beauty brands started to increasingly resource to influencers with that purpose. The question of whether this content creation by influencers is more effective in generating brand outputs than content created by the brand itself remains unanswered. The purpose of this study is to understand to what extent perceptions regarding digital influencers' social media content have a stronger impact than perceptions regarding content created by brands in consumers' both purchase intention and online engagement with the brand. The role of brand attitude was also analyzed in this context. 200 female respondents' answers were analyzed through a questionnaire.

The results showed that perceptions regarding content generated by influencers don't have a stronger impact than perceptions regarding content created by brands on brand attitude and towards both consumers' purchase intention and online engagement with beauty brands. However, brand attitude revealed to be positively correlated with both perceptions, also having a significant impact on consumers' purchase intention and online engagement with the brand, thus, it was generally a strong mediator of effects.

Consequently, brands should not replace their own social media content with content created by influencers but work together and include them in their social media strategy.

Keywords: firm-created content; user-generated content; digital influencers; purchase intention; online engagement.

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Resumo

O conteúdo criado nas redes sociais pelos consumidores sobre produtos/serviços de beleza captou a atenção das marcas desse segmento, onde alguns ascenderam a digital influencers - revelando-se eficazes em influenciar decisões de compra. Assim, as marcas de beleza começaram a recorrer a estes com esse propósito. A questão do conteúdo criado por influencers ser mais eficiente em gerar *outputs* para marca do que o conteúdo criado pela marca em si permanece por responder. O propósito deste estudo é perceber de que modo as perceções à cerca do conteúdo gerado por influencers tem um maior impacto do que as perceções à cerca do conteúdo criado pelas marcas na intenção de compra e na interação online com as marcas. O papel da atitude em relação à marca foi simultaneamente analisado neste contexto. As respostas de 200 respondentes do sexo feminino foram analisadas através de um questionário. Os resultados mostraram que as perceções em relação ao conteúdo gerado por influencers não têm um maior impacto que as perceções em relação ao conteúdo criado pelas próprias marcas em ambas a intenção de compra e na interação online com as marcas. No entanto, a atitude em relação à marca mostrou estar positivamente correlacionada com ambas as perceções, com um impacto significativo na intenção de compra e na interação online com as marcas, e, no geral, ter um forte efeito de mediação.

Consequentemente, as marcas não devem substituir o seu conteúdo com o conteúdo criado por influencers, mas trabalhar em conjunto e incluí-los na sua estratégia.

Palavras-chave: conteúdo criado pela marca; conteúdo criado pelo usuário; digital influencers; intenção de compra; interação online.

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1. INTRODUCTION

1.1 Thematic characterization

With the development of social media tools, increased internet usage and user-generated content, brands had to increase their advertisement effectiveness in order to grow the attention from audiences with the objective of stimulating sales and profitability growth through their online presence. Consumers are now actively seeking information through social media to make better purchasing decisions, while also being willing to share their personal experiences about products/services. Considering social media's reach and presence, digital influencers arise as a key attitude change and purchase intention generator for brands (Tien et al., 2019). Having their voice heard in their social community of followers and considered expert and opinion leaders through their reviews and opinions while having easy access to specific targets and market areas, brands started to increase their investment on this type of digital marketing strategy.

Nowadays, consumers are exposed to millions of messages and advertisements created by brands that they don't pay enough attention to. Due to digital evolution and the great consumption of information, brands and businesses had to change their strategy, where content generated by users such as influencers started to make a statement as an effective marketing tool. Influencers started to appear to the consumer as "one of them", common people and common consumers that share their opinions, interests and habits – while having a great reach in terms of followers. This, inevitably, started to be noticed by brands and renown companies as a business opportunity.

Considering all the changes that the marketing scenario has suffered, the means to achieve an effective target reach through advertisement on social media also had to change. Literature shows that consumers are increasingly watching or reading content generated by other users in order to make the best purchase decisions (Ki, 2019) rather than content produced exclusively by brands in their official pages. Through partnerships, free products and sponsored posts, as well as at their free will, these key opinion leaders are shaping consumers' perceptions, attitudes, how they buy and think about buying. In this process of purchase decision and intention, consumers are progressively relying on content published by other consumers, where they consider digital influencers not only closer to them but trustworthy, perceiving their content to not have any commercial association with the brand.

Although advertisements and content created by brands have been considered since early research studies as an effective mean of purchase intention, capable of shaping attitudes not only toward the content created but the advertised brand (Lutz et al., 1983; Shimp, 1981; MacKenzie et al., 1989) influencer marketing is increasingly being used as a recent advertisement strategy. Thus, sometimes up surging content created by brands (Tien et al., 2019) where the beauty segment has revealed to be one of the most prominent sectors of this type of strategy (Oliveira, 2017). So, it becomes relevant to evaluate the impact of perceptions regarding this source of information comparing it to perceptions regarding content created exclusively by beauty brands. Thus, the purpose of this study is to evaluate the effect of firm-created content and user-generated content on brand attitude towards beauty brands while evaluating its mediation effect, and consequently on purchase intention and online engagement with those brands - comparing to what extent perceptions regarding digital influencers' social media content have a stronger impact than perceptions regarding content created by brands.

A Literature Review of the main topics regarding this theme will follow the Introduction of the present study. Thus, the Hypotheses and Framework that guided this study will be discussed in the following chapter, later followed by the Methodology used. Finally, the Results accomplished in this study will be presented as well as the Conclusions obtained.

1.2 Research question

The purpose of this study is to evaluate the effect of firm-created content and user-generated content on brand attitude towards beauty brands, comparing to what extent perceptions regarding digital influencers' social media content have a stronger impact than perceptions regarding content created by those brands on both purchase intention and online engagement with brands. Taking this into consideration, the purpose of this study is to answer the succeeding question:

"*To what extent perceptions regarding digital influencers' social media content have a stronger impact than perceptions regarding content created by beauty brands in consumers' purchase intention and online engagement?*"

Through the exploring and analysis of literature regarding this topic, some constructs and brand outputs that are prominent to this project were found. Considering this, brand attitude was also analyzed, also considering its possible mediation effect.

1.3 Contribution and relevance

With the rise of the Internet and social media exposure, individuals became keener and more selective on the information they consume, especially if it involves topics they are interested. Taking in consideration user-generated-content, some individuals obtained a considered number of followers subsequent to the rise of social media, whether through their aesthetically pleasing photos, relatable lifestyles or relevant and actual posts about the hottest topics and trends. Gaining notoriety, these personalities started to hold the power to expose whatever information and opinions they are entitled to, not only about trends and topics, but about products and services too. Digital marketing and digital influencers as brand communication tools have been in the past few years in the center of the conversation (Jiménez-Castillo et al., 2019), holding the power to influence their audience, marketing teams started to see this as an opportunity to do business.

Through their generated-content, digital influencers promoted products, brands and services, in exchange for free products, money and sponsorship – with the main goal of achieving purchase intention from their viewers – both the influencer and company in question benefiting. However effective, brands remain investing and elaborating strategies to promote their products in their own online channels, in order to position their brand, reach consumers and possibly influence purchase decisions. This study aims, in the context of this very actual topic, to contribute to the evaluation of beauty brands regarding their social media content strategy, where assessing the effect of perceptions regarding firm-created content and user-generated content on brand attitude will most likely help understand the effect on purchase intention and online engagement with beauty brands. Additionally, this study contributes to understand how brands can align their interests and goals resourcing to digital influencers. In an increasingly digital era where brands are investing severely in their social media strategies as well as resourcing to digital influencers' content in order to leave the consumers with positive perceptions, it becomes relevant for brands to evaluate and understand the perceptions that are left in the consumers regarding digital influencers' social media content and content created by brands in affecting brands' outputs.

2. LITERATURE REVIEW

The objective of the present investigation is to evaluate in the context of beauty brands the effect of firm-created content and user-generated content on brand attitude, and consequently on purchase intention and online engagement with brands, comparing to what extent perceptions regarding digital influencers' social media content have a stronger impact than perceptions regarding content created by brands. To do so, the current chapter presents a review of relevant authors and literature regarding the evolution of this topic, such as the evolution of Internet and social media as a business tool, user-generated and firm-created content, the role of digital influencers in impacting behavioral adoptions and purchase decisions and, lastly, the impact of advertisement content exposure in consumers' brand-related attitudes.

2.1 Internet communication and Web 2.0

2.1.1 Web 2.0

Nowadays, Internet access and the world wide web can be done at the distance of a click, although it has suffered many changes throughout the years. Many authors discuss the evolution of Web and divide it into phases. Choudhury (2014) associates the progress with three phases. First, Web 1.0 - highlighting it as the phase of web of documents (read-only web) where publication of content was reserved to webmasters and content producers. Web 2.0, where a transition from digital network to a platform status occurred. On the other hand, Web 3.0 refers to the period where the World Wide Web was characterized by the integration of intelligent information in the digital field, which reflects in the user experience.

In the context of social media emergence, Web 2.0 represented a shift from a web characterized by the sole use of information for consulting and read-only to a web where users not only create but publish content which could easily be modified and shared. It facilitated the creation of content, interaction between users and low-cost interoperability (Berthon et al., 2007). Users became not only content readers but also content creators, since '*Web 2.0 allows for sharing, linking, collaborating, and inclusion of user-generated content. So users, rather than receiving a lecture through static Web pages, are engaged collectively in a conversation that leads to the generation of online content*'' (Thackeray et al*.,* 2008, p. 339).

For Berthon et al. (2012) this shift, although representing a technological evolution, was characterized by a strong social dimension, where users could connect with each other and exchange/modify information. This strong social component of the Web 2.0 induced services

and information made by the users themselves – through blogs, wikis and social networking (Thackeray et al., 2008).

As a result, Web 2.0 brought three main outcomes: first, a shift in the center of activity to the Web instead of the desktop; the production of value being made by the consumer and not only the firm as well as a change of power to the hands of the consumer. This made Web 2.0 a vehicle for the emergence of websites engaged as social media, and most importantly the phenomena of content creation by users (Berthon et al., 2012). So, Web 2.0 '*can be thought of as the technical infrastructure that enables the social phenomenon of collective media and facilitates consumer-generated content''* (Berthon et al., 2012, p. 62).

2.1.2 Social media

With the growth of internet and the World Wide Web and its increasing usage with social interaction purposes, Internet users could easily access '*user-centric spaces they could populate with user-generated content, along with a correspondingly diverse set of opportunities for linking these spaces together to form virtual social networks''* (Ober et al., 2015, p. 4). Social media can be defined as ''*the online means of communication, conveyance, collaboration, and cultivation among interconnected and interdependent networks of people, communities and organizations enhanced by technological capabilities and mobility''* (Tuten et al., 2017, p. 146) that '*allow the creation and exchange of User-Generated Content''* (Kaplan et al., 2017, p. 61).

In the context of the Web 2.0, that brought up content sharing and creation of online communities, social media enabled every user to engage and participate in the most diverse social networking sites and tools that aggregate the most of active users online such as Facebook, YouTube, Instagram and Twitter (Tien et al., 2019). They enable individuals to share, create in a collaborative way, debate and modify content created not only by firms but generated by users, such as communities, text, photography and video (Kietzman et al., 2011).

Social media did not only allow users to interact with each other online, but also access all the information available and shared on those platforms where they have freedom to express their own opinions and beliefs (Heinonen, 2011). Even though social media enabled basic human needs such as communication and socialization they are described as a vehicle of user content production (Berthon et al., 2012) and without notion of time, distance or space, permitting an enhanced ability to communicate, cooperate and share information (Shipps et al., 2012).

2.1.3 Online engagement with brands

Social media tools enabled the engagement and interaction relations between brands and consumers. The interactive nature of these tools enabled consumers to engage with brands in the most diverse ways, often having direct contact by "*reading, writing, watching, commenting, Liking, sharing, and so forth*" (Schivinski et al*.,* 2016, p. 2). Schivisnki, Christodoulides and Dabrowski (2016) elaborated a scale, which gathers the notion of engagement to be a behavioral construct, which allowed engagement to be measured. This way, it could allow its study considering engagement as either a precedent or consequent set of behavioral actions (Schivinski et al*.,* 2016).

Three levels of online engagement are defined which were priorly explored by Mutinga et al. (2011) which are consumption, contribution and creation – where consumers define their engagement with brands by either consuming, participating or producing (Shao, 2009). Consumption is defined as the consumer's passive participation (Schivinski et al*.,* 2016) in the social media networks, such as reading or *following* their favorite pages. Regarding contribution, it *"reflects consumers' contribution to brand-related content through participation in media previously created by either a company or another individual"* (Schivinski et al*.,* 2016, p. 66) such as commenting, sharing and *liking* content they are being exposed to. Finally, the creation dimension corresponds to consumers publishing and creating content that involves the brand (Schivinski et al*.,* 2016). Online engagement can be a crucial objective to both brands and consumers that create/generate content, where perceptions towards it often measure how effective that content is.

2.1.3 Firm-created content

In a marketing and social media strategy context, brands started increasing the allocation of their investments in social media and digital marketing. Social media marketing is considered generally an inherent activity of digital marketing, which complements traditional strategies. Digital marketing can be defined as '*'a projection of conventional marketing, its tools and strategies, on the Internet (…) a new phenomenon that brings together customization and mass distribution to accomplish marketing goals*.'' (Machado et al*.,* 2016, p. 38).

In a brand perspective, this represents an opportunity as a digital marketing strategy in which brands can, not only create content and promote their products/services but also interact and engage with consumers, generating potential new consumers and possible purchase intention (Cooley et al*.,* 2019). Although traditional and professional media embody a

prominent role in communication for brands – such as television advertisements – consumers are tending to shift their attention to this new media consumption. In this context, social media content produced by firms emerges as an essential vehicle of proximity with consumers, which started to oblige brands to focus their strategies and investment in social media advertisement content while using this tool to their own benefit - such as sponsored content and awareness-creation with the ultimate goal of inducing purchase (Tien et al., 2019).

This type of strategy and online presence assumes an ability to reach a large segment of consumers in a relatively short period of time, especially since it means a lower investment from brands (Evans et al., 2017) and becoming a truly popular way for consumers to engage with brands online (Phua et al., 2017). Engagement was, in this way, facilitated through the online, considering the growth and social media presence of brands and all the means and possibilities to involve a consumer with a brand - while allowing for interaction and communication to happen (Barger et al., 2016).

Due to the online presence of more users, the reach of marketing campaigns, initiatives, products and services is proportionally increasing. It has changed the way in which brands advertise to grab consumers' attention and possible purchase intention. Individuals are now more likely to turn to their phone to get advertising and firm-created content (Bruhn et al., 2012) containing diverse purchase options. Firm-created content is under the management and control of companies and their brands (Hermaren and Achyar, 2018), where endorsements are initiated in their official social media pages with the objective of increasing engagement and deepening of relationships with their current and new customers, considering the interactive nature of these tools (Baker et al., 2016). An intrinsic purpose of this content is to present a positive image of the brand to the consumer, considering that these specific social media pages are completely controlled by the seller. This ultimately also means that this type of content will always favor positive endorsements and communication content (Bruhn et al., 2012).

2.2 Consumers as producers

2.2.1 User-generated content

In the context of Web 2.0 and social media emergence, so did the phenomena of content creation by the users, as not only consumers but also producers (Berthon et al., 2012). Users are now empowered, not only consuming content but generating it, where *''audiences are increasingly able to operate alongside traditional media companies as content producers,*

competing with them for audience attention and, to some extent, advertising revenues'' (Napoli, 2016, p. 71).

User-generated content is independent from the firm's control (Vanden Bergh et al.*, 2011) and '*'refers to media content created or produced by the general public rather than by paid professionals and primarily distributed on the Internet''* (Daugherty *et al.,* 2008, p. 16). Individuals, then, possess the ability to generate content and have more control, with the increased possibility of communicating their opinions, reviews and own beliefs to mass audiences on platforms such as YouTube, Facebook, Wikipedia, Blogger, Instagram and personal Web pages (Daugherty et al., 2008) and to significatively impact other individuals' behavior and purchase decisions (Thackeray et al., 2008).

Consumers, as producers (Moretti et al., 2015), started to have the means to share and disseminate information related to products, services and brands. In the context of Web 2.0, considering the concepts of user-generated content and word-of-mouth, explained forwardly, academicals discussed the concept of prosumer (Moretti et al., 2015), a term that aggregates the terms producer and consumer. As Moretti et al. (2015) state, this type of consumer distinguishes himself from others by having more power to influence the purchase decisions of others, able to share its preferences, reviews and consumption experience (Napoli, 2016).

Once consumers access content that features previous consumer experiences and information, they can base and adapt their purchase decisions with more knowledge (Kembau et al., 2014). Therefore, during the decision-making process, the consumer started to have more control and play a more active part in choosing and gathering information about products/services, based in published opinions and previous experiences of other consumers before carrying out the decision (Daugherty et al., 2008). In this sense, brands are perceived has no longer having total control, not only over the content created, but also time and frequency that communications and information is being disseminated about their products/services (Mangold and Faulds, 2009).

2.2.2 Word-of-mouth and Electronic word-of-mouth

Considering the diversity of means of communication that the common individual has available to be confronted with, a lot of the information, recommendations and opinions are influenced or talked about in more informal environments on a daily basis (Solom et al., 2017). This phenomenon is called word-of-mouth (WOM), defined as the mechanism individuals use to '*'share stories, news and information with those around them''* (Berger, 2013, p. 7).

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If once consumers relied their decision-making process exclusively on the firm and the information/content they provide about the brand and its products/services, nowadays the scenario has shifted (Bradley, 2010). Associated with advances in technology and user-generated content that features online publication of consumers' experiences, opinions and beliefs, a new form of word-of mouth communication comes along. Consumers now communicate daily and intensely about their experiences with products and services, which can represent both a challenge and opportunity for brands (Pederson et al., 2014).

Electronic word-of-mouth (eWOM) – word-of-mouth through the internet – is the '*'primary factor of 20 percent to 50 percent of all purchasing decisions''* (Berger, 2013, p. 7) so it seems obvious that firms are often relying on it as a business tool. *''Word of mouth is more effective than traditional advertising (…) it's more persuasive (…) and more targeted''* (Berger, 2013, p. 8). Usually, we are confronted with word of mouth driven from individuals we already know, like friends and family, but companies are also increasingly investing in content created by other users that have some sort of influential power (such as digital influencers, explained forwardly). For their credibility and expertise amongst their audiences, digital influencers are progressively being invested on with the purpose of generating brand awareness and purchase intention – and, in that way, increase sales – since word of mouth, once adopted, is considered to '*'change customer preferences and actual purchase behavior''* (Tien et al., 2019, p. 239).

Word-of-mouth in the context of the internet and social media has permitted individuals to present their perspectives as consumers, which can ultimately serve as a source of information for other consumers and cause feelings towards the exposed message even if accepted or rejected (Maria et al., 2019). Having control over what they say, share and create, consumers can easily defend a positive, neutral or negative position about certain topics – such as services/products and brands. Word-of-mouth, negative or positive, can define the perspective and sentiment toward the content of the message capable of changing or inducing different attitudes and behaviors. Word-of-mouth, in this form, represents a marketing channel dominated by the consumers – some of them ascending to the condition of opinion leaders - which allows them to achieve a credibility and endorsement effectiveness level sometimes superior to brands (Berger, 2013).

2.2.3 Opinion leaders and two-step flow theory

Considering Web 2.0 and the development of internet technologies and the vast ways consumers can interact with each other, almost every consumer can search, base and acquire

knowledge regarding their purchase decision on online reviews, word-of-mouth endorsements about products/services and consumer's opinions about previous experiences. In a business perspective, brands started paying more attention to this type of digital marketing - commonly used in social media channels due to the interaction factor between consumers made easier.

'*'During the public opinion dissemination process, we find some agents who can exert influence on the opinions, decisions, and actions of the majority of other agents''* (Zhao et al., 2018, p. 131) – agents those that authors consider to be opinion leaders. Opinion leaders can be defined as '*'more influential within their social networks than others. They consider themselves experts in a specific area of interest (e. g. home policy or fashion) and are asked for advice in this area''* (Trepte et al., 2010, p. 120).

Lazarsfeld, Berelson and Gaudet (1944) first introduced the term opinion leader in a study where they concluded that opinions and communication between individuals, rather than a simple media-public communication, had effects that are more influential. '*'These so-called opinion leaders were characterized as selecting and transmitting information on the election as well as modifying and facilitating it. Rather than being neutral reporters, opinion leaders were passing on useful items of information''* (Trepte et al., 2010, p. 120). These individuals were characterized as being able to shape others' opinions and beliefs, through their means of persuasion and influence, who could often induce the individuals' attitudes and behavior.

The same authors proposed a flow of communication defined as the two-step flow, that '*'implies that information flows from the media to opinion leaders and from them to less active sections of the population''* (Trepte et al., 2010, p. 121). This theory emphasizes social networking in the process of communicating where influence by mass media is focused on interpersonal communication, defined by two steps (Fosse, 2011). First, when the messages disseminated by the media influences the opinions leaders, the ones who are more attentive to media's messages and information. Then, as a second flow, these opinion leaders gather the information obtained and disseminate it to the social networks close and around them (Fosse, 2011).

In a business perspective, and during the process of purchase decision and intention, some consumers may rely on online content published by other consumers considered opinion leaders in a specific subject. Taking advantage of that influence, brands became attentive to the power those key opinion leaders started to have in other consumers through their messages, sometimes sponsoring their content with the ultimate goal of generating purchase (Cooley et al., 2019).

2.2.5 Beauty brands on social media and content creation

The beauty segment is often considered as one of the most competitive and diverse segments in the market, where these brands' products/services have been present in the digital world almost since its beginning. Although challenging, social media brought a completely new set of opportunities for beauty brands (Kumar et al., 2016). Through content created by brands in their official social media accounts controlled exclusively by the brand, beauty brands could easily reach their target, promote their products and generate brand awareness and possible purchase decision. Cooley and Parks-Yancy (2019) identified YouTube and Instagram as the most utilized social media networks for cosmetic and beauty brands to promote their products, where campaigns and promotions could be accessed at a distance of a click.

The beauty brands' segment was also one of the pioneer segments who started to actively be populated with user-generated content (Cooley and Parks-Yancy, 2019). Common consumers generating content not only inhabited this media channel with reviews, tutorials and all sorts of videos and posts where they mentioned and endorsed beauty brands and their products (García-Rapp, 2016) but also commented, *liked*, and shared their personal thoughts and opinions about those brands while also interacting with other consumers. This active online participation from consumers in the discussions of beauty brands' products made consumers, independently from the firm's control, to share information related to beauty brands and their products (Moretti et al., 2015). Some of these consumers, ascending to digital influencers, started to be noticed by beauty brands for their massive audiences and level of credibility – where to some extent, some content, although user generated, started to be sponsored by the beauty brands (Djafarova et al., 2017).

2.2.6 Digital influencers

The rise of social media has permitted the easiness for anyone to create and distribute content of their own making. Individuals are not only increasingly participating and engaging in social communities, but also contributing too. According to Business of Apps data (2019) YouTube has over 1 billion users with more than 500 hours of video being uploaded every minute and 500+ million active Instagram users (Instagram Info Center, 2019). Taking these numbers in consideration, we can understand the perfect timing and opportunity brands have to sponsor posts and videos and establish partnerships with digital influencers, since '*social media have created one of the most exciting and efficient ways to reach targeted audiences''* (Tuten et al., 2014, p. 19).

Digital influencers, considered opinion leaders and generating content as users, can be defined as a '*'multi-platform high-profile Internet microcelebrities who accumulate a following on social media and/or blogs through the textual and visual narration of their personal lives and lifestyles and monetize their following by endorsing brands for a fee (i.e., paid eWOM)*''* (Jimenez-Castillo et al., 2019, p. 366). These digital influencers are considered micro-celebrities only known to a small group of the population (Abidin, 2016), and increasingly being reflected as more powerful and influential than traditional celebrities, while being perceived as more credible and accessible (Djafarova et al., 2017), especially when compared to traditional advertisements and content created by brands. Their content is perceived as natural, spontaneous and relatable.

Considering the defining role of digital influencers as opinion leaders and their easy access to the most diverse audiences and specific targets, brands are increasingly relying on social media as a business opportunity while increasing their sponsorship and paid content production in order to reach maximum influential power with the ultimate goal of purchase (Djafarova et al., 2017).

2.2.7 The exposure to digital influencers' content

Consumers are increasingly seeking information through social media to make better purchasing decisions, often relying more on the opinions of other users commonly seen as "one of them", rather than the content disseminated by brands (Bruhn et al., 2012). It is often argued that brands endorsed by digital influencers within their content induce a rise in the consumer's consciousness, often recalling it (Djafarova et al., 2017) and generating a recognition of need and evaluation of alternatives (Abidin, 2016) where, as brand ambassadors, are relied on by being related to the brand and its products/services, as well as being close to the target audience (Shimp, 2000).

When considering the content generated by digital influencers, many studies point out the level of proximity with the consumer (Abidin, 2016) which can reach a certain level of trustworthiness and reliability. On the other hand, an intrinsic purpose of content created exclusively by brands often presents a positive image of the brand, considering the control of the brands' social media pages to be focused on the seller – which may lead the consumer to believe that this type of content will always favor good endorsements and positive inputs in the brand's content (Bruhn et al., 2012).

Digital influencers are assumed to have a leading role in boosting the purchase intention and adoption of endorsements process through their social media content (Gunksman, 2017). Once the influencer shares content regarding his/hers experiences first-hand about a certain product/service and the benefits associated to them, the consumer begins to hold not only perceptions but an innovative mean of connection with the brand (Keller, 1993). From the photos posted, their descriptions and the context where the communication is made, the digital influencers' content allows social media to be used to implement, in a dynamic and appealing way appeared as trustworthy, an effective communication that is believed to shape and change consumer behavior leading to a most likely higher probability of behavioral and endorsement adoption such as purchase intent or engagement (Dodds and Grewal, 1991).

2.4 Consumers' attitudes and intentions

2.4.1 Attitude

The conceptualization of attitude has been approached by diverse authors, from the psychology to the marketing field. Rosenberg and Hovland (1960) argue that attitude is composed by cognitive, affective and behavioral factors, which result in emotional and actional responses towards an object or idea. Mitchell and Olson (1981) define attitude as the beliefs an individual has in a certain moment in time and internal evaluations toward an object. On the other hand, Kotler and Keller (2012) state that attitudes are associated with the individual's mood and led to liking or disliking a certain object, where similar attitudes lead to similar behaviors. We can conclude that all the above ideas sum up that attitude toward an object consist in a personal evaluation of its attributes, which includes the beliefs, feelings and perceptions the individual has toward the object in the moment of its evaluation (Kotler and Keller, 2012).

The study of consumer attitude is an integral part of literature regarding advertising. Consumers' attitudes endure the predisposition to react and therefore behave in a certain way, often considered good predictors of behavior towards a product/service (Kotler and Keller, 2012). Arens and Schaefer (2007) pointed that understanding the consumers' profile, behavior, and attitudes are crucial elements in developing effective advertising and content strategies and message endorsements. Since consumers are not a homogenous mass and exhibit different attitudes toward advertisements (Arens and Schaefer, 2007), it is important to consider and form theoretical frameworks that will permit the evaluation and structure of attitudes to be measured. Burke and Edell (1989) argue that consumers are exposed to content, and consequently form their attitudes toward the content that will consequently influence their

attitude toward the brand – where the exposure to advertisement content induces feelings (affect) and judgments (cognitions) in the consumer; consumers then form feelings (such as happy, annoyed, or amused) and judgments/evaluations (factual or informative). These perceptions consumers form through the exposure to the advertisement content will influence their attitude toward it, and consequently attitude towards the brand advertised - that can eventually affect purchase decisions (Edell and Burke, 1987).

2.4.2 Brand attitude

It is commonly argued that good brand attitudes will positively impact and benefit the company through inducement of purchase (Ishida et al., 2012). Brand attitude is often defined as the audiences' affective reaction to the advertised brand - which means the capability to evaluate the brand in terms of purchasing it being considered as good-bad, favorable-unfavorable, and wise-foolish, considered a consequence of attitude toward the advertisement (Lutz et al., 1983). However, it is also taken into consideration the cognitive process that helps attitude formation (Fishbein et al., 1963).

On one hand, brand cognitions are defined as the perceptions that audiences have of the advertised brand induced by the ad content, such as the set of perceived thoughts, attributes and benefits (Lutz et al., 1983). Greenwald (1968) states that audiences (consumers), as the receiving end of the ad, match the new information of the persuasive messages to the already existing brand-related information, attitude and knowledge – which will ultimately structure their brand cognitions and build the attitude toward the brand, especially after the attributes of that brand have been evaluated and weighted. In order to change attitude toward brand Lutz (1975) argues that either the beliefs or values attached to a certain brands' attributes should be altered. Research suggests that in order to increase perceived value (importance given to brand) (Mackenzie, 1986) it has been proven to be beneficial to draw attention to the benefits of the brand and make favorable endorsements in the advertisement content.

A positive brand attitude left by the content is argued to be a necessary communication effect if brands want purchase to occur (Percy and Rossiter, 1992). An attitude toward the brand approach attempts to influence and impact the consumers' brand choice by engendering favorable attitudes toward the advertised brand. This means that content should be structured in order for the consumer's beliefs and evaluation of the brand get influenced by the positive and favorable outcomes of consuming the brand, usually by emphasizing certain attributes and

benefits. If this structuration is done successfully, it can result in a favorable attitude formation and a higher probability of purchase (Shimp, 1981).

2.4.3 Brand attitude and purchase intention

Exposed to a certain message or advertisement, many authors study the effect it has on the consumer - mainly how it can shape, alter and induce attitudes and how behavioral adoption leads to purchase intention. It can be defined as "*an individual's conscious plan to make an effort to purchase a brand*" (Spears et al., 2004, p. 56). This means that purchase intention embraces the possibility of a consumer being willing to purchase a certain product or service – a behavior ambitioned by companies in order to increase sales (East et al., 2008).

Kotler and Keller (2012) state that consumers evaluate different alternatives prior to engaging in an actual purchase, building their purchase intent keeping in mind the number of recognizable benefits of that specific acquisition. Thus, purchase intention is described as the aggregation of interest of a potential consumer in acquiring a certain good as well as the probability of it actually happening (MacDonald and Sharp, 2000). This way, purchase intent is considered a relevant indicator of an actual purchase (Yuan *et al*., 2019) and an indicator of consumer's attitudes and behaviors evaluation, allowing the probability of an individual to acquire certain product to be measured (Toor et al., 2017).

The relationship between attitude and brands is often considered through the process of purchase intention, mainly the influence of one in the other (Percy and Rossiter, 1992; Kotler and Keller, 2012; Rosenberg and Hovland; 1960). After being exposed to the advertisement content, audiences form a perception about the weakness or strength of arguments presented, which conveys the existence of a positive correlation between the consumer's attitude toward a brand and the probability of buying a product from that brand (Lord et al., 1995). This means that brand choice and purchase intent will highly depend on the consumer's beliefs and evaluations which are influenced through the processing of endorsements portrayed in advertisement content, where attitude toward the brand will be structured and, consequently, the choice of whether to purchase or not (Kotler and Keller, 2012). This eventually means that purchase intent will depend on how favorable the attitude toward brand is (East et al., 2008).

3. RESEARCH FRAMEWORK AND HYPHOTESES DEVELOPMENT

Many authors have proven that resourcing to digital influencers as a content marketing strategy is an effective mean of possible purchase intention from consumers. Nevertheless, firms and their brands are still investing resources in their own social media official pages with the purpose of disseminating information about their products and services, engaging with consumers and ultimately engendering the intention to buy. However, the question of the differences in the impact induced by perceptions regarding different sources of information and their effectiveness in generating and shaping attitude towards the brand and consequently intentions remains unanswered. Moreover, it appears to be no scientific comparison between the effects on the consumers' brand attitude and brand-related intentions when comparing both perceptions of firm-created content on social media created exclusively by brands and user-generated content generated specifically by digital influencers.

Considering this, the main goal of this investigation is to understand, in the context of beauty brands, whether the perceptions regarding content impact consumers' brand attitude and to what extent content generated by digital influencers (users) has a higher impact than content created exclusively by brands (firms) in purchase intention and online engagement with brands. The present investigation will consider user-generated content the one disseminated by digital influencers through social media. Furthermore, this study is going to be based on a comparison of perceptions between the two sources of information and types of generated/created content on the social media network Instagram concerning beauty brands. With the objective of arriving at such conclusions, several hypotheses were developed as the main guidelines for the present analysis.

Figure 1 - Research Framework
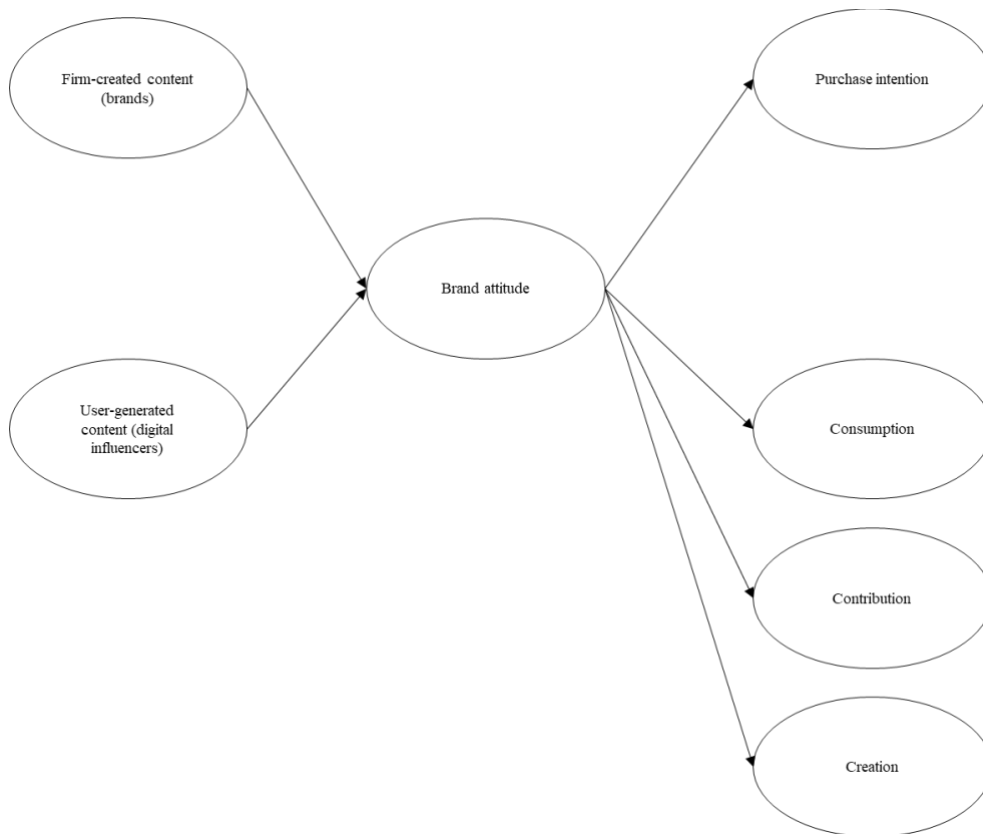
With online advertising reaching unprecedented levels of usage and consequent engagement, it is no surprise that brands are increasingly incorporating the use of social media tools and networks into their marketing communication efforts. Social media generated/created content is increasingly seen as an effective marketing strategy for both brands and digital influencers, considered as a brand's vehicle of effective and efficient advertisement (Paço and Oliveira, 2017) believed to shape attitudes such as purchase and online engagement with brands. Positive attitudes toward the brand are said to be an effective and determining antecedent in influencing consumers to engage not only with other consumers but with brands, which was also facilitated with the growth of social media presence of firms (Barger et al., 2016). It considers all the means and possibilities to involve a consumer with a brand while allowing for interaction and communication to happen, not being dependent on purchase intention (Dessart et al., 2016).

In a brand perspective, firm-created content on social media represents an opportunity in which brands can, not only create content and promote their products/services but also interact and engage with consumers, generating potential new consumers and purchase intention (Cooley et al., 2019). Investing in this online mean of advertisement is considered not only wise

but necessary (Tien et al., 2019) and emerges as an essential vehicle of proximity with consumers and possibility to engage effectively while using this tool to the own brands' benefit with the ultimate goal of inducing purchase (Tien et al., 2019). Although good perceptions on firm-created content are seen as an effective mean of a positive attitude toward brand outcome and intentions (Bruhn et al., 2019), this content will always most likely present a positive image of the brand to the consumer, considering that these specific social media pages are completely controlled by the seller and favor positive endorsements/communication content about the brand (Bruhn et al., 2012).

User-generated content, in this context, is independent from the firm's control (Vanden Bergh et al., 2011) where individuals possess the ability to generate content with the increased possibility of communicating their opinions, reviews and own beliefs to mass audiences on the most diverse platforms. Accessing content that features previous consumer experiences and information, other consumers can base their purchase decisions with more knowledge (Kembau et al., 2014) and play a more active part in choosing and gathering information about products/services. In this sense, firms are perceived has no longer having total control of communications and information being disseminated about their brands (Mangold and Faulds, 2009). Consumers are increasingly said to be actively seeking information through social media tools such as Instagram to make better purchasing decisions, often relying more on the opinions of other users commonly seen as relatable and a vehicle of engagement (Bruhn et al., 2012), such as digital influencers, capable of shaping positive brand attitudes that can ultimately result in purchase decisions (Evans et al., 2017).

It is commonly argued that good brand attitudes will positively impact purchase decision (Ishida et al., 2012). In order to induce a favorable attitude toward brand, authors argue that a positive evaluations and perceptions towards the content are crucial when consumers are exposed to advertisements, where it is believed that favorable perceptions towards the content will most likely lead to a positive attitude toward the brand being advertised, a causal relationship considered essential if purchase is intended to happen (Percy and Rossiter, 1992). This means that brand choice and purchase intent will highly depend on the consumer's beliefs and evaluations of the content, which are influenced through the processing of advertisement - where attitude toward the brand will be structured and, consequently, the choice of whether to purchase or not (Kotler and Keller, 2012). This also means that a mediation of a positive attitude toward the brand will most likely result in a favorable attitude formation and a higher probability of purchase (Shimp, 1981). Considering this, the following hypotheses are proposed:

H1*: Firm-created content has a positive effect on brand attitude towards beauty brands.*

H2*: User-generated content produced by digital influencers has a positive effect on brand attitude towards beauty brands.*

H3*: Brand attitude has a positive effect on purchase intention towards beauty brands.*

H4: *Brand attitude has impact on online engagement with brand, with positive effect on consumers' brand related H4a) consumption; H4b) contribution; H4c) creation towards beauty brands.*

H5: *User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' brand attitude towards beauty brands.*

H6: *Brand attitude mediates the effects of H6a) firm-created content on purchase intention and H6b) the effects of user-generated content on purchase intention towards beauty brands.*

H7: *Brand attitude mediates the effects of firm-created content on consumer's brand related H7a) consumption; H7b) contribution and H7c) creation towards beauty brands.*

H8: *Brand attitude mediates the effects of user-generated content on consumer's brand related H8a) consumption; H8b) contribution and H8c) creation towards beauty brands.*

H9: *User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' purchase intention towards beauty brands.*

H10: *User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' brand related H6a) consumption; H6b) contribution; H6c) creation towards beauty brands.*

4. METHODOLOGY

Following the previous chapter where the hypotheses that conducted this study were proposed, this section will identify the methods used in this investigation, providing a detailed description of the main procedures applied considering a statistical analysis. This research follows a deductive approach, where the development of hypotheses is based on existing theory which designed an accurate strategy to test them (Wilson, 2010) thus assuming that "*if a causal relationship or link seems to be implied by a particular theory or case example, it might be true in many cases''* (Gulati, 2009, p. 42).

A quantitative method was applied with the objective of verifying the investigation hypotheses, where a survey research and quantitative method recurring to statistical analysis will be followed (Crotty, 1998). This type of research is associated with exploring the existing, or not, links between the proposed variables, considered appropriate to support in the explanation of the connection between theory and research (Bryman and Bell, 2007). It focused on the use of primary information in order to achieve the proposed conclusions, since data was collected considering the purpose of analyzing the main research problem (Burns and Bush, 2006). Thus, research was conducted based on the review of literature, through the implementation of a questionnaire.

4.1 Quantitative analysis

4.1.1 Target Population

On this stage of the present investigation, a quantitative research was conducted under the form of a questionnaire, targeting Portuguese females who are aged from a threshold of 16 years old, who use social media and follow brands and digital influencers in the social platform Instagram mainly exposed to beauty advertises under the form of either brand's or digital influencers' content. According to Duggan (2015) and Statista (2020) the prominent Instagram user share by age is higher starting from a minimum of 16 years old - with women being the gender that will most likely be an Instagram user. According to a Bazaar Voice's survey (2012), over half (51%) the users who uses social media trust user-generated content more than other types of advertisement and information in brands' platforms, where 85% of millennials state that content generated by users has some influence in their purchase decisions.

Instagram is a social media platform that has over 500+ million active users (Instagram Info Center, 2019) and according to the Global Digital Insights 2020 report on Portugal by

Datareportal (2020) there were 7 million social media users in Portugal in January 2020, with Instagram being the fifth more used social media platform. Instagram reports that, in the case of Portugal, 3.80 million users can be reached with advertisements, with 55.3% of the advertisement audience being female.

4.2.2 Data collection

Surveys based on the web have effectively emerged in the last few years, allowing for a faster and inexpensive collection of data gathering while being convenient to the respondents to answer (Burns and Bush, 2006). Primary data used in this project was collected with resource to a self-administered questionnaire through *Qualtrics* software, diffused in three social network sites such as Facebook, Instagram and LinkedIn, between the 13th of July of 2020 and the 4th of August of 2020 in order to reach the individuals that are more attentive to the practices discussed in this project and are frequently active on social media, often following/engaging with digital influencers and brands online. The individuals who were part of this study's sample were anonymous volunteers.

4.2.3 Items and Scale measuring

The purpose of this part of the investigation is to validate the proposed hypotheses recurring to a questionnaire. A Likert scale was used with the objective of making an evaluation of the strength of variables affecting consumers' purchase intention and online engagement with brand. This scale measures the extent to which an answer is either positive or negative according to the stated affirmation (Likert, 1932) comprising seven options - three negative answers, three positive answers and one neutral answer - from "totally disagree" to "totally agree", as well as some data from the proposed questions being collected through the use of a frequency scale, where seven options were held from ''never'' to ''always'', containing both three positive and three negative answers, as well as one neutral, in order to measure the frequency related to a certain behavior of the respondent. To refine the questions, a table of items was made based on literature regarding the subject.

Table 1 – Table of items

Author	Dimension	Item
Bruhn, Schoenmueller and Schäfer (2012); Schivinski and Dabrowski (2016) (AdaptedTh	Firm-created content	I am satisfied with the company's social media communications for [brand].
		The level of the company's social media communications for [brand] meets my expectations.
		The company's social media communications for [brand] are very attractive.
		This company's social media communications for [brand] perform well, when compared with the social media communications of other companies.
Bruhn, Schoenmueller and Schäfer (2012); Schivinski and Dabrowski (2016)	User-generated content	I am satisfied with the content generated on social media sites by other users about [brand].
		The level of the content generated on social media sites by other users about [brand] meets my expectations.
		The content generated by other users about [brand] is very attractive.
		The content generated on social media sites by other users about [brand] performs well, when compared with other brands.
Spears and Singh (2004)	Brand attitude	This brand is appealing.
		This brand is good.
		This brand is pleasant.
		This brand is favorable.
Spears and Singh (2004)	Purchase intention	I would probably buy it.
		I would definitely intend to buy it.
		I have a very high purchase interest in it.
		I would definitely buy it.
		I would probably buy it.

			I read posts related to Brand X on social media.
Schivinski, Christodoulides and Dabrowski (2016)	Online engagement with brand	Consumption	I read fanpage(s) related to Brand X on social network sites.
			I watch pictures/graphics related to Brand X.
			I follow blogs related to Brand X.
			I follow Brand X on social network sites.
		Contribution	I comment on videos related to Brand X.
			I comment on posts related to Brand X.
			I comment on pictures/ graphics related to Brand X.
			I share Brand X related posts.
			I "Like" pictures/ graphics related to Brand X.
			I "Like" posts related to Brand X.
		Creation	I initiate posts related to Brand X.
			I initiate posts related to Brand X on social network sites.
			I post pictures/graphics related to Brand X.
			I write reviews related to Brand X.
			I write posts related to brand x on forums.
			I post videos that show Brand X.

4.2.4 Questionnaire Structure

In order to structure the questionnaire, leading digital influencers in the beauty segment were analyzed. Fitting the beauty brands and influencers segment in Portugal, the main brands endorsed in the digital influencer's content were retrieved in order to select the brands to be included in the questionnaires of this investigation. Publications from 10 digital influencers who endorse and generate content regarding brands with at least 100 000 followers was collected, focusing on the beauty segment/product category on Instagram. This specific number of followers was defined considering the notion that "*higher numbers of followers may result in larger reach of the (commercial) message and may thus leverage the power of this specific type of word-of-mouth at scale*" (De Veirman et al., 2017).

With the objective of retrieving the beauty brands more endorsed and mentioned by them, this process not only allowed the phenomena to be analyzed in the most natural and realistic context possible but served as a method for the elaboration of the quantitative analysis questionnaires.

Hence, content from the last 3 months of publications was collected from the official Instagram accounts of 10 leading influencers that fit in the beauty segment in Portugal, presented in the following table, where we can also observe the total of uploads, number of followers, average likes and engagement rate as of July 2020 (Social Blade, 2020).

Table 2 – 10 of the leading Portuguese digital influencers in the beauty segment on Instagram in Portugal

Digital influencer name	Instagram Account	Total of uploads	Number of followers	Average number of Likes	Engagement rate (%)
Helena Coelho	@helenacoelhooo	3 410	463 834	42 940,60	14,53%
Bárbara Corby	@barbaracorby	1 163	277 106	43 391,10	15,71%
Mafalda Sampaio	@mafalda.sampaio	1 893	482 154	42 551,70	8,86%
Adriana Silva	@adri.silvaaa	1 062	243 509	20 803,80	8.76%
Inês Rochinha	@inerochinha	932	270 949	28 210,60	10,63%
Inês Mocho	@inesmocho.makeup	2 009	259 244	12 652,80	4,92%
Ana Garcia Martins	@apipocamaisdoce	9 330	515 695	20 838,50	5,19%
Inês Ribeiro	@inesribeirooficial	1 582	145 765	11 093,30	7.64%
Alice Trewinnard	@alicetrewinnard	1 170	220 120	21 910,60	10,24%
Catarina Filipe	@catarinafilipe	1 446	196 900	17 716,20	9,11%

On a second phase, the content collected from the influencers was then analyzed with the objective of not only retrieving the beauty brands and their official Instagram accounts more mentioned and endorsed in the content generated by the Portuguese influencers, but also to analyze them in terms of total of uploads, number of followers, average amount of likes and engagement as of July 2020 - which are presented in the following table.

Table 3 – 10 of the most endorsed brands by leading Portuguese digital influencers on the beauty segment in Portugal

Brand name	Instagram Account	Total of uploads	Number of followers	Average number of Likes	Engagement rate (%)
Sephora	@sephoraportugal	4 965	269 830	1 320 000	0,50%
Nyx	@nyxcosmeticspt	2 812	120 941	862,72	0,72%
Benefit	@benefitcosmeticsportugal	4 322	97 246	294,04	0,31%
L'Oréal	@lorealportugal	515	63 104	298,32	0,49%
Quem disse berenice	@quemdisseberenicept	560	155 003	725,48	0,49%
Nivea	@niveapt	320	42 782	399,88	0,97%
Clinique	@cliniqueportugal	1 358	42 363	189,32	0,45%
Kiehl's	@kiehlsportugal	705	22 465	183,12	0,87%
Garnier	@garnierportugal	635	72 328	446,28	0,66%
Bioderma	@biodermaportugal	833	57 679	305,12	1,36%

This preliminary analysis served as a base for the questionnaire. The questionnaire was built in blocks, where respondents were firstly asked if they follow brands on Instagram, as well as digital influencers. If they answered negatively to either one or both of these questions, they couldn't complete the questionnaire.

Then, the respondents were asked how many brands they follow on Instagram, if they ever got to know any products through the brands they follow and if content from any brand has ever led them to an actual purchase. The same questions were then asked regarding digital influencers.

Following this, respondents were asked to select one brand from a list of the most mentioned and endorsed beauty brands by leading Portuguese digital influencers that they had lately recognized or follow on Instagram, that also have a strong presence in their own Instagram official accounts. By limiting the respondent's selection of brand from this list, we ensured that all the brands listed not only invested and created content in their own Instagram official pages but are also highly mentioned and endorsed in the digital influencers' content. The requirement of respondents to choose a brand they often recognize is based on the

assumption that '*social media platforms are visited very selectively by users, as every platform has its own focus*'' (Bruhn et al., 2012), which means that, in order to test the variables and collect the perceptions on content, we needed to ensure that the respondents had actually perceived a specific brand on Instagram. The purpose of this part was not only to test the perception of the respondents on firm-created content, but also to make the respondents think about their selected brand for the rest of the questionnaire. If they didn't select or remember any of the brands proposed, they couldn't complete the questionnaire.

Then, respondents were confronted with affirmations made accordingly to the items proposed by the variables in study (Table 1), where they had to respond and show their level of agreement according to the brand they previously selected. The same applied to the following part, where respondents had to think about digital influencers that they remember generating content on Instagram about the brand they previously selected, in order to show their level of agreement to the items proposed. The purpose of both of these blocks was to collect the perceptions on firm-created and user-generated content.

Then, the respondents were asked to share their level of agreement with affirmations from the items based in literature, as well as to share the frequency of behavior regarding the items (Table 1).

Lastly, before the conclusion of the questionnaire, the respondents were asked socio-demographic questions. All the items used in the scales were first collected in English, being forwardly translated to Portuguese in order to match the respondents' native and most convenient language.

4.2.5 Pre-tests

After the construction of the questionnaire, pre-tests were carried out with the objective of reducing errors, determining problematic questions that could cause some confusion or not having an accurate interpretation by the respondents. These pre-tests were conducted between the 14th of July of 2020 and 19th of July of 2020, involving a sample of 10 respondents that matched the target population. These respondents pointed out the high level of extensive reading of a certain number of questions that was causing the respondents to experience some difficulty in comprehending the questions.

Considering this, the introduction and explanation of the questions was then reduced in order to ease the reading and comprehension of the respondents. After these changes were carried out, the process of data collection began.

4.2.6 Data Analysis Procedures

The statistical analysis was conducted with the software IBM SPSS Statistics version 26.0 for Macbook. The analysis included demographics and descriptive statistics, as well as frequencies. In order to proceed with the investigation, the several scale items would further be gathered in indicators – for this purpose, Principal Components Analysis were requested, thus, the reliability and internal consistency of the indicators was tested through Cronbach's Alpha. With all the assumptions confirmed, the analysis and testing of the proposed hypotheses was carried out. With the objective of analyzing the proposed hypotheses, simple and multiple linear regressions were performed, thus, several mediation effects were measured resourcing to Andrew Hayes' mediation effect analysis through the PROCESS 3.5 plug-in for SPSS. The significance level (α) was fixed at 0.05.

5. RESULTS

5.2 Quantitative analysis

5.2.1 Sample characterization

The initial sample of questionnaire respondents consisted of a total of 350 women, where 200 were found valid. Characterized with a mean of 23.2 years old, the majority, 45%, had as highest academic level a bachelor's degree and 43% were employed.

Table 4 - Sample characterization

		N	%
Age (Mean;Std. Deviation)		23,2	3,3
Academic background	High school	55	27,5
	Bachelor degree	90	45
	Post-graduation	17	8,5
	Master degree	38	19
Employment situation	Unemployed	11	5,5
	Student	76	38
	Worker/student	27	13,5
	Worker	86	43

5.2.2 Brand and influencer related behavior

Every respondent who answered the questionnaire followed both brands and digital influencers on Instagram. Considering brands, we could highlight that 35% of the respondents followed between 5 to 10 brands on Instagram, percentage which corresponded to a total of 70 women.

Table 5 – How many brands would you say you follow on Instagram?

		N	%
How many brands would you say you follow on Instagram?	1 - 5	31	15,5
	5 - 10	70	35
	10 -15	38	19
	> 15	61	30,5
	Total	200	100

From the total of respondents, 97% had also stated that they did, at least once, got to know products from the brands they followed on Instagram and 89% of the respondents had also been led to acquire a product.

Regarding influencers, 86 from the total of 200 respondents stated that they followed more than 15 influencers on Instagram, which represented 43%.

Table 6 - How many brands would you say you follow on Instagram?

		N	%
How many influencers would you say you follow on Instagram?	1 - 5	23	11,5
	5 - 10	53	26,5
	10 -15	38	19
	> 15	86	43
	Total	200	100

Considering the total of respondents, 99,5% also stated that they got to know products through the influencers they followed on Instagram, 91,5% affirming that they have been led, by digital influencers, to acquire a product.

In comparison with followed brands, we could observe that the majority of the respondents followed more digital influencers than they followed brands. Thus, we could emphasize that the number of respondents that stated that they have both got to know new products and led to purchase from content generated by digital influencers (99,5% and 91,5% accordingly) is higher than from content created by brands (97% and 89%).

5.2.3 Principal Component Analysis

In order to analyze the interdependence between the constructs, a Principal Components Analysis (PCA) was performed, which allowed the identification of subsets of variables, which are highly correlated amongst each other in order to extract the considered appropriate number of components for each scale. In order to perform a Principal Components Analysis, the proposed variables had to be metrical, and the sample size adequate – exactly at least five times more cases than the number of variables (Reis, 2001). With both these assumptions confirmed, the input variables had also to present the existence of multicollinearity – which means the variables needed to show correlations (Reis, 2001). This assumption could be analyzed by observing, on a first stage, the correlations' matrix of the Kaiser-Meyer-Olkin (KMO) test, where values from 0.7 are considered good and the higher the KMO value the more the input variables are correlated (Reis, 2001). All the input variables in this analysis showed values higher than 0.7 (tables 6 to 11) hence confirming this assumption. Thus, on a second stage, the Bartlett's test was also analyzed. This test had the objective to inquire if there isn't a correlation between any pair of variables (Reis, 2001), where the adequate result must come from the rejection of the null hypothesis. Since all the tests showed a p value lower than 0.05 (tables 6 to 11), the null hypothesis is rejected. So, the assumption was confirmed.

With all the required assumptions confirmed, the Principal Components Analysis was performed. The input variables could admit a partition in several subsets, which reflect different analytical dimensions, considering that if the Principal Components Analysis extracted only one component, it means that the construct in analysis was unidimensional (Field, 2017). Each of the first four constructs (Firm-created content; User-generated content; Brand attitude; Purchase intention) extracted one component – which confirmed that each of these subsets of items were measuring the same construct (Field, 2017).

Table 7 – Components of Firm-created content

Constructs	Components
	Firm-created content
FCC1	.911
FCC2	.867
FCC3	.865
FCC4	.849
Total Variance Explained	76,3

KMO = .826
Bartlett's test = 0.000

Table 8 – Components of User-generated content

Constructs	Components
	User-generated content
UGC1	.928
UGC2	.915
UGC3	.883
UGC4	.876
Total Variance Explained	81,1

KMO = .811
Bartlett's test = 0.000

Table 9 – Components of Brand attitude

Constructs	Components
	Brand attitude
BA1	.867
BA2	.837
BA3	.837
BA4	.736
Total Variance Explained	67,4

KMO = .770
Bartlett's test = 0.000

Table 10 – Components of Purchase intention

Constructs	Components
	Purchase intention
PI1	.916
PI2	.912
PI3	.905
PI4	.817
Total Variance Explained	78,7

KMO = .814
Bartlett's test = 0.000

With all the required assumptions confirmed, another Principal Component Analysis was requested considering a Varimax rotation (Reis, 2001) in order to analyze the interdependence between the Online engagement scale – which gathered 3 dimensions (Consumption; Contribution; Creation) (Field, 2017).

Table 11 – Components of Online engagement

Constructs	Components			
	1	**2**	**3**	**4**
CREA3	.906	.272	.103	.111
CREA2	.893	.284	.064	.135
CREA6	.889	.240	.089	.081
CREA1	.861	.298	.065	.154
CREA4	.851	.218	.126	.080
CREA5	.747	.291	.224	.023
CONTR3	.295	.874	.144	.156
CONTR2	.344	.872	.106	.102
CONTR1	.415	.746	.133	.136
CONTR4	.415	.688	.192	.158
CONS1	.057	.087	.857	.112
CONS2	.154	.094	.852	.196
CONS3	.007	.075	.677	.369
CONS4	.264	.333	.616	.103
CONTR6	.094	.195	.178	.617
CONTR5	.065	.225	.223	.593
CONS5	.246	-.024	.337	.563

KMO = .893 Bartlett's test = 0.000

Three scale items revealed to be problematic and showed low loading values (Reis, 2001). Hence, a new Principal Components Analysis was requested removing, one item at a time, the three items. The result from the analysis considering the removal of those items resulted in an accurate component extraction.

Table 12 – Components of Online engagement (items removed)

Constructs	Components		
	Creation	**Contribution**	**Consumption**
CREA3	.902	.298	.119
CREA2	.890	.314	.088
CREA6	.884	.266	.089
CREA1	.860	.327	.097
CREA4	.852	.234	.131
CREA5	.752	.286	.210
CONTR3	.281	.888	.166
CONTR2	.325	.886	.115
CONTR1	.399	.768	.148
CONTR4	.399	.712	.215
CONS2	.164	.099	.868
CONS1	.057	.089	.850
CONS3	.029	.085	.781
CONS4	.260	.338	.604

KMO = .893

Bartlett's test = 0.000

With all the components showing reasonable loading values and divided into accurate subsets correlated amongst each other, we proceeded to the internal consistency analysis.

5.2.4 Internal consistency

In order to proceed with the present investigation, the internal consistency of the variables' values was tested, considering the previous removal of problematic items, using the Cronbach's Alpha, which varies between 0 and 1 – where values with a minimum of 0,7 are considered to have a good level of internal consistency (Aldrich & Cunningham, 2015). We can observe on table 24 that all the scales display levels superior to 0,7.

Table 13 – Internal consistency of the scales

Measure	**Number of items**	**Cronbach's Alpha**
Firm-created content	4	0,896
User-generated content	4	0,922
Brand attitude	4	0,833
Purchase intention	4	0,908
Online engagement with brand – Consumption	4	0,799
Online engagement with brand – Contribution	4	0,924
Online engagement with brand – Creation	6	0,960

5.2.4 Hypotheses analysis

H1*: Firm-created content has a positive effect on brand attitude towards beauty brands.*

With the objective of analyzing the effect of firm-created content on brand attitude towards beauty brands, a simple linear regression was performed (Maroco, 2018). As this model's significance is 0.000, and considering a p value of 0.05, we accept this hypothesis. There is statistical evidence that perceptions regarding firm-created content have a positive effect (B=0,709) on brand attitude towards beauty brands. This means that the higher this value, if everything else remains constant, the higher the effect of perceptions regarding firm-created content on brand attitude. Thus, 50% of the variance of brand attitude towards beauty brands in this model can be explained by the perceptions regarding firm-created content (R^2=0,500; F(1,198)=200,353; p=0,000).

Table 14 – Model for Hypothesis 1

Variables	P-value	Beta values
Firm-created content	0.000	0,709
R^2		0,500
df		1,198
F		200,353

H2*: User-generated content produced by digital influencers has a positive effect on brand attitude towards beauty brands.*

A simple linear regression was also applied in order to analyze this hypothesis (Maroco, 2018). As the significance for this model is 0.000, considering a p value of 0.05, we accept this hypothesis. There is statistical evidence that perceptions regarding user-generated content have a positive effect (B=0,524) on brand attitude towards beauty brands. This means that the higher this value, if everything else remains constant, the higher the effect of perceptions regarding user-generated content on brand attitude towards beauty brands. Thus, 27,1% of the variance of brand attitude towards beauty brands can be explained by the perceptions regarding user-generated content (R^2=0,271; F(1,198)=75,101; p=0,000).

Variables	P-value	Beta values
User-generated content	0.000	0,524
R^2		0,271
df		1,198
F		75,101

H3*: Brand attitude has a positive effect on purchase intention towards beauty brands.*

This hypothesis was analyzed considering a simple linear regression (Maroco, 2018). As the significance level of this model is 0.000, and considering a p value of 0.05, we accept this hypothesis. There is statistical evidence that brand attitude towards beauty brands has a positive effect (B=0,721) on purchase intention. This means that the higher this value, if everything else remains constant, the higher the effect of brand attitude on purchase intention. Thus, 51,7% of the variance of purchase intention can be explained through brand attitude towards beauty brands (R^2=0,517; F(1,198)=214,411; p=0,000).

Table 16 – Model for Hypothesis 3

Variables	P-value	Beta values
User-generated content	0.000	0,721
R^2		0,517
df		1,198
F		214,411

H4: *Brand attitude has impact on online engagement with brand, with positive effect on consumers' brand related H4a) consumption; H4b) contribution; H4c) creation towards beauty brands.*

For this hypothesis, three multiple linear regressions were performed (Reis, 2001). The significance level of the impact of brand attitude towards beauty brands on online engagement with brand in consumer's brand related consumption (H4a) is 0.000, and considering a p value of 0.05, we accept this hypothesis. There is statistical evidence that brand attitude has a positive

effect (B=0,444) on consumer's brand related consumption. This means that the higher this value, if everything else remains constant, the higher the effect of brand attitude on consumption. Thus, 19,3% of the variance of consumer's brand related consumption can be explained through brand attitude towards beauty brands (R^2=0,193; F(1,198)=48,594; p=0,000).

Table 17 – Model for Hypothesis 4a)

Variables	P-value	Beta values
Brand attitude	0.000	0,444
R^2		0,193
df		1,198
F		48,594

Regarding consumer's brand related contribution (H4b) the significance level of the impact of brand attitude towards beauty brands is 0.023, and considering a p value of 0.05, we accept this hypothesis. There is statistical evidence that brand attitude towards beauty brands has a positive effect (B=0,160) on consumer's brand related contribution. This means that the higher this value, if everything else remains constant, the higher the effect of brand attitude on contribution. Thus, 2,1% of the variance of consumer's brand related consumption can be explained through brand attitude towards beauty brands (R^2=0,021; F(1,198)=5,214; p=0,023).

Table 18 – Model for Hypothesis 4b)

Variables	P-value	Beta values
Brand attitude	0.023	0,160
R^2		0,021
df		1,198
F		5,214

Regarding consumer's brand related creation (H4c) the significance level of the impact of brand attitude towards beauty brands is 0.153, and considering a p value of 0.05, we reject this hypothesis. There is no statistical evidence that brand attitude towards beauty brands has a

positive effect on consumer's brand related creation, thus not explaining its variation (R^2=0,005; $F_{(1,198)}$=2,060; p=0,153).

Table 19 – Model for Hypothesis 4c)

Variables	P-value	Beta values
Brand attitude	0.153	0,102
R^2		0,005
df		1,198
F		2,060

H5: *User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' brand attitude towards beauty brands.*

Regarding this hypothesis, a multiple linear regression was performed (Reis, 2001). The linear model is statistically significant (p<0,05) meaning that it helps to predict brand attitude towards beauty brands, explaining 52,1% of its variation (R^2=0,521; $F_{(2,197)}$=109,141; p=0,000). Observing the standardized regression coefficients, firm-created content (B=0,606) has a higher value than user-generated content (B=0,182), however, they are both statistically significant (p<0.05) which means that both effects help to predict brand attitude. Consequently, we reject this hypothesis. User-generated content produced by digital influencers doesn't have a stronger effect than firm-created content on consumers' brand attitude towards beauty brands.

Table 20 – Determinant variables of Brand attitude

Variables	P-value	Beta values
Firm-created content	0.000	0,606
User-generated content	0.002	0,182
R^2		0,521
P-value		0,000

H6: *Brand attitude mediates the effects of H6a) firm-created content on purchase intention and H6b) the effects of user-generated content on purchase intention towards beauty brands.*

In these hypotheses, the mediation effect of brand attitude was analyzed considering the mediation effect analysis of Andrew Hayes and the PROCESS 3.5 plug-in – which evaluates the mediation effect between two variables and how the impact of one on the other variates considering the mediation of one variable (Hayes, 2017) where "*the mediation, M, is the mechanism by which X influences Y*" (Prado et al., 2014, p. 8).

This analysis is often considering divided into steps that comprise paths (Preacher & Hayes, 2004). Firstly, this analysis evaluates the assumption of path C, where the X (independent variable) predicts Y (dependent variable). Then, as a second step, path A evaluates if X predicts M (mediation variable). In the last step, path B comprises the relationship of X and M together as predictors of Y, evaluated in order to understand where not only M predicts Y but, as path C', X no longer predicts or the effect is lessened on Y with M in the equation (Prado et al., 2014; Preacher and Hayes, 2004; Hayes, 2017).
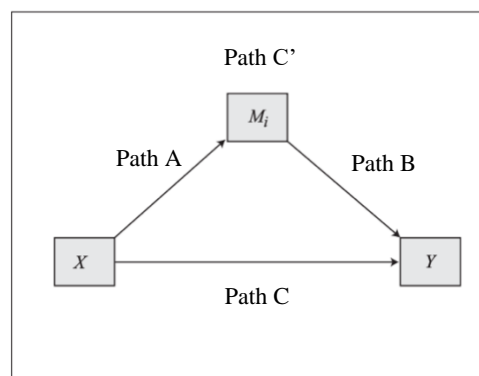
Figure 2 – Model for Mediation Effect Analysis (Retrieved and adapted from Haynes, 2017)

Regarding the mediation effect of brand attitude in perceptions concerning firm-created content and purchase intention (H6a), the first path (C) considered the effect on X on Y, that is, firm-created content on purchase intention. This model is statistically significant ($p<0.05$), where perceptions regarding firm-created content (B=0,584) help to predict purchase intention ($F(1,198)=101,405$). Thus, 33,8% of its variation can be explained through perceptions regarding firm-created content ($R^2=0,338$).

As a second step, path A considered the effect of X on M, that is, firm-created content on brand attitude. This model is statistically significant ($p<0.05$), where perceptions regarding

firm-created content (B=0,631) help to predict brand attitude (F(1,198)=200,353) and explains 50,3% of its variation (R^2=0,503).

Considering the last step, path B specified the effect of X and M together in predicting Y. This model is statistically significant (p<0.05), where together perceptions regarding firm-created content and brand attitude help to predicted purchase intention (F(2,197)=111,042), thus explaining 52,9% of its variation (R^2=0.529). Brand attitude, by itself, also predicted purchase intention (B=0,700; p=0,000).

Path C' evaluated the effect of perceptions regarding firm-created content on purchase intention with the mediation of brand attitude. This means that it was expected, in order for mediation to happen, that the presence of brand attitude in the effect of perceptions regarding firm-created content on purchase intention diminished the effect of the perceptions by its own on purchase intention. Although significant (p<0.05) the effect of perceptions regarding firm-created content on purchase intention when brand attitude is present as a mediator (B=0,147) was in fact lower than without brand attitude as a mediator (0,584). This means that brand attitude does indeed mediate the relationship between perceptions regarding firm-created content and purchase intention, where the direct effect of firm-created content on purchase intention diminishes with the presence of brand attitude. Hence, this hypothesis is accepted.

Table 21 – Path C and C' of mediation of Brand attitude between Firm-created content and Purchase intention

Paths	P-value	Beta values	R^2
Path C: Firm-created content – Purchase intention	0.000	0,584	0,338
Path C': Firm-created content – Purchase intention (with Brand attitude)	0.051	0,147	0,529

Regarding the mediation effect of brand attitude in perceptions concerning user-generated content and purchase intention (H6b), the first path (C) considered the effect of user-generated content on purchase intention. This model is statistically significant (p<0.05), where perceptions regarding user-generated content (B=0,323) helped to predict purchase intention (F(1,198)=32,324). Thus, 14% of its variation can be explained through perceptions regarding user-generated content (R^2=0,140).

As a second step, path A considered the effect of X on M, that is, user-generated content on brand attitude. This model is statistically significant (p<0.05), where perceptions regarding

user-generated content (B=0,401) helped to predict brand attitude ($F_{(1,198)}$=75,100) and explain 27,5% of its variation (R^2=0,275).

Considering the last step, path B specifies the effect of X and M together in predicting Y. This model is statistically significant, where together perceptions regarding user-generated content and brand attitude help to predict purchase intention ($F_{(2,197)}$=106,671), thus explaining 51,9% of its variation (R^2=0.519). Brand attitude, by itself, also predicts purchase intention (B=0,816; p=0,000).

Path C' evaluated the effect of perceptions regarding user-generated content on purchase intention with the mediation of brand attitude. The effect of perceptions regarding user-generated content on purchase intention when brand attitude is present as a mediator (B=-0,004) was in fact lower than without brand attitude as a mediator (B=0,323) where the model ceases to be statistically significant (p=0,934). This means that brand attitude does indeed mediate the relationship between perceptions regarding user-generated content and purchase intention, where the direct effect of perceptions regarding user-generated content ceases to exist with the presence of brand attitude. Hence, this hypothesis is accepted. There is total mediation of brand attitude since in its presence the direct effect of perceptions regarding user-generated content on purchase intention cease to be significant.

Table 22 – Path C and C' of mediation of Brand attitude between User-generated content and Purchase intention

Paths	P-value	Beta values	R^2
Path C: User-generated content – Purchase intention	0.000	0,323	0,140
Path C': User-generated content – Purchase intention (with Brand attitude)	0.934	-0,004	0,519

H7: *Brand attitude mediates the effects of firm-created content on consumer's brand related H7a) consumption; H7b) contribution and H7c) creation towards beauty brands.*

In these hypotheses, the mediation effect of brand attitude was also analyzed considering the mediation effect analysis of Andrew Hayes and the PROCESS 3.5 plug-in.

Regarding the mediation effect of brand attitude in perceptions regarding firm-created content on online engagement – consumer's brand related consumption (H7a), the first path (C) considered the effect firm-created content on consumer's brand related consumption. This

model is statistically significant ($p<0.05$), where perceptions regarding firm-created content (B=0,552) help to predict purchase intention ($F_{(1,198)}=50,703$). Thus, 20,3% of its variation can be explained through perceptions regarding firm-created content ($R^2=0,203$).

As a second step, simultaneously as the hypothesis before, path A considered the effect of firm-created content on brand attitude. This model is statistically significant ($p<0.05$), where perceptions regarding firm-created content (B=0,631) help to predict brand attitude ($F_{(1,198)}=200,353$) and explain 50,3% of its variation ($R^2=0,503$).

Considering the last step, path B specified the effect of firm-created content and brand attitude together in predicting consumer brand related consumption through online engagement. This model is statistically significant ($p<0.05$), where together perceptions regarding firm-created content and brand attitude help to predicted consumption ($F_{(2,197)}=30,200$), thus explaining 23,4% of its variation ($R^2=0.234$). Brand attitude, by itself, also predicted purchase intention (B=0,342; p=0,000).

Path C' evaluated the effect of perceptions regarding firm-created content on consumer's brand related consumption with the mediation of brand attitude. Statistically significant ($p<0.05$) the effect of perceptions regarding firm-created content on consumption when brand attitude is present as a mediator (B=0,342) was in fact lower than without brand attitude as a mediator (0,552). This means that brand attitude does indeed mediate the effect between perceptions regarding firm-created content and consumption, where the direct effect of firm-created content on consumer's brand related consumption diminishes with the presence of brand attitude. Hence, this hypothesis is accepted.

Table 23 – Path C and C' of mediation of Brand attitude between Firm-created content and consumer's brand related consumption

Paths	P-value	Beta values	R^2
Path C: Firm-created content – Consumption	0.000	0,552	0,203
Path C': Firm-created content – Consumption (with Brand attitude)	0.002	0,342	0,234

Regarding the mediation effect of brand attitude in perceptions about firm-created content on online engagement – consumer's brand related contribution (H7b), the first path (C) considered the effect firm-created content on consumer's brand related contribution. This

model is statistically significant ($p<0.05$), where perceptions regarding firm-created content (B=0,305) help to predict contribution ($F_{(1,198)}=8,832$). Thus, 4,2% of its variation can be explained through perceptions regarding firm-created content ($R^2=0,042$).

As a second step, simultaneously as the hypothesis before, path A considered the effect firm-created content on brand attitude. This model is statistically significant ($p<0.05$), where perceptions regarding firm-created content (B=0,631) help to predict brand attitude ($F_{(1,198)}=200,353$) and explain 50,3% of its variation ($R^2=0,503$).

Considering the last step, path B specified the effect of firm-created content and brand attitude together in predicting consumer brand related contribution through online engagement. This model is statistically significant ($p<0.05$), where together perceptions regarding firm-created content and brand attitude help to predicted consumption ($F_{(2,197)}=4,434$), thus explaining 4,3% of its variation ($R^2=0.431$). However, brand attitude, by itself, didn't predict consumer's brand related contribution (B=0,045; p=0,781).

Path C' evaluated the effect of perceptions regarding firm-created content on consumer's brand related contribution with the mediation of brand attitude. The effect of perceptions regarding firm-created content on consumption when brand attitude is present as a mediator didn't reveal to be significant (B=0,277; p=0,597). This means that brand attitude has a total mediation the effect between perceptions regarding firm-created content and contribution, where the direct effect of perceptions regarding firm-created content ceases to exist with the presence of brand attitude. Hence, this hypothesis is accepted.

'Table 24 – Path C and C' of mediation of Brand attitude between Firm-created content and consumer's brand related contribution

Paths	P-value	Beta values	R^2
Path C: Firm-created content – Contribution	0.003	0,305	0,042
Path C': Firm-created content – Contribution (with Brand attitude)	0.059	0,277	0,043

Regarding the mediation effect of brand attitude in perceptions regarding firm-created content on online engagement – consumer's brand related creation (H7c), the first path (C) considered the effect firm-created content on consumer's brand related creation. This model is statistically significant ($p<0.05$), where perceptions regarding firm-created content (B=0,321)

helped to predict creation (F(1,198)=9,720). Thus, 4,6% of its variation can be explained through perceptions regarding firm-created content (R^2=0,046).

As a second step, simultaneously as the hypothesis before, path A considered the effect firm-created content on consumer's brand related creation. This model is statistically significant (p<0.05), where perceptions regarding firm-created content (B=0,631) help to predict brand attitude (F(1,198)=200,353) and explain 50,3% of its variation (R^2=0,503).

Considering the last step, path B specified the effect of perceptions regarding firm-created content and brand attitude together in predicting consumer brand related creation through online engagement. This model is statistically significant (p<0.05), where together perceptions regarding firm-created content and brand attitude help to predicted creation (F(2,197)=5,426), thus explaining 5,2% of its variation (R^2=0.052). Brand attitude, by itself, didn't predict consumer's brand related creation (B=-0,017; p=0,289).

Path C' evaluated the effect of perceptions regarding firm-created content on consumer's brand related creation with the mediation of brand attitude. Although significant (p<0.05) the effect of perceptions regarding firm-created content on creation when brand attitude is present as a mediator (B=0,431) was in fact lower than without brand attitude as a mediator (0,231). This means that brand attitude does indeed mediate the effect between perceptions regarding firm-created content and creation, where the direct effect of firm-created content on creation diminishes with the presence of brand attitude. Hence, this hypothesis is accepted.

Table 25 - Path C and C' of mediation of Brand attitude between Firm-created content and consumer's brand related creation

Paths	P-value	Beta values	R^2
Path C: Firm-created content – Creation	0.002	0,321	0,046
Path C': Firm-created content – Creation (with Brand attitude)	0.003	0,431	0,052

H8: *Brand attitude mediates the effects of user-generated content on consumer's brand related H8a) consumption; H8b) contribution and H8c) creation towards beauty brands.*

In these hypotheses, the mediation effect of brand attitude was also analyzed considering the mediation effect analysis of Andrew Haynes and the PROCESS 3.5 plug-in.

Considering the mediation effect of brand attitude in perceptions regarding user-generated content and online engagement – consumer's brand related consumption (H8a), the first path (C) considered the effect of user-generated content on consumer's brand related consumption. This model is statistically significant (p<0.05), where perceptions regarding user-generated content (B=0,437) helped to predict purchase intention (F(1,198)=41,246). Thus, 17,2% of its variation can be explained through perceptions regarding firm-created content (R^2=0,172).

As a second step, as earlier, path A considered the effect of X on M, that is, user-generated content on brand attitude. This model is statistically significant (p<0.05), where perceptions regarding user-generated content (B=0,401) helped to predict brand attitude (F(1,198)=75,100) and explain 27,5% of its variation (R^2=0,275).

Considering the last step, path B specified the effect of X and M together in predicting Y. This model is statistically significant (p<0,05), where together perceptions regarding user-generated content and brand attitude help to predicted consumer's brand related consumption (F(2,197)=31,612), thus explaining 24,3% of its variation (R^2=0.243). Brand attitude, by itself, also predicted consumption (B=0,429; p=0,000).

Path C' evaluated the effect of perceptions regarding user-generated content on consumer's brand related consumption with the mediation of brand attitude. The effect of perceptions regarding user-generated content on consumption when brand attitude is present as a mediator revealed to be statistically significant (p<0,005) and its effect (B=0,265) was in fact lower than without brand attitude as a mediator (B=0,437). This means that brand attitude mediates the effect between perceptions regarding user-generated content and consumption, where the direct effect of user-generated content on consumption diminishes with the presence of brand attitude. Hence, this hypothesis is accepted.

Table 26 - Path C and C' of mediation of brand attitude between User-generated content and consumer's brand related consumption

Paths	P-value	Beta values	R^2
Path C: User-generated content – Consumption	0.000	0,437	0,172
Path C': User-generated content – Consumption (with Brand attitude)	0.007	0,265	0,243

Regarding the mediation effect of brand attitude in perceptions regarding user-generated content and consumer's brand related contribution (H8b), the first path (C) considered the effect of user-generated content on contribution. This model is statistically significant ($p<0.05$), where perceptions regarding user-generated content (B=0,268) helped to predict purchase intention ($F_{(1,198)}=9,220$). Thus, 4,4% of its variation can be explained through perceptions regarding firm-created content ($R^2=0,044$).

As a second step, path A considered the effect of user-generated content on brand attitude. This model is statistically significant ($p<0.05$), where perceptions regarding user-generated content (B=0,401) helped to predict brand attitude ($F_{(1,198)}=75,100$) and explain 27,5% of its variation ($R^2=0,275$).

Considering the last step, path B specifies the effect of X and M together in predicting Y. This model is statistically significant ($p<0.05$), where together perceptions regarding user-generated content and brand attitude help to predict contribution ($F_{(2,197)}=4,953$), thus explaining 4,7% of its variation ($R^2=0.047$). Brand attitude, by itself, didn't predict contribution (B=0,113; p=0,403).

Path C' evaluated the effect of perceptions regarding user-generated content on consumer's brand related contribution with the mediation of brand attitude. The effect of perceptions regarding user-generated content on contribution when brand attitude is present as a mediator (B=0,223) is slightly lower than without brand attitude as a mediator (B=0,268). This means that, even if with a small difference, brand attitude does mediate the effect between perceptions regarding user-generated content and contribution, where this effect diminishes with the presence of brand attitude. Hence, this hypothesis is accepted.

Table 27 - Path C and C' of mediation of brand attitude between User-generated content and consumer's brand related contribution

Paths	P-value	Beta values	R^2
Path C: User-generated content – Contribution	0.002	0,268	0,044
Path C': User-generated content – Contribution (with Brand attitude)	0.007	0,223	0,047

Regarding the mediation effect of brand attitude in perceptions regarding user-generated content and purchase consumer's brand related creation (H8c), the first path (C) considered the

effect of user-generated content on creation. This model isn't statistically significant (p=0.219), where perceptions regarding user-generated content (B=0,111) didn't help to predict creation (F(1,198)=1,517). Since this first path analysis is essential to be statistically significative in order for the analysis to continue and the mediation effect to possibly occur, we reject this hypothesis (Preacher and Hayes, 2004; Hayes, 2017).

Table 28 - Path C of mediation of Brand attitude between User-generated content and consumer's brand related creation

Variables	P-value	Beta values
User-generated content	0.219	0,111
R^2		0,007
P-value		0,219

H9: *User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' purchase intention towards beauty brands.*

For this hypothesis, a multiple linear regression was performed (Reis, 2001). The linear model is statistically significant (p<0,05) meaning that it helps to predict purchase intention towards beauty brands, explaining 33,5% of its variation (R^2=0,335; F(2,197)=51,159; p=0,000). However, the significance value for the impact of firm-created content in purchase intention is 0.000, while it is 0.333 for the impact of user-generated content. Considering a p value of 0.05 it is possible to conclude that the impact of user-generated content in purchase intention towards beauty brands is not significant. Thus, observing the standardized regression coefficients, firm-created content (B=0,544) has a higher value than user-generated content (B=0,068) which means that is has a higher effect in purchase intention. Consequently, we reject this hypothesis. User-generated content produced by digital influencers doesn't have a stronger effect than firm-created content on consumers' purchase intention towards beauty brands.

Table 29 – Determinant variables of Purchase intention

Variables	P-value	Beta values
Firm-created content	0.000	0,544
User-generated content	0.333	0,068
R^2		0,335
P-value		0,000

H10: *User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' brand related H10a) consumption; H10b) contribution; H10c) creation towards beauty brands.*

In this hypothesis, three multiple linear regressions were performed. Regarding consumer's brand related "Consumption" (H10a) the model is statistically significant (p<0,05) meaning that both firm-created content and user-generated content help to predict consumer's brand related consumption, explaining 23,4% of its variation (R^2=0,234; F(2,197)=31,388; p=0,000). Thus, considering a p value of 0.05, both firm-created content (p=0,000) and user-generated content (p=0,002) are statistically significant. Observing the standardized regression coefficients, the difference between the effects of firm-created content (B=0,319) and user-generated content (B=0,235) is small. Consequently, we reject this hypothesis. User-generated content produced by digital influencers doesn't have a stronger effect than firm-created content on consumers' brand related consumption towards beauty brands (H10a).

Table 30 - Determinant variables of Online engagement - Consumption

Variables	P-value	Beta values
Firm-created content	0.000	0,319
User-generated content	0.002	0,235
R^2		0,234
P-value		0,000

Considering consumer's brand related "Contribution" (H10b) the model only explains 4,6% of its variation (R^2=0,046; F(2,197)=5,817; p=0,004). Thus, considering a p value of 0,05, both firm-created content (p=0,127) and user-generated content (p=0.100) aren't statistically significant. Thus, observing the standardized regression coefficients, user-generated content (B=0,138) shows similar values to firm-created content (B=0,129) which means its perceptions don't have a stronger effect in consumer's brand related contribution. Consequently, we reject this hypothesis. Perceptions regarding user-generated content produced by digital influencers don't have a stronger effect than firm-created content on consumers' brand related contribution towards beauty brands (H10b).

Table 31 - Determinant variables of Online engagement – Contribution

Variables	P-value	Beta values
Firm-created content	0.127	0,129
User-generated content	0.100	0,138
R^2		0,046
P-value		0,004

Regarding consumer's brand related "Creation" (H10c) the model is statistically significant (p<0.05) meaning that both perceptions regarding firm-created content and user-generated content help to predict consumer's brand related creation towards beauty brands, explaining 3,9% of its variation (R^2=0,039; F(2,197)=5,029; p=0,007). However, the significance value for the impact of firm-created content in consumer's brand related creation is 0.004, while it is 0.544 for the impact of user-generated content. Considering a p value of 0,05 it is possible to conclude that the impact of user-generated content is not significant. Thus, observing the standardized regression coefficients, firm-created content (B=0,245) has a higher value than user-generated content (B=-0,051) which means that is has a higher effect in consumer's brand related creation. Consequently, we reject this hypothesis. Perceptions regarding user-generated content produced by digital influencers don't have a stronger effect than firm-created content on consumers' brand related creation towards beauty brands (H10c).

Table 32 - Determinant variables of Online engagement – Creation

Variables	P-value	Beta values
Firm-created content	0.004	0,245
User-generated content	0.544	-0,051
R^2		0,039
P-value		0,007

5.2.5 Model Analysis

Considering the initially proposed model, it is possible to conclude that both perceptions regarding firm-created content and user-generated content have a positive effect on brand attitude towards beauty brands. Thus, brand attitude also shows a positive effect on purchase intention towards beauty brands. Regarding online engagement with brand, brand attitude similarly presents a positive effect in consumer's brand related consumption and contribution.

However, brand attitude towards beauty brands' effect isn't statistically significant in explaining consumer's online engagement particularly in the dimension of consumer's brand related creation. Thus, perceptions regarding user-generated content didn't show a higher effect than firm-created content in consumers' brand attitude towards beauty brands.

Regarding the mediation effect of brand attitude, it revealed to generally be significant. Brand attitude showed a mediation effect between both firm-created/user-generated content and purchase intention. Nevertheless, it only showed a strong mediation effect between perceptions regarding firm-created content and online engagement in consumer's brand related consumption and contribution, but not significant and with low values in consumer's brand related creation. The same was verified in the effect of perceptions regarding user-generated content and online engagement.

Concerning purchase intention, perceptions regarding user-generated content didn't show a stronger effect than perceptions regarding firm-created content. Thus, perceptions regarding user-generated content didn't indicate a stronger effect in consumer's online engagement with brand.

Table 33 - Summary of rejected/accepted hypotheses

Hypotheses	Accepted	Rejected
H1: Firm-created content has a positive effect on brand attitude towards beauty brands.	✕	
H2: User-generated content produced by digital influencers has a positive effect on brand attitude towards beauty brands.	✕	
H3: Brand attitude has a positive effect on purchase intention towards beauty brands.	✕	
H4a): Brand attitude has impact on online engagement with brand, with positive effect on consumers' brand related consumption towards beauty brands.	✕	
H4b): Brand attitude has impact on online engagement with brand, with positive effect on consumers' brand related contribution towards beauty brands.	✕	
H4c): Brand attitude has impact on online engagement with brand, with positive effect on consumers' brand related creation towards beauty brands.		✕
H5: User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' brand attitude towards beauty brands.		✕
H6a): Brand attitude mediates the effects of firm-created content on purchase intention towards beauty brands.	✕	
H6b): Brand attitude mediates the effects of user-generated content on purchase intention towards beauty brands.	✕	
H7a): Brand attitude mediates the effects of firm-created content on consumer's brand related consumption towards beauty brands.	✕	
H7b): Brand attitude mediates the effects of firm-created content on consumer's brand related contribution towards beauty brands.	✕	
H7c): Brand attitude mediates the effects of firm-created content on consumer's brand related creation towards beauty brands.	✕	

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H8a): *Brand attitude mediates the effects of user-generated content on consumer's brand related consumption towards beauty brands.*	✖	
H8b): *Brand attitude mediates the effects user-generated content on consumer's brand related contribution towards beauty brands.*	✖	
H8c): *Brand attitude mediates the effects of user-generated content on consumer's brand related creation towards beauty brands.*		✖
H9: User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' purchase intention towards beauty brands.		✖
H10a): User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' brand related consumption towards beauty brands.		✖
H10b): User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' brand related contribution towards beauty brands.		✖
H10c): User-generated content produced by digital influencers has a stronger effect than firm-created content on consumers' brand related creation towards beauty brands.		✖

6. CONCLUSIONS

6.1 Results discussion

The purpose of this study was to evaluate the effect of perceptions regarding firm-created content and user-generated content on brand attitude towards beauty brands, and consequently on purchase intention and online engagement with beauty brands - comparing to what extent perceptions regarding digital influencer's social media content have a stronger effect than perceptions regarding content created by brands.

Regarding the respondents of this investigation, they consisted in a sample of 200 women with an average age mean of 23.3 years old, where the majority had as highest academic level a bachelor's degree (45%) and the majority were also employed (43%).

An intrinsic purpose of social media tools is enabling the user to follow a certain page or account, facilitating the act of subscribing to their content, where following is often considered a good predictor of the high probability of the user being exposed to its content - regardless of what it is about (De Veirman et al., 2017). Consumers are actively seeking information and content through social media, often relying on the content of other users seen as common consumers, in the place of content created only by brands (Bruhn et al., 2012). It was determined that content created by brands will always most likely present a positive image of the brand to the consumer, where their pages are often completely controlled by the brand and favor positive endorsements (Bruhn et al., 2012). Hence, this was confirmed by this study as most of the respondents followed more influencers than they followed brands - 35% of the respondents followed between 5 to 10 brands while 45% followed more than 15 influencers on Instagram.

Considering the consumers' exposure to social media content, the probability of products/services endorsed being considered on purchase decisions was determined high (Gunksman, 2017). Due to a set of factors that often can make consumers rely their purchase decisions on digital influencers rather than brands - such as high level of trust perceived (Jimenez-Castillo et al., 2019) - content induces a rise in the consumer's consciousness, generating a recognition of need and evaluation of alternatives where awareness of products/services is created (Abidin, 2016). This was also confirmed by this study, where, regarding content created by brands, a percentage of respondents (97%) stated that they did, at least once, got to know products from the brands they followed on Instagram, as well as being led to acquire a product (89%). Nevertheless, a greater percentage of respondents (99,5%)

stated that they got to know products through the digital influencers they followed on Instagram, also affirming that they have been led, by digital influencers, to acquire a certain product (91,5%).

A positive brand attitude left by the content is often argued to be a necessary communication effect (Percy and Rossiter, 1992). Digital marketing as a strategy enabled brands to create content and better promote their products/services with the purpose of inducing a positive brand attitude (Tien et al., 2019) where positive perceptions of firm-created content are seen as an effective mean and predictor of a positive attitude toward the brand (Bruhn et al., 2019). Hence, this investigation proposed that firm-created content has a positive effect on brand attitude towards beauty brands. According to the results, firm-created content has indeed a positive effect on brand attitude towards beauty brands, where respondents that had high positive perceptions regarding firm-created content also showed high levels of positive brand attitude.

With the possibility of accessing content that features previous consumer experiences and information, it is believed that other consumers can base their purchase decisions with more knowledge on user-generated content (Kembau et al., 2014). Digital influencers are argued to be rising as key opinion leaders and user-generated content disseminators, characterized with high levels of proximity with the common consumer (Malik et al., 2013) often generating content in a dynamic and appealing way (Malik et al., 2013) believed to effectively shape attitude toward the brand endorsed (Bruhn et al., 2012). Thus, this study proposed that, considering user-generated content the one disseminated by digital influencers, has a positive effect on brand attitude towards beauty brands. The results indicated precisely that. There was statistical evidence that perceptions regarding user-generated content have a positive effect on brand attitude towards beauty brands, where respondents who showed a high level of positive perceptions regarding user-generated content also showed a high level of positive brand attitude. Additionally, this study also proposed that user-generated content has a higher impact than firm-created content in consumers' brand attitude towards beauty brands. Although showing significance, perceptions regarding user-generated content didn't reveal to have a higher effect than perceptions regarding firm-created content.

Prior to engaging in an actual purchase, consumers are believed to build their purchase intent keeping in mind the number of recognizable benefits of that specific acquisition (Kotler and Keller, 2012) where attitude toward the brand will be structured and, consequently, the choice of whether to purchase or not (Kotler and Keller, 2012). This eventually means that purchase intent will depend on how favorable the attitude toward brand is (Percy and Rossiter,

1992; Kotler and Keller, 2012; Rosenberg and Hovland; 1960; East et al., 2008). Accordingly, this study proposed that brand attitude has a positive effect on purchase intention towards beauty brands. This was confirmed by the results, where brand attitude revealed to be statistically significant in predicting purchase intention – where high positive values of brand attitude correlated with high positive values of purchase intention. This is not unexpected, since when exposed to content, consumers are argued to form a perception about the weakness or strength of arguments presented, which conveys the existence of a positive correlation between the consumer's attitude toward a brand and the probability of buying a product from such brand (Lord et al., 1995).

It is commonly believed that the intrinsic interactive nature of social media tools has changed how consumers engage with brands (Schivinski et al., 2016) where an almost direct contact between consumers and the vastest set of brands can happen. This interaction can be characterized by different levels that are part of online consumer engagement with brands - such as consumption, contribution and creation (Schivinski et al., 2016) which were analyzed in this study. These behaviors are often related with pre-determined attitude toward the brand in question – where a positive brand attitude is argued to be a good predictor of the level of engagement with the brand (Schivinski et al., 2016; Phua et al., 2017; Evans et al., 2017). Thus, this study proposed that brand attitude has impact on online engagement with beauty brands, with a positive effect on its different levels. According to the results, this was confirmed – brand attitude has indeed impact on online engagement with beauty brands, where positive effects between brand attitude and consumer's brand related consumption, contribution and creation revealed statistically significant. This corroborated the assumption that positive levels of brand attitude are good predictors of the levels of engagement with the brand and how the consumers interact online with brands - ultimately determining and defining those behaviors (Schivinski et al., 2016).

Evaluated through both its impact and as a precedent of behaviors, brand attitude was also commonly argued in literature as a mediator of effects, where the attitude towards the brand is often the mechanism which mediates the relationship between the perceptions and outcomes of acknowledging the brand and the set of behaviors which can result from it (Kotler and Keller, 2012). This assumption was also analyzed in this study, where brand attitude was evaluated through its possible mediation effect, which also confirmed in general to happen. Brand attitude showed a mediation effect between both perceptions of firm-created and user-generated content and purchase intention. Regarding consumer's online engagement with the brand, it showed a strong mediation effect in consumer's brand related consumption and contribution through both

perceptions of content, but not as strong on consumer's brand creation. This low or inexistent mediation effect may be due to external factors, where consuming the content and sometimes contributing towards it (Schivinski et al., 2016) envolves low levels of interaction and low effort from the consumer; it only assumes for example liking or following (Schivinski et al., 2016). Thus, the creation dimension of online engagement assumes the predisposition of the consumer for creating towards a specific brand, where although attitude towards that brand can show high levels by iself, it may not necessarily imply a behavior from the consumer (Marbach et al., 2019).

There are several findings in this study that appear contradictory regarding the effects of perceptions regarding user-generated content and firm-created content. When considering the user-generated content by digital influencers, many studies point out not only their effectiveness in affecting consumers' purchase decisions, but the level of proximity with the consumer through their content (Bruhn et al., 2012; Malik et al., 2013; Abidin, 2016; Djafarova et al., 2017). However, this study concluded that perceptions regarding digital influencers' social media content don't show a stronger effect than perceptions regarding content created by beauty brands in determining both purchase intention and online engagement with the brand. There are numerous factors which can contribute to such conclusions. On one hand, some studies argue that digital influencers' content can often lose focus due to the endorsement of a large scope of brands and different market segments (Evans et al. 2017; Boerman et al., 2017; Woodroof et al., 2020) which may cause the consumer not only to lose trust and diminish the credibility in digital influencers, but to become apprehensive when exposed to their content and perceive it as not being genuine (Evans et al. 2017; Boerman et al., 2017). Once these feelings are triggered, it is not surprising that consumers feel less tempted in considering the products/services featured in digital influencers' content in their purchase decisions, where often sponsorship disclosure culminates in the knowledge of persuasion (Boerman et al., 2017). Consumers can, ultimately, develop a tendency to disbelief and dislike the content, as well as feelings of distrust towards it (Wood and Quinn 2003; Wei et al., 2008; Rozendaal et al., 2011; Boerman et al., 2017). Thus, Instagram users selectively follow the pages/accounts they like/are more interested in, where following a certain brand indicates the predisposition to be exposed specifically to its content and consequently their products/services, whereas following a digital influencer can be driven by numerous other factors and not exactly the willingness of exposure to a specific brand content – exposure that often is unintentional and they otherwise would avoid (Abidin, 2016; Djafarova et al., 2017; Boerman et al., 2017).

Online engagement with beauty brands was addressed in literature as an opportunity driven by the brands' focus in social media strategies, in which brands can, not only create content and promote their products/services, but also to allow consumers to interact and engage (Cooley et al., 2019) which can involve online behaviors such as "*reading, writing, watching, commenting, "liking", sharing, and so forth*" (Schivinski et al., 2016, p. 2). Digital influencers often play a key role in the proximity between consumer-brand (Schivinski et al., 2016). Hence, this study proposed that user-generated content has a stronger effect than firm-created content in engendering online engagement behaviors towards beauty brands through brand-related consumption, contribution and creation.

Although it most certainly has an effect, the results indicated that the existing difference between both effects is not statistically significant. Thus, several studies discuss these behaviors as depending on numerous factors, where engagement does not rely either only or precisely on the perceptions regarding the content and might justify why the hypotheses were rejected. It is commonly argued that the predisposition to engage relies more on the individual's motivation rather than external factors and is largely autonomously driven (Osei-Frimpong, 2019) or may depend on the level of involvement with brand (Zaichkowsky, 1985; Mittal and Lee, 1989; Foxall and Pallister, 1998). Several studies point out that online engagement relies severely on personality traits (Homer and Kahle, 1988; Roccas et al., 2002; Schwartz and Bilsky, 1987; Ul Islam et al., 2017; Marbach et al., 2019), such as openness to new experiences and individual motivations, where perhaps "*individuals who are more extravert have greater engagement with online brand communities as they are more sociable and outgoing*" (Marbach et al., 2019, p.17). Hence, the rejection of such hypothesis may rely on the fact that, although it most certainly has an effect, online engagement with brands doesn't solemnly depend on the perceptions regarding the content.

Concluding, it is now possible to answer the proposed research question:

"*To what extent perceptions regarding digital influencers' social media content have a stronger impact than perceptions regarding content created by beauty brands in consumers' purchase intention and online engagement?*"

Perceptions regarding the content generated by digital influencers, solely, don't have a stronger impact than perceptions regarding the content created by brands on both consumers' purchase intention and online engagement with brand. However, brand attitude towards beauty brands revealed to be a strong mediator of effects, where positive perceptions regarding both

digital influencers' and brands content showed positive levels of brand attitude, also considered a good predictor of consumer's purchase intention and probability of engaging online with beauty brands.

6.2 Managerial implications

With the present investigation, the commitment of evaluating the effect of perceptions regarding firm-created content and user-generated content on brand attitude towards beauty brands, and consequently on purchase intention and online engagement was accomplished – thus comparing to what extent perceptions regarding digital influencer's social media content have a stronger impact than perceptions about content created by brands. Although in general for sure significant, digital influencers' content perceptions didn't reveal to have a stronger impact than perceptions concerning content created by brands in consumers' both purchase intention and online engagement with beauty brands. Nevertheless, a positive brand attitude demonstrated to be a strong mediator and good predictor and in instigating such behaviors, being an outcome of the perceptions regarding social media content both created by brands and digital influencers simultaneously. The perceptions regarding content created by brands unveiled to be an effective vehicle of proximity and interaction with consumers superior to perceptions of content disseminated by digital influencers, that although showing to be important, didn't disclose any signs of replacing perceptions and even content created by beauty brands. Ultimately, content created by brands revealed to have a higher impact in consumers, prompting them to engage while also creating an intention of an actual purchase to happen.

Nevertheless, this study also contributed to the notion that beauty brands shouldn't disregard the perceptions and content generated by digital influencers. The majority of the respondents showed both to follow on Instagram a high number of digital influencers and that their perceptions regarding digital influencers' content highly impacted their attitude toward the beauty brand selected. In a modern era of social media technologies and the increasing attention paid to the digital world, influencers rise as key opinion leaders and a mirror of direct feedback about the beauty brands' products/services in a consumer perspective, where they can play a significant part in creating brand awareness and possible purchase intention from consumers. This ultimately means that beauty brands can and should work alongside digital influencers and include them in their social media strategy, through sponsored content and partnerships, where together brands and digital influencers can contribute to a mutual goal: the consumers' purchase intention and will to engage with the brand online.

6.3 Limitations

This study presented some limitations. The number of validated responses turned out to be relatively small (N=200), which leads us to conclude that several respondents didn't complete the questionnaire. This could be due either to lack of motivation or the estimated time that was needed to finish the questionnaire (7 minutes). Thus, the profile of respondents followed a considerable number of brands, where limiting that choice may have caused the respondents to be confused. Respondents were also asked to think about both the brand and digital influencer of their choice throughout the questionnaire, which may have caused the respondents to not answer as accurately as they would if they were evaluating their perception regarding actual publications that contained content created by the brand and by the digital influencer of their choice.

Additionally, the Principal Components Analysis revealed some problematic scale items, which also represented a limitation.

6.4 Recommendations for future research

Recognized as a limitation to this study, the sample size could be increased in order to achieve results that are more precise.

An alternative way to better test the perceptions and differences regarding social media content created by brands/generated by digital influencers would be an experimental study, perhaps manipulated content or a face-to-face experimentation. This experimentation could involve interviews of a certain number of respondents which fitted the targeted sample and inquire about what they considered to be the most mentioned/endorsed brands and digital influencers, as well as their perceptions regarding their content - in order to not only corroborate research but to evaluate this phenomenon directly with consumers. Additionally, the author could also interview both brand owners and digital influencers directly, which we believe would better help to achieve the goal of inquiring about their strategy and to understand this topic from their point of view. Even though this method would require additional time, we believe it could result in both a more accurate brand/digital influencer choice by the respondents and an analysis of the phenomenon in the most representative context possible.

This investigation questioned the extent to which perceptions regarding digital influencers' social media content have a stronger impact than perceptions regarding content created by brands in consumers' both purchase intention and online engagement with the brand was accomplished, as well as brand attitude as a consequence of these perceptions and as a predictor

of the proposed behaviors. For future research, brands could also invest their time and resources in understanding how they can leverage their businesses considering digital influencers as a strategy.

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Annexes

Annexes index

A. Questionnaire in English

Study about brands and influencers

Study about brands and influencers

This questionnaire was elaborated considering the master's degree thesis in Business Administration from ISCTE Business School, with the objective of inquiring about the perceptions regarding brands and influencers on Instagram.

The answers are totally anonymous and won't be shared or identified. The estimated time for completing this questionnaire is 6 minutes.
Any question should be sent cavbo1@iscte-iul.pt.

Thank you for your cooperation.

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1 Do you follow brands on Instagram?

○ Yes (1)

○ No (2)

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2 Do you follow influencers on Instagram?

    ○ Yes (1)

    ○ No (2)

3 How many brands would you say you follow on Instagram?

    ○ 1 - 5 (1)

    ○ 5 - 10 (2)

    ○ 10 - 15 (3)

    ○ > 15 (4)

4 Have you ever got to know products through the brands you follow on Instagram?

    ○ Yes (1)

    ○ No (2)

5 Has a brand that you follow on Instagram ever lead you to acquire a product?

○ Yes (1)

○ No (2)

6 How many influencers would you say you follow on Instagram?

○ 1 - 5 (1)

○ 5 - 10 (2)

○ 10 - 15 (3)

○ > 15 (4)

7 Have you ever got to know products through the influencers you follow on Instagram?

○ Yes (1)

○ No (2)

8 Has an influencer that you follow on Instagram ever lead you to acquire a product?

○ Yes (1)

○ No (2)

End of Block: Block 2

Start of Block: Block 3

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9 From the following brands, please select one that you remember following on Instagram.

*The questions that will follow will consider the brand you select.

○ Sephora (1)

○ Nyx (2)

○ Benefit (3)

○ L'Oréal (4)

○ Quem disse berenice (5)

○ Nivea (6)

○ Clinique (7)

○ Kiehl's (8)

○ Garnier (9)

○ Bioderma (10)

○ None of the above (12)

10 Considering the content that the brand you previously selected creates and publishes on Instagram, please indicate on a scale from 1 (Totally disagree) to 7 (Totally agree) your level of agreement with the following statements.

	1 (Totally disagree) (1)	2 (2)	3 (3)	4 (Neither agree of disagree) (4)	5 (5)	6 (6)	7 (Totally agree) (7)
I am satisfied with the content communicated by this brand. (1)	○	○	○	○	○	○	○
The content communicated by this brand meets my expectations. (2)	○	○	○	○	○	○	○
The content communicated by this brand is very attractive. (3)	○	○	○	○	○	○	○

The content communicated by this brand performs well, when compared with the content communicated by other brands. (4)

○   ○   ○   ○   ○   ○   ○

11 Influencers also post content about brands. Do you recall seeing any content posted by influencers about the brand you previously selected?

○ Yes (1)

○ No (2)

12 Considering the content that influencers generated and post on Instagram about the brand you previously selected, please indicate on a scale from 1 (Totally disagree) to 7 (Totally agree) your level of agreement with the following statements.

	1 (Totally disagree) (1)	2 (2)	3 (3)	4 (Neither agree or disagree) (4)	5 (5)	6 (6)	7 (Totally agree) (7)
I am satisfied with the content generated by influencers about this brand. (1)	○	○	○	○	○	○	○
The content generated by influencers about this brand meets my expectations. (2)	○	○	○	○	○	○	○
The content generated by influencers about this brand is very attractive. (3)	○	○	○	○	○	○	○
The content generated by influencers about this brand performs well, when compared to other brands. (4)	○	○	○	○	○	○	○

End of Block: Block 4

13 Considering the brand you initially selected, please indicate on a scale from 1 (Totally disagree) to 7 (Totally agree) your level of agreement with the following statements.

	1 (Totally agree) (1)	2 (2)	3 (3)	4 (Neither agree of disagree) (4)	5 (5)	6 (6)	7 (Totally agree) (7)
This brand is appealing. (1)	○	○	○	○	○	○	○
This brand is good. (2)	○	○	○	○	○	○	○
This brand pleasant. (3)	○	○	○	○	○	○	○
This brand is favorable. (4)	○	○	○	○	○	○	○

14 Considering the brand you initially selected, please indicate on a scale from 1 (Totally disagree) to 7 (Totally agree) your level of agreement with the following statements.

	1 (Totally disagree) (1)	2 (2)	3 (3)	4 (Neither agree or disagree) (4)	5 (5)	6 (6)	7 (Totally agree) (7)
I would probably buy products from this brand. (1)	○	○	○	○	○	○	○
I have a very high purchase interest in products from this brand. (2)	○	○	○	○	○	○	○
I would definitely buy products from this brand. (3)	○	○	○	○	○	○	○
I would probably buy products from this brand. (4)	○	○	○	○	○	○	○

15 Considering the brand you initially selected, please indicate on a scale from 1 (Never) to 7 (Always) what best describes your behavior regarding the following statements.

	1 (Never) (1)	2 (2)	3 (3)	4 (Sometimes) (4)	5 (5)	6 (6)	7 (Always) (7)
I read posts related to this brand on social media. (1)	○	○	○	○	○	○	○
I read fanpage(s) related to this brand on social network sites. (2)	○	○	○	○	○	○	○
I watch pictures/graphics related to this brand. (3)	○	○	○	○	○	○	○
I follow blogs related to this brand. (4)	○	○	○	○	○	○	○
I follow this brand on social network sites. (5)	○	○	○	○	○	○	○

16 Considering the brand you initially selected, please indicate on a scale from 1 (Never) to 7 (Always) what best describes your behavior regarding the following statements.

	1 (Never) (1)	2 (2)	3 (3)	4 (Sometimes) (4)	5 (5)	6 (6)	7 (Always) (7)
I comment on videos related to this brand. (1)	○	○	○	○	○	○	○
I comment on posts related to this brand. (2)	○	○	○	○	○	○	○
I comment on pictures/graphics related to this brand. (3)	○	○	○	○	○	○	○
I share this brand's related posts. (4)	○	○	○	○	○	○	○
I "Like" pictures/graphics related to this brand. (5)	○	○	○	○	○	○	○
I "Like" posts related to this brand. (6)	○	○	○	○	○	○	○

17 Considering the brand you initially selected, please indicate on a scale from 1 (Never) to 7 (Always) what best describes your behavior regarding the following statements.

	1 (Never) (1)	2 (2)	3 (3)	4 (Sometimes) (4)	5 (5)	6 (6)	7 (Always) (7)
I initiate posts related to this brand. (1)	○	○	○	○	○	○	○
I initiate posts relatedI initiate posts related to this brand on social network sites. (2)	○	○	○	○	○	○	○
I post pictures/graphics related to this brand. (3)	○	○	○	○	○	○	○
I write reviews related to this brand. (4)	○	○	○	○	○	○	○
I write posts related to this brand on forums. (5)	○	○	○	○	○	○	○
I post videos that show this brand. (6)	○	○	○	○	○	○	○

18 Please, state your age.

_____

19 What is the higher academic qualification that you possess?

○ None (1)

○ Primary education (2)

○ High school (3)

○ Bachelor degree (4)

○ Post-graduation (5)

○ Master degree (6)

○ PhD (7)

20 What is your current situation?

○ Unemployed (1)

○ Student (2)

○ Worker/Student (3)

○ Worker (4)

○ Retired (5)

B. Questionnaire in Portuguese

Estudo sobre marcas e influencers

Estudo sobre marcas e influencers

O presente inquérito foi elaborado no âmbito da tese de mestrado em Gestão de Empresas pela ISCTE Business School, tendo como objeto de estudo as percepções em relação a marcas e influencers no Instagram.

As respostas são totalmente anónimas e não serão divulgadas ou identificadas. O tempo previsto para a conclusão deste inquérito é de 6 minutos.
Qualquer questão deverá ser redirecionada para cavbo1@iscte-iul.pt.

Muito obrigada desde já pela colaboração.

1 Acompanha marcas no Instagram?

○ Sim (1)

○ Não (2)

2 Acompanha influencers no Instagram?

○ Sim (1)

○ Não (2)

3 Quantas marcas diria que acompanha no Instagram?

○ 1 - 5 (1)

○ 5 - 10 (2)

○ 10 - 15 (3)

○ > 15 (4)

4 Já conheceu produtos através das marcas que acompanha no Instagram?

○ Sim (1)

○ Não (2)

5 Já alguma marca que acompanha no Instagram o/a levou a adquirir um produto?

○ Sim (1)

○ Não (2)

6 Quantos/as influencers diria que acompanha no Instagram?

○ 1 - 5 (1)

○ 5 - 10 (2)

○ 10 - 15 (3)

○ > 15 (4)

7 Já conheceu produtos através dos/as influencers que acompanha no Instagram?

○ Sim (1)

○ Não (2)

8 Já algum/a influencer que acompanha no Instagram o/a levou a adquirir um produto?

○ Sim (1)

○ Não (2)

End of Block: Block 2

9 Das seguintes marcas, por favor selecione uma que se lembra de acompanhar no Instagram.

*As perguntas que seguem terão em conta a marca que selecionar.

○ Sephora (1)

○ Nyx (2)

○ Benefit (3)

○ L'Oréal (4)

○ Quem disse berenice (5)

○ Nivea (6)

○ Clinique (7)

○ Kiehl's (8)

○ Garnier (9)

○ Bioderma (10)

○ Nenhuma das anteriores (12)

10 Ao pensar no conteúdo que a marca que selecionou anteriormente cria e publica no Instagram, por favor indique numa escala de 1 (Discordo totalmente) a 7 (Concordo totalmente) o seu nível de concordância com as seguintes afirmações.

	1 (Discordo totalmente) (1)	2 (2)	3 (3)	4 (Não concordo nem discordo) (4)	5 (5)	6 (6)	7 (Concordo totalmente) (7)
Estou satisfeito/a com o conteúdo comunicado por esta marca. (1)	○	○	○	○	○	○	○
O conteúdo comunicado por esta marca corresponde às minhas expectativas. (2)	○	○	○	○	○	○	○
O conteúdo comunicado por esta marca é bastante atrativo. (3)	○	○	○	○	○	○	○
O conteúdo comunicado por esta marca destaca-se positivamente, quando comparado ao conteúdo comunicado por outras marcas. (4)	○	○	○	○	○	○	○

11 Influencers também publicam conteúdo sobre marcas. Lembra-se de ter visto algum conteúdo publicado por influencers sobre a marca que selecionou anteriormente?

○ Sim (1)

○ Não (2)

12 Ao pensar no conteúdo que influencers geram e publicam no Instagram sobre a marca que selecionou anteriormente, por favor indique numa escala de 1 (Discordo totalmente) a 7 (Concordo totalmente) o seu nível de concordância com as seguintes afirmações.

	1 (Discordo totalmente) (1)	2 (2)	3 (3)	4 (Não concordo nem discordo) (4)	5 (5)	6 (6)	7 (Concordo totalmente) (7)
Estou satisfeito/a com o conteúdo gerado por influencers sobre esta marca. (1)	○	○	○	○	○	○	○
O conteúdo gerado por influencers sobre esta marca corresponde às minhas expectativas. (2)	○	○	○	○	○	○	○
O conteúdo gerado por influencers sobre esta marca é bastante atrativo. (3)	○	○	○	○	○	○	○
O conteúdo gerado por influencers sobre esta marca destaca-se positivamente, quando comparado ao conteúdo gerado por outras marcas. (4)	○	○	○	○	○	○	○

13 Considerando a marca que selecionou inicialmente, por favor indique numa escala de 1 (Discordo totalmente) a 7 (Concordo totalmente) o seu nível de concordância com as seguintes afirmações.

	1 (Discordo totalmente) (1)	2 (2)	3 (3)	4 (Não concordo nem discordo) (4)	5 (5)	6 (6)	7 (Concordo totalmente) (7)
Esta marca é apelativa. (1)	○	○	○	○	○	○	○
Esta marca é boa. (2)	○	○	○	○	○	○	○
Esta marca transmite prazer. (3)	○	○	○	○	○	○	○
Esta marca é favorável. (4)	○	○	○	○	○	○	○

14 Considerando a marca que selecionou inicialmente, por favor indique numa escala de 1 (Discordo totalmente) a 7 (Concordo totalmente) o seu nível de concordância com as seguintes afirmações.

	1 (Discordo totalmente) (1)	2 (2)	3 (3)	4 (Não concordo nem discordo) (4)	5 (5)	6 (6)	7 (Concordo totalmente) (7)
Tencionaria comprar produtos desta marca. (1)	○	○	○	○	○	○	○
Tenho um elevado interesse em comprar produtos desta marca. (2)	○	○	○	○	○	○	○
Definitivamente que compraria produtos desta marca. (3)	○	○	○	○	○	○	○
Provavelmente compraria produtos desta marca. (4)	○	○	○	○	○	○	○

15 Considerando a marca que selecionou inicialmente, por favor indique numa escala de 1 (Nunca) a 7 (Sempre) o que melhor descreve o seu comportamento em relação às seguintes afirmações.

	1 (Nunca) (1)	2 (2)	3 (3)	4 (Às vezes) (4)	5 (5)	6 (6)	7 (Sempre) (7)
Eu leio publicações relacionadas com esta marca nas redes sociais. (1)	○	○	○	○	○	○	○
Eu leio páginas relacionadas com esta marca nas redes sociais. (2)	○	○	○	○	○	○	○
Eu vejo fotos/imagens relacionadas com esta marca. (3)	○	○	○	○	○	○	○
Eu sigo blogs relacionados com esta marca. (4)	○	○	○	○	○	○	○
Eu sigo esta marca nas redes sociais. (5)	○	○	○	○	○	○	○

16 Considerando a marca que selecionou inicialmente, por favor indique numa escala de 1 (Nunca) a 7 (Sempre) o que melhor descreve o seu comportamento em relação às seguintes afirmações.

	1 (Nunca) (1)	2 (2)	3 (3)	4 (Às vezes) (4)	5 (5)	6 (6)	7 (Sempre) (7)
Eu comento nos vídeos relacionados com esta marca. (1)	○	○	○	○	○	○	○
Eu comento nas publicações relacionadas com esta marca. (2)	○	○	○	○	○	○	○
Eu comento nas fotos/imagens relacionadas com esta marca. (3)	○	○	○	○	○	○	○
Eu partilho publicações relacionadas com esta marca. (4)	○	○	○	○	○	○	○
Eu coloco ''Gosto'' nas fotos/imagens relacionadas com esta marca. (5)	○	○	○	○	○	○	○
Eu coloco ''Gosto'' nas publicações relacionadas com esta marca. (6)	○	○	○	○	○	○	○

17 Considerando a marca que selecionou inicialmente, por favor indique numa escala de 1 (Nunca) a 7 (Sempre) o que melhor descreve o seu comportamento em relação às seguintes afirmações.

	1 (Nunca) (1)	2 (2)	3 (3)	4 (Às vezes) (4)	5 (5)	6 (6)	7 (Sempre) (7)
Eu faço publicações relacionadas com esta marca. (1)	○	○	○	○	○	○	○
Eu faço publicações relacionadas com esta marca nas redes sociais. (2)	○	○	○	○	○	○	○
Eu publico fotos/imagens relacionadas com esta marca. (3)	○	○	○	○	○	○	○
Eu escrevo reviews relacionadas com esta marca. (4)	○	○	○	○	○	○	○
Eu escrevo publicações relacionadas com esta marca em fóruns. (5)	○	○	○	○	○	○	○
Eu publico vídeos que mostram esta marca. (6)	○	○	○	○	○	○	○

---

18 Por favor, indique a sua idade.

_____

19 Qual o nível de habilitação académica mais elevado que possui?

○ Nenhum (1)

○ Ensino primário (2)

○ Ensino secundário (3)

○ Licenciatura (4)

○ Pós-graduação (5)

○ Mestrado (6)

○ Doutoramento (7)

20 Qual é a sua situação atual?

○ Desempregado/a (1)

○ Estudante (2)

○ Trabalhador/a-Estudante (3)

○ Trabalhador/a (4)

○ Reformado/a (5)

C. Questionnaire Structuring Material

- https://www.instagram.com/helenacoelhooo/
- https://www.instagram.com/barbaracorby/
- https://www.instagram.com/mafalda.sampaio/
- https://www.instagram.com/adri.silvaaa/
- https://www.instagram.com/inesrochinha/
- https://www.instagram.com/inesmocho.makeup/
- https://www.instagram.com/apipocamaisdoce/
- https://www.instagram.com/inesribeirooficial/
- https://www.instagram.com/alicetrewinnard/
- https://www.instagram.com/sephoraportugal/
- https://www.instagram.com/niveapt/
- https://www.instagram.com/benefitcosmeticsportugal/
- https://www.instagram.com/lorealportugal/
- https://www.instagram.com/quemdisseberenicept/
- https://www.instagram.com/niveapt/
- https://www.instagram.com/cliniqueportugal/
- https://www.instagram.com/vichy.pt/
- https://www.instagram.com/garnierportugal/
- https://www.instagram.com/biodermaportugal/

D. Statistic tables

1.1 Frequency Tables

Academic background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school	55	27,5	27,5	27,5
	Bachelor degree	90	45,0	45,0	72,5
	Post-graduation	17	8,5	8,5	81,0
	Master degree	38	19,0	19,0	100,0
	Total	200	100,0	100,0	

Employment situation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unemployed	11	5,5	5,5	5,5
	Student	76	38,0	38,0	43,5
	Worker/student	27	13,5	13,5	57,0
	Worker	86	43,0	43,0	100,0
	Total	200	100,0	100,0	

1.3 Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	200	16	37	23.19	3.256
Valid N (listwise)	200				

1.4 Frequency tables – Brand related behavior

How many brands would you say you follow on Instagram?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5	31	15.5	15.5	15.5
	5 - 10	70	35.0	35.0	50.5
	10 -15	38	19.0	19.0	69.5
	> 15	61	30.5	30.5	100.0
	Total	200	100.0	100.0	

Custom Table

		Count	Column N %
How many brands would you say you follow on Instagram?	1 - 5	31	15.5%
	5 - 10	70	35.0%
	10 -15	38	19.0%
	> 15	61	30.5%
	Total	200	100.0%

Have you ever got to know products from the brands you follow on Instagram?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	194	97.0	97.0	97.0
	No	6	3.0	3.0	100.0
	Total	200	100.0	100.0	

Has a brand that you follow on Instagram ever lead you to acquire a product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	178	89.0	89.0	89.0
	No	22	11.0	11.0	100.0
	Total	200	100.0	100.0	

1.5 Frequency tables – Influencer related behavior

How many influencers would you say you follow on Instagram?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5	23	11.5	11.5	11.5
	5 - 10	53	26.5	26.5	38.0
	10 -15	38	19.0	19.0	57.0
	> 15	86	43.0	43.0	100.0
	Total	200	100.0	100.0	

Custom Tables

		Count	Column N %
How many influencers would you say you follow on Instagram?	1 - 5	23	11.5%
	5 - 10	53	26.5%
	10 -15	38	19.0%
	> 15	86	43.0%
	Total	200	100.0%

Have you ever got to know products from the influencers you follow on Instagram?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	199	99.5	99.5	99.5
	No	1	.5	.5	100.0
	Total	200	100.0	100.0	

Has an influencer that you follow on Instagram ever lead you to acquire a product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	183	91.5	91.5	91.5
	No	17	8.5	8.5	100.0
	Total	200	100.0	100.0	

1.6 Principal Component Analysis

1.6.1 Firm-created content

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.826
Bartlett's Test of Sphericity	Approx. Chi-Square	479.347
	df	6
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.052	76.300	76.300	3.052	76.300	76.300
2	.383	9.563	85.863			
3	.353	8.824	94.687			
4	.213	5.313	100.000			

Extraction Method: Principal Component
Analysis.

Component Matrix[a]

	Component
	1
FMC2	.911
FMC1	.867
FMC3	.865
FMC4	.849

Extraction Method:
Principal Component
Analysis.[a]

a. 1 components
extracted.

1.6.2 User-generated content

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.811
Bartlett's Test of Sphericity	Approx. Chi-Square	628.692
	df	6
	Sig.	.000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.244	81.090	81.090	3.244	81.090	81.090
2	.394	9.841	90.932			
3	.209	5.232	96.164			
4	.153	3.836	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
UGC2	.928
UGC3	.915
UGC4	.883
UGC1	.876

Extraction Method:

Principal Component

Analysis.[a]

a. 1 components extracted.

1.6.3 Brand attitude

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.770
Bartlett's Test of Sphericity	Approx. Chi-Square	328.719
	df	6
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.694	67.353	67.353	2.694	67.353	67.353
2	.620	15.495	82.848			
3	.413	10.334	93.182			
4	.273	6.818	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component
	1
BA4	.867
BA3	.837
BA2	.837
BA1	.736

Extraction Method:
Principal Component
Analysis.^a

a. 1 components
extracted.

1.6.3 Purchase intention

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.814
Bartlett's Test of Sphericity	Approx. Chi-Square	571.505
	df	6
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.155	78.869	78.869	3.155	78.869	78.869
2	.444	11.104	89.973			
3	.233	5.837	95.810			
4	.168	4.190	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
PI3	.916
PI2	.912
PI1	.905
PI4	.817

Extraction Method:

Principal Component

Analysis.[a]

a. 1 components

extracted.

1.6.4 Online engagement (Consumption; Contribution; Creation)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.893
Bartlett's Test of Sphericity	Approx. Chi-Square	3214.529
	df	136
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.138	47.869	47.869	8.138	47.869	47.869	5.153
2	2.702	15.894	63.763	2.702	15.894	63.763	3.209
3	1.315	7.736	71.499	1.315	7.736	71.499	2.671
4	1.179	6.934	78.434	1.179	6.934	78.434	2.301
5	.683	4.018	82.452				
6	.594	3.494	85.946				
7	.501	2.950	88.895				
8	.362	2.131	91.026				
9	.351	2.067	93.093				
10	.272	1.602	94.695				
11	.235	1.381	96.076				
12	.203	1.193	97.269				
13	.158	.929	98.197				
14	.099	.585	98.782				
15	.079	.467	99.250				
16	.076	.447	99.697				
17	.052	.303	100.000				

Rotated Component Matrix[a]

	Component			
	1	2	3	4
CREA3	.906	.272	.103	.111
CREA2	.893	.284	.064	.135
CREA6	.889	.240	.089	.081
CREA1	.861	.298	.065	.154
CREA4	.851	.218	.126	.080
CREA5	.747	.291	.224	.023
CONTR3	.295	.874	.144	.156
CONTR2	.344	.872	.106	.102
CONTR1	.415	.746	.133	.136
CONTR4	.415	.688	.192	.158
CONS1	.057	.087	.857	.112
CONS2	.154	.094	.852	.196
CONS3	.007	.075	.677	.369
CONS4	.264	.333	.616	.103
CONTR6	.094	.195	.178	.617
CONTR5	.065	.225	.223	.593
CONS5	.246	-.024	.337	.563

Extraction Method: Principal Component Analysis.

 Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 6 iterations.

1.6.5 Online engagement (Consumption; Contribution; Creation) – Items removed

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	2709.175
	df	91
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7.580	54.140	54.140	7.580	54.140	54.140	5.020
2	2.144	15.315	69.455	2.144	15.315	69.455	3.310
3	1.266	9.041	78.495	1.266	9.041	78.495	2.659
4	.632	4.511	83.007				
5	.519	3.708	86.715				
6	.402	2.874	89.589				
7	.352	2.515	92.104				
8	.280	2.003	94.107				
9	.234	1.674	95.781				
10	.199	1.425	97.206				
11	.161	1.153	98.359				
12	.098	.699	99.058				
13	.078	.559	99.616				
14	.054	.384	100.000				

Rotated Component Matrix^a

	Component		
	1	2	3
CREA3	.902	.298	.119
CREA2	.890	.314	.088
CREA6	.884	.266	.089
CREA1	.860	.327	.097
CREA4	.852	.234	.131
CREA5	.752	.286	.210
CONTR3	.281	.888	.166
CONTR2	.325	.886	.115
CONTR1	.399	.768	.148
CONTR4	.399	.712	.215
CONS2	.164	.099	.868
CONS1	.057	.089	.850
CONS3	.029	.085	.781
CONS4	.260	.338	.604

1.7 Reliability Analysis – Cronbach Alpha

1.7.1 Firm-created content

Case Processing Summary

		N	%
Cases	Valid	200	100,0
	Excludedª	0	,0
	Total	200	100,0

Reliability Statistics

Cronbach's Alpha	N of Items
,896	4

a. Listwise deletion based on all variables in the procedure.

1.7.2 User-generated content

Case Processing Summary

		N	%
Cases	Valid	200	100,0
	Excludedª	0	,0
	Total	200	100,0

Reliability Statistics

Cronbach's Alpha	N of Items
,922	4

a. Listwise deletion based on all variables in the procedure.

1.7.3 Brand attitude

Case Processing Summary

		N	%
Cases	Valid	200	100,0
	Excludedᵃ	0	,0
	Total	200	100,0

Reliability Statistics

Cronbach's Alpha	N of Items
,833	4

1.7.4 Purchase intention

Case Processing Summary

		N	%
Cases	Valid	200	100,0
	Excludedᵃ	0	,0
	Total	200	100,0

Reliability Statistics

Cronbach's Alpha	N of Items
,908	4

a. Listwise deletion based on all variables in the procedure.

1.7.5 Online engagement with brand – Consumption

Case Processing Summary

		N	%
Cases	Valid	200	100,0
	Excludedᵃ	0	,0
	Total	200	100,0

Reliability Statistics

Cronbach's Alpha	N of Items
,799	4

a. Listwise deletion based on all variables in the procedure.

1.7.6 Online engagement with brand – Contribution

Case Processing Summary

		N	%
Cases	Valid	200	100,0
	Excluded[a]	0	,0
	Total	200	100,0

Reliability Statistics

Cronbach's Alpha	N of Items
,924	4

a. Listwise deletion based on all variables in the procedure.

1.7.7 Online engagement with brand – Creation

Case Processing Summary

		N	%
Cases	Valid	200	100,0
	Excluded[a]	0	,0
	Total	200	100,0

Reliability Statistics

Cronbach's Alpha	N of Items
,960	6

a. Listwise deletion based on all variables in the procedure.

1.8 Regression – H1

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709[a]	.503	.500	.64244

a. Predictors: (Constant), Firm-created content

b. Dependent Variable: Brand attitude

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.690	1	82.690	200.353	.000[b]
	Residual	81.719	198	.413		
	Total	164.410	199			

a. Dependent Variable: Brand attitude

b. Predictors: (Constant), Firm-created content

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.300	.255		9.014	.000
	Firm-created content	.631	.045	.709	14.155	.000

a. Dependent Variable: Brand attitude

1.9 Regression – H2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.524[a]	.275	.271	.77589

a. Predictors: (Constant), User-generated content

b. Dependent Variable: Brand attitude

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.212	1	45.212	75.101	.000[b]
	Residual	119.198	198	.602		
	Total	164.410	199			

a. Dependent Variable: Brand attitude

b. Predictors: (Constant), User-generated content

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.663	.259		14.165	.000
	User-generated content	.402	.046	.524	8.666	.000

a. Dependent Variable: Brand attitude

1.10 Regression – H3

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721[a]	.520	.517	.71273

a. Predictors: (Constant), Brand attitude

b. Dependent Variable: Purchase intention

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	108.918	1	108.918	214.411	.000[b]
	Residual	100.581	198	.508		
	Total	209.500	199			

a. Dependent Variable: Purchase intention

b. Predictors: (Constant), Brand attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.362	.329		4.136	.000
	Brand attitude	.814	.056	.721	14.643	.000

a. Dependent Variable: Purchase intention

1.11 Regression – H4a)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.444[a]	.197	.193	1.12363

a. Predictors: (Constant), Brand attitude

b. Dependent Variable: Online engagement – Consumption

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.352	1	61.352	48.594	.000[b]
	Residual	249.985	198	1.263		
	Total	311.337	199			

a. Dependent Variable: Online engagement - Consumption

b. Predictors: (Constant), Brand attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.063	.519		2.048	.042
	Brand attitude	.611	.088	.444	6.971	.000

a. Dependent Variable: Online engagement - Consumption

1.12 Regression – H4b)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.160[a]	.026	.021	1.49568

a. Predictors: (Constant), Brand attitude

b. Dependent Variable: Online engagement - Contribution

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.665	1	11.665	5.214	.023[b]
	Residual	442.940	198	2.237		
	Total	454.605	199			

a. Dependent Variable: Online engagement - Contribution

b. Predictors: (Constant), Brand attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.701	.691		1.014	.312
	Brand attitude	.266	.117	.160	2.283	.023

a. Dependent Variable: Online engagement - Contribution

1.13 Regression – H4c)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.102[a]	.010	.005	1.51497

a. Predictors: (Constant), Brand attitude

b. Dependent Variable: Online engagement - Creation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.732	1	4.732	2.062	.153[b]
	Residual	454.435	198	2.295		
	Total	459.167	199			

a. Dependent Variable: Online engagement - Creation

b. Predictors: (Constant), Brand attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.040	.700		1.486	.139
	Brand attitude	.170	.118	.102	1.436	.153

a. Dependent Variable: Online engagement - Creation

1.14 Regression – H5

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725[a]	.526	.521	.62921

a. Predictors: (Constant), User-generated content, Firm-created content

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	86.418	2	43.209	109.141	.000^b
	Residual	77.992	197	.396		
	Total	164.410	199			

a. Dependent Variable: Brand attitude

b. Predictors: (Constant), User-generated content, Firm-created content

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.054	.262		7.825	.000
	Firm-created content	.540	.053	.606	10.202	.000
	User-generated content	.140	.046	.182	3.068	.002

a. Dependent Variable: Brand attitude

1.15 Mediation analysis – H6a)

****

OUTCOME VARIABLE:

BA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7092	.5030	.4127	200.3532	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2999	.2552	9.0138	.0000	1.7967	2.8030
FCC	.6311	.0446	14.1546	.0000	.5432	.7190

Standardized coefficients

	coeff
FCC	.7092

****

OUTCOME VARIABLE:

PI

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7280	.5299	.4999	111.0427	2.0000	197.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.2238	.3335	3.6699	.0003	.5662	1.8815
FCC	.1427	.0696	2.0504	.0516	.0055	.2800
BA	.7002	.0782	8.9524	.0000	.5460	.8544

Standardized coefficients
        coeff
FCC   .1421
BA   .6203

************************   TOTAL   EFFECT   MODEL
****

OUTCOME VARIABLE:
 PI

Model Summary

     R   R-sq   MSE   F   df1   df2   p
   .5820   .3387   .6997   101.4051   1.0000   198.0000   .0000

Model

             coeff   se   t   p   LLCI   ULCI
constant   2.8342   .3322   8.5310   .0000   2.1791   3.4894
FCC   .5846   .0581   10.0700   .0000   .4701   .6991

Standardized coefficients
        coeff
FCC   .5820

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y
****

Total effect of X on Y
   Effect   se   t   p   LLCI   ULCI   c_ps   c_cs
   .5846   .0581   10.0700   .0000   .4701   .6991   .5698   .5820

Direct effect of X on Y
   Effect   se   t   p   LLCI   ULCI   c'_ps   c'_cs
   .1427   .0696   2.0504   .0416   .0055   .2800   .1391   .1421

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.4419	.0622	.3238	.5640

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.4307	.0512	.3328	.5316

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.4399	.0574	.3309	.5502

1.16 Mediation analysis – H6b)

OUTCOME VARIABLE:
 BA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5244	.2750	.6020	75.1008	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.6634	.2586	14.1647	.0000	3.1534	4.1735
UGC	.4017	.0464	8.6661	.0000	.3103	.4931

Standardized coefficients

	coeff
UGC	.5244

****

OUTCOME VARIABLE:

126

PI

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7211	.5199	.5105	106.6713	2.0000	197.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.3677	.3380	4.0471	.0001	.7013	2.0342
UGC	-.0042	.0501	-.0829	.9340	-.1030	.0947
BA	.8168	.0654	12.4801	.0000	.6877	.9458

Standardized coefficients

	coeff
UGC	-.0048
BA	.7236

*********************** TOTAL EFFECT MODEL **************************

OUTCOME VARIABLE:
PI

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3746	.1403	.9096	32.3249	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4.3599	.3179	13.7144	.0000	3.7330	4.9868
UGC	.3239	.0570	5.6855	.0000	.2116	.4363

Standardized coefficients

	coeff
UGC	.3746

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.3239	.0570	5.6855	.0000	.2116	.4363	.3157	.3746

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
-.0042	.0501	-.0829	.9340	-.1030	.0947	-.0041	-.0048

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.3281	.0632	.2152	.4642

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.3198	.0526	.2221	.4308

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.3794	.0601	.2643	.5002

1.17 Mediation analysis – H7a)

OUTCOME VARIABLE:

 BA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7092	.5030	.4127	200.3532	1.0000	198.0000	.0000

Model

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	coeff	se	t	p	LLCI	ULCI
constant	2.2999	.2552	9.0138	.0000	1.7967	2.8030
FCC	.6311	.0446	14.1546	.0000	.5432	.7190

Standardized coefficients

	coeff
FCC	.7092

****

OUTCOME VARIABLE:

 CONS

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4844	.2347	1.2095	30.2002	2.0000	197.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.7375	.5187	1.4217	.1567	-.2855	1.7605
FCC	.3368	.1083	3.1108	.0021	.1233	.5503
BA	.3425	.1217	2.8150	.0054	.1025	.5824

Standardized coefficients

	coeff
FCC	.2750
BA	.2489

************************   TOTAL   EFFECT   MODEL
****

OUTCOME VARIABLE:

 CONS

Model Summary

R	R-sq	MSE	F	df1	df2	p

.4515   .2039   1.2518   50.7032   1.0000   198.0000   .0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.5251	.4444	3.4321	.0007	.6488	2.4014
FCC	.5529	.0777	7.1206	.0000	.3998	.7060

Standardized coefficients

	coeff
FCC	.4515

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.5529	.0777	7.1206	.0000	.3998	.7060	.4421	.4515

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.3368	.1083	3.1108	.0021	.1233	.5503	.2693	.2750

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.2161	.0825	.0653	.3853

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.1728	.0646	.0525	.3054

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI

BA   .1765   .0656   .0545   .3100

1.18 Mediation analysis – H7b)

OUTCOME VARIABLE:

 BA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7092	.5030	.4127	200.3532	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2999	.2552	9.0138	.0000	1.7967	2.8030
FCC	.6311	.0446	14.1546	.0000	.5432	.7190

Standardized coefficients

	coeff
FCC	.7092

****

OUTCOME VARIABLE:

 CONTR

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2076	.0431	2.2082	4.4343	2.0000	197.0000	.0131

Model

	coeff	se	t	p	LLCI	ULCI
constant	.4332	.7009	.6180	.5373	-.9491	1.8154
FCC	.2770	.1463	1.8937	.0597	-.0115	.5655

BA   .0456   .1644   .2773   .7818   -.2786   .3698

Standardized coefficients

       coeff

FCC   .1872

BA   .0274

************************ TOTAL EFFECT MODEL
****

OUTCOME VARIABLE:

 CONTR

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2067	.0427	2.1979	8.8328	1.0000	198.0000	.0033

Model

	coeff	se	t	p	LLCI	ULCI
constant	.5380	.5888	.9137	.3620	-.6231	1.6992
FCC	.3058	.1029	2.9720	.0033	.1029	.5087

Standardized coefficients

       coeff

FCC   .2067

************* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y
****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.3058	.1029	2.9720	.0033	.1029	.5087	.2023	.2067

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs

.2770   .1463   1.8937   .0597   -.0115   .5655   .1833   .1872

Indirect effect(s) of X on Y:

Effect   BootSE   BootLLCI   BootULCI
BA   .0288   .0914   -.1359   .2219

Partially standardized indirect effect(s) of X on Y:

Effect   BootSE   BootLLCI   BootULCI
BA   .0190   .0605   -.0927   .1434

Completely standardized indirect effect(s) of X on Y:

Effect   BootSE   BootLLCI   BootULCI
BA   .0194   .0614   -.0961   .1432

1.19 Mediation analysis – H7c)

OUTCOME VARIABLE:

BA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7092	.5030	.4127	200.3532	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2999	.2552	9.0138	.0000	1.7967	2.8030
FCC	.6311	.0446	14.1546	.0000	.5432	.7190

Standardized coefficients

	coeff
FCC	.7092

****

OUTCOME VARIABLE:

CREA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2285	.0522	2.2091	5.4266	2.0000	197.0000	.0051

Model

	coeff	se	t	p	LLCI	ULCI
constant	.6231	.7010	.8888	.3752	-.7594	2.0056
FCC	.4318	.1463	2.9515	.0035	.1433	.7204
BA	-.1745	.1644	-1.0614	.2898	-.4987	.1497

Standardized coefficients

	coeff
FCC	.2904
BA	-.1044

*********************** TOTAL EFFECT MODEL
****

OUTCOME VARIABLE:
 CREA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2163	.0468	2.2105	9.7205	1.0000	198.0000	.0021

Model

	coeff	se	t	p	LLCI	ULCI
constant	.2217	.5905	.3755	.7077	-.9427	1.3862
FCC	.3217	.1032	3.1178	.0021	.1182	.5252

Standardized coefficients

	coeff
FCC	.2163

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y

****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.3217	.1032	3.1178	.0021	.1182	.5252	.2118	.2163

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.4318	.1463	2.9515	.0035	.1433	.7204	.2843	.2904

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	-.1101	.0966	-.3009	.0809

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	-.0725	.0644	-.1995	.0542

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	-.0741	.0668	-.2111	.0520

1.20 Mediation analysis – H8a)

OUTCOME VARIABLE:

 BA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5244	.2750	.6020	75.1008	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.6634	.2586	14.1647	.0000	3.1534	4.1735
UGC	.4017	.0464	8.6661	.0000	.3103	.4931

Standardized coefficients

	coeff
UGC	.5244

****

OUTCOME VARIABLE:
 CONS

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4929	.2430	1.1964	31.6122	2.0000	197.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.6795	.5173	1.3135	.1906	-.3407	1.6997
UGC	.2652	.0767	3.4561	.0007	.1139	.4166
BA	.4293	.1002	4.2850	.0000	.2317	.6269

Standardized coefficients

	coeff
UGC	.2516
BA	.3120

*********************** TOTAL EFFECT MODEL
****

OUTCOME VARIABLE:
 CONS

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.4152	.1724	1.3013	41.2463	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2522	.3803	5.9229	.0000	1.5024	3.0021
UGC	.4377	.0682	6.4223	.0000	.3033	.5721

Standardized coefficients

	coeff
UGC	.4152

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.4377	.0682	6.4223	.0000	.3033	.5721	.3499	.4152

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.2652	.0767	3.4561	.0007	.1139	.4166	.2121	.2516

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.1725	.0475	.0864	.2749

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.1379	.0364	.0700	.2151

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.1636	.0424	.0825	.2504

1.21 Mediation analysis – H8b)

OUTCOME VARIABLE:
 BA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5244	.2750	.6020	75.1008	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.6634	.2586	14.1647	.0000	3.1534	4.1735
UGC	.4017	.0464	8.6661	.0000	.3103	.4931

Standardized coefficients

	coeff
UGC	.5244

****

OUTCOME VARIABLE:
 CONTR

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2188	.0479	2.1971	4.9539	2.0000	197.0000	.0080

Model

	coeff	se	t	p	LLCI	ULCI
constant	.3784	.7011	.5398	.5899	-1.0041	1.7610
UGC	.2230	.1040	2.1445	.0332	.0179	.4281
BA	.1137	.1358	.8373	.4034	-.1541	.3814

Standardized coefficients

	coeff

UGC   .1751

BA   .0684

************************   TOTAL   EFFECT   MODEL
****

OUTCOME VARIABLE:
 CONTR

Model Summary

     R   R-sq   MSE   F   df1   df2   p
  .2109   .0445   2.1938   9.2206   1.0000 198.0000   .0027

Model

          coeff   se   t   p   LLCI   ULCI
constant   .7949   .4937   1.6101   .1090   -.1787   1.7685
UGC   .2687   .0885   3.0365   .0027   .0942   .4432

Standardized coefficients
         coeff
UGC   .2109

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y
****

Total effect of X on Y

     Effect   se   t   p   LLCI   ULCI   c_ps   c_cs
   .2687   .0885   3.0365   .0027   .0942   .4432   .1778   .2109

Direct effect of X on Y

     Effect   se   t   p   LLCI   ULCI   c'_ps   c'_cs
   .2230   .1040   2.1445   .0332   .0179   .4281   .1476   .1751

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.0457	.0526	-.0655	.1442

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.0302	.0345	-.0437	.0914

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.0359	.0407	-.0512	.1070

1.22 Mediation analysis – H8c)

OUTCOME VARIABLE:

 BA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5244	.2750	.6020	75.1008	1.0000	198.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	3.6634	.2586	14.1647	.0000	3.1534	4.1735
UGC	.4017	.0464	8.6661	.0000	.3103	.4931

Standardized coefficients

	coeff
UGC	.5244

****

OUTCOME VARIABLE:

CREA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1091	.0119	2.3031	1.1859	2.0000	197.0000	.3077

Model

	coeff	se	t	p	LLCI	ULCI
constant	.9536	.7178	1.3285	.1855	-.4619	2.3691
UGC	.0600	.1065	.5632	.5739	-.1500	.2700
BA	.1286	.1390	.9251	.3560	-.1455	.4027

Standardized coefficients

	coeff
UGC	.0468
BA	.0769

************************* TOTAL EFFECT MODEL **************************

OUTCOME VARIABLE:
CREA

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0872	.0076	2.3014	1.5170	1.0000	198.0000	.2195

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.4247	.5057	2.8174	.0053	.4275	2.4219
UGC	.1116	.0906	1.2317	.2195	-.0671	.2904

Standardized coefficients

	coeff
UGC	.0872

*************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.1116	.0906	1.2317	.2195	-.0671	.2904	.0735	.0872

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.0600	.1065	.5632	.5739	-.1500	.2700	.0395	.0468

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.0517	.0547	-.0493	.1697

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.0340	.0354	-.0340	.1085

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
BA	.0404	.0414	-.0406	.1246

1.23 Regression – H9

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.585[a]	.342	.335	.83662	2.005

a. Predictors: (Constant), User-generated content, Firm-created content

b. Dependent Variable: Purchase523 intention

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.614	2	35.807	51.159	.000[b]
	Residual	137.885	197	.700		
	Total	209.500	199			

a. Dependent Variable: Purchase intention

b. Predictors: (Constant), User-generated content, Firm-created content

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.731	.349		7.825	.000
	Firm-created content	.546	.070	.544	7.766	.000
	User-generated content	.059	.061	.068	.970	.333

1.24 Regression – H10a)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.492ᵃ	.242	.234	1.09475	1.968

a. Predictors: (Constant), User-generated content, Firm-created content

b. Dependent Variable: Online engagement - Consumption

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.235	2	37.618	31.388	.000ᵇ
	Residual	236.102	197	1.198		
	Total	311.337	199			

a. Dependent Variable: Online engagement - Consumption

b. Predictors: (Constant), User-generated content, Firm-created content

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.088	.457		2.382	.018
	Firm-created content	.390	.092	.319	4.241	.000
	User-generated content	.248	.079	.235	3.133	.002

a. Dependent Variable: Online engagement - Consumption

1.25 Regression – H10b)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.236[a]	.056	.046	1.47613	1.854

a. Predictors: (Constant), User-generated content, Firm-created content

b. Dependent Variable: Online engagement - Contribution

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.351	2	12.676	5.817	.004[b]
	Residual	429.254	197	2.179		
	Total	454.605	199			

a. Dependent Variable: Online engagement - Contribution

b. Predictors: (Constant), User-generated content, Firm-created content

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.227	.616		.369	.712
	Firm-created content	.190	.124	.129	1.533	.127
	User-generated content	.176	.107	.138	1.651	.100

a. Dependent Variable: Online engagement - Contribution

1.26 Regression – H10c)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.220[a]	.049	.039	1.48915	1.885

a. Predictors: (Constant), User-generated content, Firm-created content

b. Dependent Variable: Online engagement - Creation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.305	2	11.152	5.029	.007[b]
	Residual	436.862	197	2.218		
	Total	459.167	199			

a. Dependent Variable: Online engagement - Creation

b. Predictors: (Constant), User-generated content, Firm-created content

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.337	.621		.543	.588
	Firm-created content	.365	.125	.245	2.913	.004
	User-generated content	-.065	.108	-.051	-.607	.544

a. Dependent Variable: Online engagement - Creation