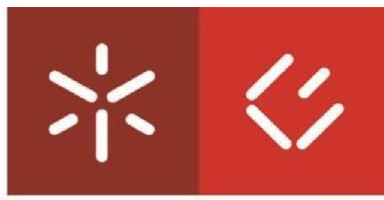Aliaa Ahmed Abdelmeniem Mohamed

The Role of Social Media Marketing Activities on Customer Engagement and its influence on Customer's Purchase Intention and Price Premium: An Empirical study in the Luxury Fashion Market

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Universidade do Minho
Escola de Economia e Gestão

Aliaa Ahmed Abdelmeniem Mohamed

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STATEMENT OF INTEGRITY

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism or any form of undue use of information or falsification of results along the process leading to its elaboration.

I further declare that I have fully acknowledged the Code of Ethical Conduct of the University of Minho.

O papel das atividades de marketing de mídia social no engajamento do cliente e sua influência na intenção de compra dos clientes e no prêmio de preço: Um estudo empírico no mercado de moda de luxo

RESUMO

A pesquisa estudou a robustez da relação entre as atividades de marketing de mídia social e o engajamento de clientes online por meio da plataforma Instagram. O conceito de atividades de marketing de mídia social é uma abordagem contemporânea ao marketing digital que adicionou uma nova dimensão à arena do marketing moderno. A relevância de estudar as marcas de moda de luxo reflete a necessidade de compreender o papel das atividades de marketing nas redes sociais através da plataforma Instagram. O canal Instagram oferece uma plataforma única para as empresas empregarem postagens que podem converter espectadores em clientes. Além disso, a literatura sugere que o envolvimento do cliente online desempenha um papel vital nas compras do cliente e na intenção de compra. Assim, esta tese tem como objetivo examinar o poder da aplicação de atividades de marketing de mídia social que induzam os clientes a se envolverem com marcas de moda de luxo no Instagram, afetando as intenções de compra e a aceitação de preços premium.

A pesquisadora gerou um estudo empírico utilizando uma abordagem Monométodo através de uma abordagem quantitativa para investigar a abrangência dos construtos e testar o modelo conceitual desenvolvido. Os resultados revelaram evidências empíricas para apoiar os conceitos de atividades de marketing de mídia social, engajamento do cliente online, intenções de compra e prêmios de preço. As marcas de moda de luxo aplicam atividades de marketing de mídia social por meio de (compartilhamento, personalização, tendência e interação) por meio de sua plataforma Instagram para influenciar o envolvimento do cliente on-line por meio de postagens (consumo, contribuição e criação) relacionadas à marca. Além disso, as descobertas apoiaram que o envolvimento do cliente on-line afeta as intenções de compra e os prêmios de preço dos clientes.

The Role of Social Media Marketing Activities on Customer Engagement and its influence on Customer's Purchase Intention and Price Premium:
An Empirical study in the Luxury Fashion Market

ABSTRACT

The research studied the robustness of the relationship between social media marketing activities and online customer engagement through the Instagram platform. The social media marketing activities concept is a contemporary approach to digital marketing that has added a new dimension to the modern marketing arena. The relevance of studying luxury fashion brands reflects the need to understand the role of social media marketing activities through the Instagram platform. The Instagram channel offers a unique platform for firms to employ postings that can convert viewers into customers. Furthermore, the literature suggested that online customer engagement plays a vital role in customer purchases and intention to purchase. Thus, this thesis aims to examine the power of applying social media marketing activities that induce customers to engage with luxury fashion brands on Instagram, affecting purchase intentions and acceptance of price premiums.

The researcher generated an empirical study using a Mono-method approach through a quantitative approach to investigate the scope of the constructs and test the developed conceptual model. The findings revealed empirical evidence to support the concepts of social media marketing activities, online customer engagement, purchase intentions, and price premiums. Luxury fashion brands apply social media marketing activities through (sharing, customization, trendiness, and interaction) through their Instagram platform to influence online customer engagement through (consumption, contribution, and creation) posts related to the brand. Also, the findings supported that online customer engagement impacts customers' purchase intentions and price premiums.

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INTRODUCTION

1.1. Introduction

This chapter presents the theme under study, featuring social media marketing activities (SMMA) and online customer engagement (OCE), purchase intentions, and price premium in the luxury brands fashion context. The chapter includes the rationale and scope of the study. Moreover, it presents the research background emerging from the gap identified in the literature. The research background supports the emergence of the gap and the development of the main research questions and objectives. Finally, this chapter briefly addresses the expected contributions of the thesis.

1.2. Research Background

The emergence of social media platforms made traditional ways of finding information and purchasing items to become obsolete (Seo & Park, 2018). Social media platforms have evolved from a single marketing tool to a marketing intelligence source where firms can monitor, analyze, and anticipate customer behaviors. For instance, a business can trace the number of audiences of a virtual marketing campaign, allowing companies to comprehend what customers want and fulfill their needs (Alkharabsheh et al., 2021). Therefore, it has become crucial for marketers to strategically utilize and leverage social media to attain competitive advantage and superior performance (Ji et al., 2022). In contrast with traditional media, social media platforms allow users to generate and exchange content effortlessly and interactively, allowing individuals to dive in and enjoy interaction with the brands.

With the remarkable and rapid development of communication technology, social media has become crucial for people's lifestyles. As social media channels turned out to be popular in the business world, they forced brand and business managers to use contemporary instruments to address their customers (De Vries, Gensler, & Leeflang, 2012). Nowadays, customers prefer brands available on social media platforms and provide good content (Kavisekera & Abeysekera, 2016). These platforms gained attention from academics and practitioners as they are faste-paced and allow for high interaction among individuals. In fact, it has become more convenient and essential for companies to use social media in marketing activities, promotion, customer management, and employee communications (Seo & park 2018).Such social media channels facilitate and strengthen collaborations within online communities, enabling customers to engage through sharing brand stories with others (Hajli et al., 2017). The researcher selected the Instagram platform as the social media channel

under investigation. The Instagram platform has been fast growing in terms of users and has become a popular platform for social interaction, photo/ video, as well as entertainment (Rhee et al., 2021). In addition, the Instagram platform highlights the shopping experiences and existing market offers (Rhee et al., 2021).

Instagram promotes and facilitates only a glimpse of content, making attention challenging (Zulli, 2020). Thus, brand managers ought to capture customers' attention.

Instagram creates a special status for managers and brands to look for new strategies to deal with customers (Zarei et al., 2022). This study is concerned with expanding the understanding of social media marketing activities (SSMA) on social media platforms, in particular, Instagram. SSMA are promotional and relational communication means that complement organizational marketing strategies' application by offering enhanced interactivity via online relationships between businesses and customers (Ibrahim et al., 2022). SMMA enable a direct two-way communication between customers and brands (Kim & Ko 2012), connecting brands and customers and offer a unique platform for user- centered networking and social interaction (Chi et al., 2011). Such media activities ease content sharing, interactions, and joint work between businesses and customers. Accordingly, it is important to analyze social media marketing activities a brand uses.

Kim & Ko (2010, 2012) developed the SMMA measurement as being captured in the dimensions of entertainment, interaction, trendiness, customization, and word of mouth. Later the measurement expanded to also include word of mouth to the interaction, trendiness, customizations, and sharing to adjust the components to the social media context. Moslehpour et al. (2020) examined the *SMMA* model through the dimensions of entertainment and interaction. Their study reported a positive influence of the dimensions of SMMA on trust and perceived value. Other research has investigated the impact of SMMA through the dimensions trendiness, customization and WOM on brand equity and brand trust (Ebrahim, 2020). The current study proposes the measurement of the SMMA construct based on the four dimensions: *sharing, trendiness, customization, and interaction.* The study focuses on the activities initiated by the brand's Instagram page without the customer interference. Thus, the research focuses on the dimension of the activities done by the brand online through the Instagram platform, which are *sharing, trendiness, customization, and interaction.* To the author's knowledge, previous research did not explore these dimensions together.

SMMA represent recent marketing instruments, and managers need to understand how to implement these social media activities to promote customer engagement effectively so that promotion efforts will be beneficial (Ji et al., 2022). SMMA enable marketers to communicate with customers actively and constitute a source of easy access, thereby facilitating their search for brand information. Yet, it is challenging for brands on social media to continuously capture customer attention. In such a context, the notion of customer engagement comes to the fore. This research investigates customer engagement to understand social media marketing activities in enabling customers to voluntarily participate in providing feedback for other customers and influencingthe purchasing of brands. Therefore, it is critical to explore the customer engagement mechanism regarding social media platforms (Ji et al., 2022). The current research addresses this mechanism specifically through the Instagram platform. The Instagram channel offers a unique platform for firms to employ postings for online customer engagement and to convert viewers into customers (Russmann et al., 2016).

Customer engagement has emerged as a crucial component in social media marketing strategies, prompting significant interest from practitioners and academics. Customer engagement conveys frequent voluntary interactions between customers and the brand (Kim & Ko, 2010), leading to value co-creation, where social media empowers customers to take control of the marketing communication. Customers are becoming commentators, collaborators, and creators of messages (Ji et al. 2022). The current study considers online customer engagement as a holistic idea that integrates the three behavioral engagement activities: *Consumption, Contribution, and Creation* (Schivinski et al., 2016) to highlight the idea of customers becoming commentators, collaborators and creators. Through *consumption* of brand-related social media content, customers attain the lowest level of customer engagement, displayed by behaviors, such as, reading and watching brand posts and simply following brands on a social media platform. Customers can engage through *contribution*, which captures medium-level of online customer engagement, for example, liking, sharing, and commenting on brand posts. Finally, customers can engage through the *creation* process, the most substantial level of online customer engagement with a brand, where customers go beyond the simple *consumption* to*contribution* to the brand posts by creating user-generated content such as online posts and reviews related to the brand.

The current research investigates the role of social media marketing activities on online customer engagement. Previous studies have investigated the relationship between social

media marketing and customer engagement (Liu et al.,2021; Dhaoui, 2014). However, the academic research on customer engagement, particularly on the Instagram platform, still needs to be expanded. The study further focuses on the context of luxury brands.

From exploring the online marketing in different contexts, claimed that the luxury brand market is one of the fastest-growing segments with high profits (Ahn, Park & Hyun 2018). One of the reasons for the growth of the luxury brand market can be the increased consumption of luxury products and the changing lifestyle of consumers in emerging markets (Kumar et al., 2022). Online sales of luxury brands are expected to increase 20% by 2025, and online customer engagement to emerge as a crucial driver in the growth of luxury brands' consumption (Kumar et al., 2022). There is the need to investigate the luxury brand market as the market continues to grow despite the critical economic circumstances worldwide (Walsh et al., 2018). It is a starting point in this research to investigate the social media marketing activities and its influence on online customer engagement in the luxury market context. Thus, this study focuses on social media marketing activities performed by the luxury brand managers through the Instagram platform. Although the compatibility between luxury brands and social media platforms has traditionally been questioned (Okonkwo, 2009; Liu et al., 2021), over the last decade, luxury brands have increasingly adopted social media platforms (Kim & Ko, 2012), acknowledging their strong potential to connect with customers (Liu et al., 2021). Luxury brands are goods that, in addition to their practical use, bring the owner a status symbol and wealth. One characteristic of luxury brands is the high price rates (Malkoc et al.,2022). Past research stated that if everyone possessed a luxury brand, it would not be luxurious and would lose its perceived unique value. Although any business's motive is attining higher profit, brand managers tend to find ways to increase their sales (Malkoc et al., 2022), and one of these ways is their presence on social media platforms.

As mentioned, engaged customers are critical for brand success since they generate multiple benefits by playing a crucial part in varied activities within the social media context. These benefits include sharing posts/stories, liking the posted content, and volunteering in brand-related activities. Luxury brands have acknowledged the significance of social media for managing marketing activities (Kumar et al., 2022). Thus, the importance of customer engagement derives from the need to understand the behaviors of individuals who interact with brands without necessarily buying them (Vivek, Beatty, & Morgan, 2012).

Hence, the current study aims to understand better the relationship between social media marketing and customer engagement in the luxury fashion market that eventually will influence customers' purchase intention and their acceptance of price premiums. The current research focuses on customers' purchase intentions rather than behavior because the intention has broader implications which often positively influences an individual's actions (Hung et al., 2011). Purchase intentions are an individual's conscious plan to make an effort to purchase a particular brand (Spears et al., 2004).

The novelty in the research is exploring the influence of customers' engagement through their personal Instagram page on other customers' purchase intention and eventually accepting the brands' price premium. Price premium may be considered the sum customers are willing to pay for a brand compared to other relevant brands (Aaker, 1996). As this study tries to enrich the understanding of customer behavior in the luxury fashion market, it explores customers' acceptance of price premiums. The motive behind studying the price premium is that luxury brands' characteristics are exclusivity, uniqueness, scarcity, excellent quality, and premium price (Hudders et al., 2013). This study aligns with past research to gain further empirical insights into the relationship between social media marketing activities and online customer engagement that induces customers' purchase intention and price premium in the luxury brand context.

Finally, the present study contributes to the existing literature in different ways. The researcher investigates the role of social media marketing activities that are relevant for customers to engage with the brand on Instagram. The current study points out the business-to-customer relationship that leads to a customer-to-customer relationship, i.e., the brand's applying social media marketing activities on their Instagram platform leads to online customer engagement influencing customers' purchasing intentions and price premiums. In the case of this study, we focus on the Instagram platform, considering the fast-growing image-sharing service the platform offers. The research tests the idea that online customer-brand engagement directly persuades the customers' purchase intention to accept the price premium toward luxury brands. However, focusing on perceived social media marketing, customer engagement, customer purchase intention, and price premium through the eyes of the customers is a complex theoretical and practical challenge. Thus, literature encounters brings multiple challenges on these topics.

1.3. Research Question, Objectives and Contribution

The current study claims that social media marketing applied by luxury fashion brands can enhance customer engagement on the Instagram platform. Nevertheless, the current study tries to determine if online customer engagement leads to customers' purchase intentions and acceptance of the price premium of the brand. According to the research background, the need for more investigation regarding components of social media marketing activities that help online customer engagement is a critical topic. This study adds to previous literature by providing and empirically testing a research model that shows how social media marketing influences online customer engagement in the context of luxury brands. The starting point of the current research relates to the following research questions:

1. *What are the social media marketing activities applied by luxury brands on their Instagram platform*?

2. *What is the impact of luxury brands social media marketing activities on online customer engagement on the Instagram platform?*

The current study scrutinizes social media marketing activities components (*Sharing, Customization, Trendiness, and Interaction*) done by luxury brands on the Instagram platform. The research also investigates the effect of the previously mentioned social media marketing activities that affect the aggregated concept of customer engagement (*consumption, contribution, and creation*) of social media content. The focus of the study encompasses studying the Instagram platform, which offers unique and valuable features to enhance communication effectiveness. Moreover, the current study seeks to understand which of the luxury brand social media activities the customer values and help firms make informed decisions about assigning activities to maximize customers' use of the Instagram platform.

Although understanding how social media marketing affects online customer engagement is challenging, it is essential to highlight its impact on customers' purchase intention and acceptance of price premiums. As this study explores the luxury fashion brands market, it was crucial to analyze the extent to which customers are willing to tolerate a higher price. Customers' willingness to pay a price premium for a product occurs when there is certainty about what the product can offer. A high price in marketing is both a financial and quality indicator; customers expect higher quality with higher prices (Salem et al., 2018).

Therefore, the third research question of the study is:

3. *What is the impact of online customer engagement on customers purchase intentions and willingness to pay a premium-price for a luxury brand?*

Given the previous research questions, the study has 2 main objectives. First, the study proposes to provide a deeper understanding of the online customer engagement on the Instagram platform, as social media's advent represents a relevant dimension for luxury brands in today's era. Instagram equips the luxury brands with a platform to demonstrate recent innovative means to satisfy their customers. Customers' online engagement through the platform is revealed by consuming information and liking/resharing posts on their page. leading to customers' purchase intention. Purchase intention refers to consumers' interest in

buying a particular brand and is considered a proxy for actual purchasing behavior (Kummar et al., 2022). Social media marketing is beneficial for addressing emotional results. Customers might conceive empathy for a brand even though they are unwilling to purchase (Husain et al., 2022).

The second objective reports the comprehension of the impact of online customer engagement through the Instagram platform on customers' acceptance of premium price. Past research described willingness to pay a premium price, as a price that a customer is keen to provide for the desired brand over competing ones; it also reflects its strength (Kummar et al., 2022). The researcher added to this objective by considering online customer engagement's mediating role. The mediator in this research was online customer engagement (consumption, contribution, and creation). As a mediator, online customer engagement (consumption, contribution, and creation) enriches the relationship between social media marketing activities and customers' purchase intentions and acceptance of a price premium.

This study contributes to the existing literature in four specific ways. First, the study uses the Instagram platform to explore the social media marketing construct through *Sharing, Customization, Trendiness, and Interaction*). Second, this research studies online customer engagement, adopting Schivinski's (2016) construct of online customer engagement activities (*consumption, contribution, and creation*). The study bridges the gap and proposes a model that tests the impact of social media marketing activities as a second-order construct formed by four dimensions (*Sharing, Customization, Trendiness, and Interaction*) on online customer engagement also considered a second-order construct formed by three dimensions (*consumption, contribution, and creation*). Third, the research investigates the impact of the second order construct online customer engagement on the customers' behavioral intentions (purchase intentions) and willingness to pay a premium price for a luxury brand. Finally, this research aims to bridge the gap of empirical studies on customer engagement and offer evidence that online customer engagement as a mediator factor reinforces the relationship between social media marketing activities and customers' purchase intention and willingness to pay a premium price. The research applies statistical mediation analysis to determine whether the effect of one variable on a second variable is relocated through a third variable (MacKinnon et al., 2012).

Based on the study's findings we derive implications for luxury fashion brands management. The potential advantages of studying social media marketing activities provide new

approaches to analyzing online customer engagement that enhance customers purchase intentions for business practices.

1.4. Thesis Structure

The overall structure of the research takes the form of five chapters. After the present General Introduction chapter, Chapter two presents the Literature Review that supports the theoretical arguments of the thesis. This chapter addresses the four primary constructs – social media marketing activities, online customer engagement, purchase intentions, and price premium. Based on the previous theoretical background, the end of the chapter presents the research model and the research hypotheses. Chapter three introduces the research methodology part. After presenting the research design, the researcher develops the empirical study (quantitative method) that composes the approach to the investigation. Chapter four presents the results and a discussion about the main findings. Finally, chapter five discusses the research's main conclusions and points out the current study's limitations and thoughts that may assist in future research. The thesis outline is presented in figure 1.

Figure 1 - Thesis Outline
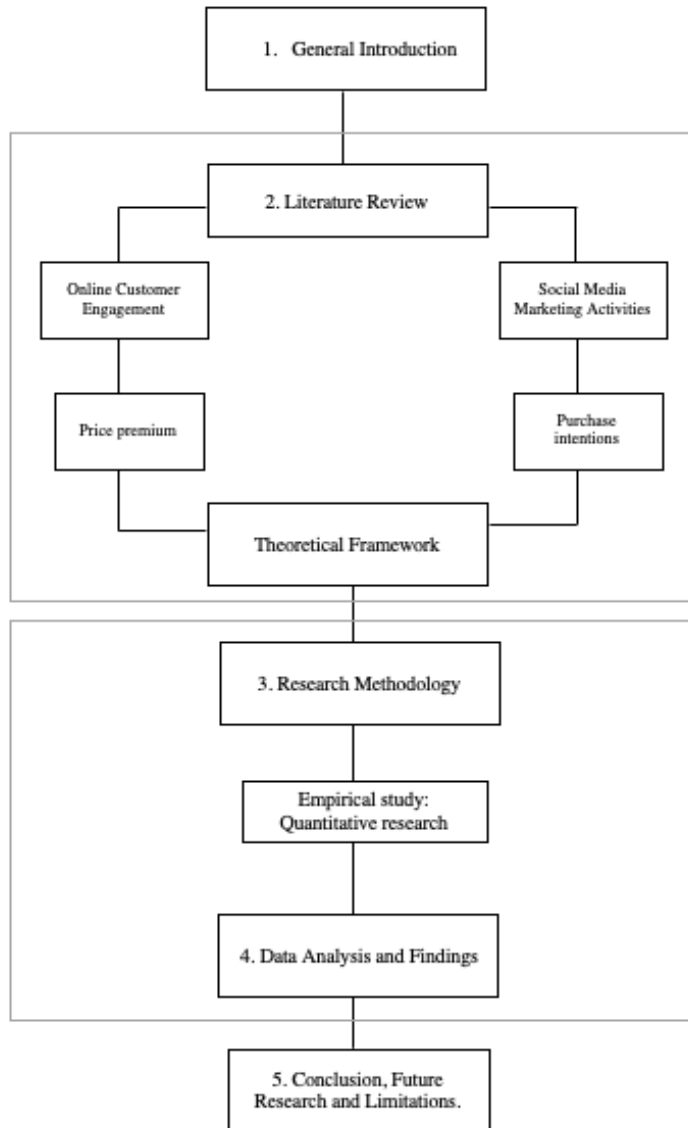
LITERATURE REVIEW

2.1. Introduction

The Literature Review chapter consists of five main sections. The first section displayed one of the primary constructs of the current study, Social Media Marketing Activities (SMMA). It starts with exploring the concept of social media and the different social media platforms. Moreover, the first section focused on broadening the social media marketing concept by addressing different social media marketing components stated by past research. Finally, the section proposed an outlook dimension to the study's internal foundations by introducing the definitions of social media marketing activities components applied in the current study. The second section concentrates on the other primary construct of the study, which corresponds to Online Customer Engagement (OCE). The section starts by proposing the concept of Engagement, followed by the notion of Customer Engagement (CE), which introduces the definitions noted by previous studies. Further, the section presented different dimensions of the customer engagement concept. Finally, the section presented the main base of the study, the online customer engagement definitions, and the dimensions used. The third section raised the terms customers' Purchase Intentions (PI) and Price Premium (PP) by bringing out various definitions from previous literature. The fourth section presented a holistic idea of the luxury brands concept, and it started by introducing the term brand then the researcher highlighted the complex meaning of luxury by presenting different definitions.

Finally, the fifth section is devoted to presenting and developing the hypotheses of the research. The end of this section presents the research model of the current study.

2.2. Defining Social-Media

Social media is defined as a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, allowing the creation and exchange of user-generated content (Kaplan, 2010). Web 2.0 is an era where user-generated content can create healthy communities that facilitate individuals' interactions with common interests. The Internet and Web 2.0 have empowered proactive consumer behavior in the information and buying process (Schivinski, 2016). This definition was in line with Robinson's (2007) findings, where he defined social media as the tools used for communications with Web 2.0 characteristics. These characteristics are participatory, collaborative, have knowledge sharing, and user-empowering tools available on the Web. While Boyd& Ellison, 2007, defined social media as web-based services that allow individuals to develop public or semi-public profiles.

These profiles communicate with a list of users with whom they share a connection and view those connections made by others in the system. Kim & Ko (2012) introduced another definition to social media, where they added other dimensions to the term. They defined social media as an online application, media, and platform that facilitates interaction, sharing, and collaboration between individuals. They stated that sharing content could include weblogs, social blogs, wikis, podcasts, microblogging, and social bookmarking.

Kim & Ko (2012) definition was consistent with Richter & Koch (2007), where they defined social media as online applications, platforms, and media that aim to facilitate collaboration, interaction, and content sharing. This definition was consistent with Rienetta et al. (2017) findings as they mentioned that social media take various forms, including social blogs, web-blogs, micro-blogging, wikis, podcasts, pictures, video, rating, and social bookmarking. They added that social media allows creation, collaboration, and broadcasting by online individuals. Erdoğmuş et al. (2012) defined social media as activities, practices, and behaviors among individuals who meet online to share knowledge, information, and opinions using conversational media like Facebook, Instagram, and Twitter. Other scholar defined social media as a group of Internet-based applications that accept users to create and share content by interacting with one another (De Vries et al., 2017). Rienetta et al. (2017) approved De Vries et al. (2017) definition and added that social media channels include users who can generate content through social networking sites, content sharing, Web chat/discussion, microblogging, and live streaming through Facebook, Instagram, Twitter, Skype, and Life stream.

One of the most significant challenges in reviewing research on social media is setting the scope, and boundary conditions provided a long history of random conceptualizations (Fox & McEwan, 2019). As web 2.0 development exploded, companies and popular media quickly labeled any internet-based technologies facilitating interpersonal interaction as social media (Fox & McEwan, 2019). One argument is that authors have often derived conceptualizations from currently popular technology (Carr & Hayes, 2015). Also, Boyd & Ellison (2007) defined social networking sites as a subset of social media. They described social media as an online environment in which people create a self-descriptive profile and then make links to other people they know on the site, creating a network of personal or aggregate "likes" that communicate information to other users.

In conclusion, most of the previous definitions agreed that social media allows creating communities that share information and knowledge as social media impacts human communication and business firms. Small and big brand businesses are involving social media platforms like Facebook, Instagram in marketing activities. The existence of brands on social media platforms allowed social media users to be aware of many different brands. Brands using social media depend on marketing with the idea of storytelling/images, which is key to attracting and retaining potential and existing customers. Therefore, this is a starting point in this study, where being active on social media platforms emerges as a destination for brands to bring their products closer to their customers and leverage engagement with these consumers. This engagement may increase their purchase intention and willingness to pay a premium price for a brand.

From the previous discussion, whether social media is crucial and affects business activities, many questions arise in this study. Should social media be a focal point for strategy makers for better business practice in the luxury brands market? Do luxury brands that exist on social media and allow customer engagement is more appealing to consumers and can develop a behavioral intention rather than brands that do not exist? What is social media marketing activities' impact on customers' online engagement? What is the influence of customers' online engagement on customers' purchase intention and premium price on luxury brands in the fashion industry? This study will try to answer these questions.

The following section (2.2.1) in the literature will better understand the different social media platforms like Facebook and Instagram that brands may use in the marketing process for their products/services.

2.2.1. Social Media Platforms

A social media platform is defined as a web-based service that grants individuals to promote public or semipublic profiles. Social media platforms allow people to communicate with each other, sharing and viewing connections made by other individuals in the system (Jayasuriya, 2018). Social media platforms are considered an economical and user-friendly method that enable the generation, consumption, and sharing of user-generated content by individuals. Social media platforms facilitate and offer a cost-effective way for businesses to reach more customers. Subsequently, these businesses can strengthen their brand awareness through

various applications and tools. Companies appear to believe that such social media strategies are justified because of their potential to generate profits (Rodriguez-Donaire, 2012).

Social media platforms include various channels such as social networking sites (SNS), business networking sites, and creativity works sharing sites, and collaborative websites (Kietzmann et al., 2010). Kaplan (2010) mentioned that social media includes several types of widely available platforms for everyone and by everyone. It includes websites that use shared virtual applications. These platforms have developed as a new technological tool that includes using web-based technologies to generate collaborative and interactive channels. Like Facebook and Instagram, these channels assist individuals and societies in sharing, discussing, and improving user-generated content (Kietzmann et al., 2012).

Furthermore, social media platforms converted from being a friend's network to be one of the fastest sources of information for products and services (Rishi & Sharma, 2017). Customers can add value to a product/service by adding their own content to influence the purchasing decisions of other customers throughout peer-to-peer communications. Social media platforms improve the communication power of active social media users by offering various avenues without demanding much effort. Separately from creating and sharing knowledge, individuals can use these platforms to construct or join countless communities with other like-minded individuals according to their similarities of interest and purpose (Rathore et al., 2018). Social media platforms can include business firms' activities like; sharing content, interaction with customers, providing customer services, gathering feedback, and collaborating with employees (Bowden, 2009).

As social media platforms have been taking over the world quickly, it is used for business purposes in two ways. The first purpose is to communicate with external parties, such as customers and vendors. That is why business firms maintain social media pages on widespread networks such as Facebook, Instagram, and Twitter. Social media's second purpose is internal communication within an organization between employees (Jayasuriya, 2018). Social media can impact a brand's reputation (Kim & Ko, 2012). Social media platforms have the potential to influence consumers directly and personally in the social environment. Companies and brands are keen to advertise in this new medium, social media platforms. In other words, a company's marketing department can use social media to build up an individual relationship with customers.

In conclusion, social media platforms have reinforced the existing relationship between businesses and customers and resulted in innovative changes in traditional communication techniques. Thus, it leads to enhance the capability of businesses to interact with these platforms (Iankova et al., 2019). Although most social media channels offer similar abilities to marketers, such as transfer content, target, and engage customers, different social media platforms are perceived more favorably for certain forms of communications (Iankova et al., 2019). Facebook is for providing a precious means for customer relationship management (Popp et al., 2016). In contrast, Twitter is known for its capability to communicate brand messages and mining consumer responses (Culotta & Cutler, 2016). Instagram is a channel for sharing image-based content (Muñoz & Towner, 2017). At the same time, the YouTube platform is known for its videos. Though specific platforms have concentrations in different areas, "*Better customer experience is driven by the presence of multiple channels*" (Iankova et al., 2019, p. 1274). The previous discussion indicates that companies and brands should use different social networking platforms for promoting their products/services.

Finally, social media platforms have brought social activities into the online virtual world (Chen et al., 2019). Peters et al. (2013) asserted that a company should understand the social media users in terms of their motives, network structure, content generation, and social roles and interactions in order to be able to succeed on these platforms. This study focuses on individuals who use Instagram platforms in the purchasing process and who take information about a specific brand through these channels. Facebook is considered the most popular and widely used social media network. It has the highest daily active users than other social networks (Jayasuriya et al., 2018). Therefore, Facebook is a social platform that has the highest reach potential (Chaffey, 2019). The following section (2.2.1.1) will define the Facebook Platform and how it contributes to the success of companies.

2.2.1.1. Facebook Platform

Facebook is considered the world's most extensive online social network, and many distinct features highlight its function as a critical social communication platform (Allen, 2012). Facebook was founded in 2005 as a free public social media platform. Its building blocks are profiles of specific personal information about the user and the actions made within Facebook (Holten et al., 2016). Facebook connects users through their network of Facebook friends and pages they follow and like. They can communicate about any topic, which creates connections

among people (Allen, 2012). Facebook has been at the primacy of the now-standard interweaving of online communications with individuals' everyday lives (Ellison et al., 2011). They added that users are connected through their network of 'Facebook friends' and pages they follow and like. The social environment of friends and pages, which the individual follows, creates a newsfeed informing others about the network based on the friendship patterns.

Another term arose, which is Facebook marketing as companies using Facebook in marketing for their brands. Facebook marketing concerns creating and actively using a Facebook page as a communications channel to maintain contact with and attract potential customers (Jayasuriya et al., 2018). The extensive widespread of Facebook marketing activities makes it possible for users to join and create groups. Companies and brands use Facebook as a platform for commercial content of paid and non-paid advertising. Facebook marketing takes the form of boosted newsfeeds, promotional advertising, and projection of recommended page/products/services, all of which can target specific Facebook user-profiles and online interests (Holten et al., 2016).

The following section (2.2.1.2) will introduce the Instagram platform. Past scholar defined Instagram as a channel to connect and communicate with customers and potential customers of brands (Salleh et al., 2015). Due to the researcher's limited knowledge, although Instagram is the most popular photo capturing and sharing application, it has attracted less attention from the scholar community. The reason is that despite its popularity, little research has been focused on Instagram. This research will study the Instagram Platform.

2.2.1.2. Instagram Platform

Instagram was defined as an online social platform based on a free application dedicated to the mobile experience (Holton et al., 2016). Instagram is a mobile photo and video capturing and sharing service that has emerged as a new medium in the spotlight (Hu et al., 2014). Another definition stated by Holton et al. 2016 in line with the previous Hu et al. (2014) definition is that Instagram is an online photo-sharing and social network platform that allows users to upload, edit, and share pictures with other users. Holton et al. 2016, added that each Instagram user has a profile with a short, self-selected description, where users can follow other users and like, comment, and 're-gram other users' pictures. Instagram can be considered the home for visual storytelling for everyone from celebrities, brands, teens, and anyone with a creative passion.

The *Instagram* platform encompasses 400 million users worldwide, leading to high customer engagement (Holton et al., 2016). With the growing users of Instagram, Peters et al. (2013) mentioned that the Instagram platform caused companies and brands to take advantage and create pages on Instagram to market their products. As mentioned by previous scholars Holton et al. (2016), Instagram allows customers to engage, the purpose of the current research is to study the impact of social media (Instagram) on Egyptian customer engagement in the luxury brands market. Instagram has a visual component that connects perfectly with fashion brands, including pictures, videos, boomerangs, layout, stories, and live (Vinerean & Opreana, 2019). These visual components were the starting point for the current research to study marketing the luxury brands through the Instagram platform.

As social media platforms, i.e. (Instagram/Facebook), are growing in terms of active users, size, demand, and attractiveness; it offers an excellent platform for segmenting, targeting, and positioning their brands (Mukhtar et al., 2020). Therefore, social media as a marketing tool is not an isolated activity but rather the final step of a consistent strategic effort to improve the product or service, the organization, and the traditional corporate website (Constantinides, 2014). Social media platforms have changed the power structures in the marketplace, as it offers a unique marketing communication tool (Balakrishnan et al., 2014). Evidence pointed out a significant power migration and the emergence of a new breed of sophisticated customers, difficult to influence, convince, and retain (Constantinides, 2014).

Another term raised is social media marketing activities; Social media marketing uses these social media applications as an extension to fulfill traditional marketing (Balakrishnan et al., 2014). Participation in social media platforms is a two-way communication that can be attained through social media marketing instead of the traditional one-way communication (Lamberton & Stephen, 2016). Companies use social media channels as a marketing instrument to connect with customers and communicate with each other (Lamberton & Stephen, 2016). Social media marketing also leverages mobile and web-based technologies to create an interactive medium where users and groups share, co-create, discuss, and modify, known as user-generated content (Kietzmann et al., 2011). By manipulating the user-generated content has enabled businesses to forecast the future purchasing behavior of their customers more accurately (Kim & Ko, 2011), enhances brand post popularity (De Vries et al., 2012), attract new customers (Michaelidou et al., 2011), build awareness, increase sales and build loyalty (Castronovo, 2012).

Hence, social media marketing has been enlarging and evolving since it came into existence between brands and active social media users. The following part (2.2.2) will give a better understanding of defining social media marketing.

2.2.2. Defining Social Media Marketing

Social media marketing was defined as a mean to connect and interact with existing and potential customers and build long-lasting relationships (Chan & Guillet, 2011; Chang et al., 2015; Choi, 2016). Social media marketing enhances stakeholders' value through marketing activities by including social media channels in marketing communication (Pham & Gammoh, 2015; Felix et al., 2017). Jaysuriya (2018) defined social media marketing as the process that empowers websites, brands, products, and services through online social networks. Social media marketing include blogging, sharing photos, and videos online (Jayasuriya, 2018). Social media marketing enables participants to connect, share information, begin a conversation with one another, mobilize resources, assist the sales processes, and strengthen relationships with existing industrial associates (Drummond et al.,2020).

The existing literature has not reached a mutual agreement for defining social media marketing. Some researcher defined it as a means to connect and interact with existing and potential customers and build customer relationships (Chan & Guillet, 2011; Chi, 2011; Chang et al., 2015; Choi et al., 2016). Other researcher defined it as a process of improving stakeholders' value through marketing activities by including the social media platforms in marketing communication (Pham & Gammoh, 2015; Tuten & Solomon, 2017; Felix et al., 2017). The upcoming table (1) summarizes definitions for social media marketing stated by past research.

Table 1 - Social Media Marketing Definitions

Social media marketing definitions	Author
''A way of using the Internet to collaborate instantly, share information, and have a conversation about ideas or causes we care about''	Taubenheim et al. (2008, p. 58)
''A social and managerial process by which individuals and groups obtain what they need and want through a set of Internet-based applications that enable interaction, communication, collaboration of user-generated content and hence, sharing of information such as ideas, thoughts, content, and relationships''	Chan & Guillet (2011, p. 347)

"Social media marketing provides meaning and connection between brands and consumers and offers a personal channel and currency for user-centered networking and social interaction"	Chi (2011, p. 46)
"Social media marketing, which uses social networks such as Facebook to enable content sharing, information diffusion, relationship building, and fans cohesion"	Chang et al. (2015, p. 777)
"Company's process of creating and promoting online marketing-related activities on social media platforms that offer values to its stakeholders"	Pham & Gammoh (2015, p. 325)
"Engaging with customers through SNSs is commonly known as social media marketing and brings several benefits to companies, such as creating word-of-mouth, positively affecting customer equity, enhancing customer loyalty to the company, and increasing the company's purchase intention of the company's products or services"	Choi et al. (2016, p. 772)
"Is the utilization of social media technologies, channels, and software to create, communicate, deliver, and exchange offerings that have value for an organization's stakeholders"	Tuten & Solomon (2017, P. 21)
"Is an interdisciplinary and cross-functional concept that uses social media (often in combination with other communications channels) to achieve organizational goals by creating value for stakeholders"	Felix et al. (2017, p. 123)

The current study implemented the definition of social media marketing stated by Felix et al. (2017, P.123): "*Is an interdisciplinary and cross-functional concept that uses social media (often in combination with other communications channels) to achieve organizational goals by creating value for stakeholders*." However, the standard components between social media marketing and those definitions encourage users to spread social media marketing content through social media marketing activities like interaction and word of mouth.

In conclusion, the potential benefit of social media marketing for the entrepreneurial firm lies in its ability to generate value in relationships and networks. The entrepreneurial venture's low resource commitment, ease of implementation, and simplicity to use compared to traditional marketing communications have particular appeal (Drummond et al.,2020). Ebrahim et al. (2020) supported Drummond et al. (2020) findings that social media marketing augments traditional and digital marketing communication tools. Ebrahim et al. (2020) added that social media marketing monitors and facilitates customer communications, collaborations, and interactions with the company, its brands, and other customers and

encourages their engagement. It also describes customers' views of the company's multiple marketing activities on the social media platform. As this section presented the definitions of the social media marketing concept, the following section (2.5) will identify social media marketing components. According to Kim & Ko (2012), luxury brands' social media marketing components include five dimensions: entertainment, interaction, trendiness, customization, and WOM (word-of-mouth). Hence, the current research studied luxury brands in the Egyptian market. The researcher examined luxury brands applying the social media marketing activities from the perception of the Egyptian consumers, such as, sharing, customization, interaction, and trendiness. The following section (2.2.3) will provide the components of social media marketing activities.

2.2.3. Components of Social Media Marketing Activities

Social media marketing activities (SMMAs) entails promoting brands/companies through online channels, including blogging, sharing photos, and online posts (Yazdanparast et al., 2016). Kim & Ko (2012) defined social media marketing activities as a two-way communication seeking empathy with young users and reinforcing the familiar emotions associated with current brands to a higher age group. Their findings indicate that through those activities, brands have the chance to create a holistic and more profound connection to those customers engaging with social media and further build their brands (Kim & Ko 2010; Dwivedi et al., 2018).

Kim & Ko (2012) developed a construct of social media marketing activities to highlight that utilizing social media as a marketing tool will have a different appeal than traditional marketing platforms. The benefits of social media as a marketing means are that the customer will be more entertained by the enterprise's free marketing content and will produce social network activity. Wibowo et al. (2021) supported that social media is real-time and fast, enabling customers to receive the newest information and trends in products/services offered by the enterprise. The customers can customize information searching by utilizing the default search feature on social networking sites, hashtags, or direct custom searching services provided by the firm through their social media page (Wibowo et al., 2021). They added that a social media marketing campaign makes it possible to generate direct interactions between users, leading to word-of-mouth effects, including customer willingness to pass along information seen in the enterprise's social media to others. Kim & Ko (2012) construct

indicated that social media marketing activities' components involve five components: entertainment, interaction, trendiness, customization, and word of mouth. The authors found that social media marketing activities significantly affect brand equity and buying intentions.

Past research addressed the components of social media marketing activities in various contexts. Godey et al. (2016) characterized social media marketing components as entertainment, interaction, trendiness, customization, and word-of-mouth. In contrast, Yadav & Rahman (2017) have classified social media marketing activities into interactivity, informativeness, electronic word-of-mouth personalization, and trendiness. On the other hand, Seo & Park (2018) applied entertainment, interaction, trendiness, customization, and perceived risk as social media marketing components. In addition, Bilgin (2018) explored entertainment, interaction, trendiness, advertisement, and customization as the social media marketing activities components.

The current study attempts to undertake four components (sharing, customization, interaction, and trendiness) of social media marketing activities in finding the effects on customer engagement towards luxury brands. The following sections introduce these components.

2.2.3.1. Sharing

Sharing defined as the extent to which users exchange, distribute, and receive content using social media applications. Sharing is a way of interacting with social media (Kietzmann, 2012). Social media platforms consist of people connected by a shared object like a video, picture, link, or location (Kietzmann et al., 2010). Kietzmann (2010) stated that whether sharing leads users to have conversations or even build relationships with each other depends on the social media platform's functional objective. Powered by user conversations, any company's content through social media may translate into good or bad word-of-mouth (Babac, 2011; Khan & Jan, 2019).

Sharing through social media platforms has fundamental implications for companies that engage with their customers through these channels (Kietzmann, 2012). The first is to evaluate what social media users have in common or to identify new objects that can mediate their mutual interests. A second implication is a degree to which the object can or should be shared. For instance, the YouTube channel started as a platform to allow individuals to upload and share videos. Some users criticized uploading videos because YouTube failed to ensure that

these uploaded materials fulfilled the copyright laws and hosting videos that contain offensive material. As a result, YouTube developed controls to filter and then screen the content that it shares (Kietzmann, 2012). Companies need to understand that by sharing content, they are making a statement. Companies are not only sharing information about their products/services; they are also sharing their values and creating an image. This image can leave a long-term impression on individuals' minds (Babac, 2011).

2.2.3.2. Customization

Customization can be defined as the degree to which a service/product is tailored to satisfy an individual's preferences (Schmenner, 1986). In the social media context, customization is the extent to which social media channels provide a customized information search and customized services. Customization is defined as the extent to which a service reflects customers' demands to satisfy their needs and wants (Schmenner, 1986). Customization in social media platforms is based on communicating with individual users, which is significantly different from traditional advertisement tools (Seo & Park, 2018). There are two types of posts, depending on the messages' level of customization. First is a customized and intended post for a specific person or a small audience (e.g., Facebook comment or post to a closed circle of friends). Second is a broadcast that contains messages targeting anyone interested (e.g., Twitter tweets) (Zhu & Chen, 2015).

Customization refers to posting messages for the intended audience (Godey et al., 2016). Customization can have positive perceived control by companies and satisfaction among users by providing customers with information about the product/service (Ding & Keh, 2016). Brands can customize and express individuality, build stronger brand affinity, and brand loyalty by customizing their sites (Martin et al., 2010). For instance, brands like Burberry and Gucci use their online presence by sending customized messages to individual customers, enabling them to personalize their products (Godey et al., 2016). However, consumers' preferences for standardized or customized products/services depend on their consumption goals. Customers seeking hedonic goals tend to prefer customized services, while customers who seek utilitarian purposes tend to prefer a standardized product/service (Ding & Keh, 2016).

2.2.3.3. Interaction

Interaction through social media offers a space to customers who contribute to social media platforms to communicate and exchange ideas (Seo & Park, 2018). Interaction can be expressed as users who contribute to brand-related social media platforms in order to meet like-minded others, interact, and talk with them about specific products/services (Muntinga et al., 2011). Social media channels can give consumers' assistance as well as space for discussing ideas (Godey et al., 2016). Interactions in social media platforms offer perception to active users to engage with brands' related activities. Those active users contribute to social media with respect to particular brands who meet and interact with each other in virtual space and discuss specific products and/or brands (Muntinga et al., 2011).

Social interaction is an essential motivator for creating user-generated content (Daugherty et al., 2008). These interactions are changing the dynamics of brand-customer communications, and they motivate the development of user-generated content (UGC) in social media (Seo & Park, 2018). Social media is divided into two groups according to the nature of users' connection and interaction (Zhu & Chen, 2015). First, the profile-based social media, which focuses on information and topics related to its members. The profile-based primary purpose is to encourage social media users to connect with these specific topics through these channels, Facebook, Twitter, and WhatsApp (Zhu & Chen, 2015). Second, content-based social media focuses on the contents, discussions, and comments on the posted topics. The primary purpose is for the users to connect with the topics a specific profile provides through channels such as Instagram, Pinterest, and YouTube (Zhu & Chen, 2015).

2.2.3.4. Trendiness

Trendiness regards disseminating the latest and trendiest information about products or brands (Godey et al., 2016). Trendiness is the extent to which a brand provides the newest information about its products and services (Godey et al., 2016). Consumers use various social media platforms to obtain information, as they perceive them as a trust-worthier source of information than traditional promotional activities (Mangold & Faulds, 2009). The trendiness of information acquired through social media channels has four sub-motivations: surveillance, knowledge, pre-purchase information, and inspiration. Surveillance is monitoring and remaining updated about individuals' social environment. Knowledge refers to a product or brand-related information that consumers obtain to profit from another consumers'

knowledge to learn more about a product or brand. Pre-purchase information indicates reading product reviews on brand communities/groups to make a buying decision (Muntinga et al., 2011; Godey et al., 2016). Finally, inspiration relates to consumers following brand-related information to obtain new trends or ideas. For instance, consumers look at images of other people's clothes for ideas about what they want to wear (Muntinga et al., 2011; Godey et al., 2016).

The following section (2.2.4) includes a table (2.2), which summarizes definitions of the components of social media marketing activities, including sharing, customization, interaction, and trendiness. As social media provides users with shared interests in a virtual space to share and discuss ideas, the study agreed that Sharing is the volume in which customers communicate with each other using social media channels (Kietzmann et al., 2011). In the social media context, customization relates to posted information about a specific brand (Zhu & Chen, 2015). Customization is classified in terms of two perspectives: broadcasts (e.g., Twitter tweets) and customized messages (e.g., Facebook/Instagram post). Customized notifications target a specific group or audience while broadcasts focus on anyone interested (Zhu & Chen, 2015). Furthermore, Tam & Ho (2006) stated that customization avoids information overloading and increases the quality of customer decision-making in the purchasing process.

2.2.4. Bringing Together the Components of Social Media Marketing Activities

As mentioned in the previous section (2.2.2), the researcher showed that to study social media marketing to enhance brand success, scholars must identify many variables: identity, conversations, sharing, presence, relationships, reputation, and groups (Khan & Jan, 2019). Past research defined Identity as the extent to which online users disclose their identities in a social media setting (Kietzmann et al., 2012). Identity can include revealing information about users like their name, age, gender, and profession (Babac, 2011). A user's identity can often present through the conscious or unconscious 'self-disclosure' of personal information such as feelings, thoughts, likes, and dislikes (Kaplan et al., 2010). Users willingly share their identities on social media applications, but they have concerns about their personal information (Kietzmann et al., 2010). Identity is a core activity to social media channels; this grants some fundamental implications for firms who seek to improve their social media sites or strategies for engaging with users. Kietzmann (2012) stated that there is no single identity

for a single social media user. Social media users have serious concerns about how a brand can easily access their information as a source for data mining and surveillance (Kietzmann & Angell, 2010). Therefore, those users may be reluctant to share their names, age, profession, and address where other individuals may misuse it. We can say that a careful balance between sharing identities and protecting privacy is crucial when using social media applications. Any deprivation for this information can lead to a lack of accountability among users and encourage cyber-bullying (Kietzmann, 2012).

Other research added that five different social media marketing activities are: Entertainment, Interaction, Trendiness, Customization, and electronic word-of-mouth (Kim & Ko, 2012; Godey et al., 2016). Past study has addressed these activities as Interaction, trendiness, customizations, and sharing with different settings. In the process of identifying available social media marketing activities, these activities, Interaction, trendiness, customizations, sharing, are explained and adjusted to the social media context (Jayasuriya et al., 2018). Considering that not all the social media platforms work with the same elements, most of them have at least three or more characteristics of social media marketing activities like Interaction, customization, and word of mouth (Jayasuriya et al., 2018). Other studies have classified social media marketing activities differently. Adding to Kim & Ko (2012), who classified social media marketing activities into interaction, entertainment, trendiness, customization, and word-of-mouth (W O M), Chang (2012) proposed social media marketing activities as information display, customer participation, unique differentiation, content suitability, and customer response (Seo & Park, 2018). Sano (2015) applied interaction, trendiness, perceived risk, and customization as the characteristics of social media marketing activities. In comparison, Tresna & Wijaya (2015) and Babac (2011) have used a functionality-based approach to study social media marketing.

In contrast to the previous findings, Tuten & Solomon (2017) classified social media marketing activities as companies' components into communication, providing information, supporting daily life, promoting and selling, and social response and activity. While in the airline service, the researcher found that social media marketing activities are entertainment, interaction, trendiness, customization, and perceived risk (Seo & Park, 2018). They found that an essential component in social marketing activities was entertainment. Entertainment in social media is a critical component that increases participating behavior, induces positive emotions, and generates intention continuous usage (Seo & Park, 2018).

Some of the drawbacks of social media marketing activities, which can be the spread of negative word of mouth and information overload that can annoy consumers (McCoy et al., 2007). Adding to these drawbacks, the difficulties in measuring social media activities' added value have kept many marketing executives skeptical about applying it to their brands (Hutter et al., 2013). Nevertheless, since brands cannot risk being absent in such an influential communication platform, companies invest in their social media marketing activities (Hutter et al., 2013).

From the previous discussion, social media marketing activities in the new brand communication paradigm are considered part of the promotional mix (Mangold & Faulds, 2009). For instance, some companies formed social media communication (Schivinski, 2011; Zailskaite-Jakste & Kuvykaitė, 2013). Kelly et al. (2010) found that social media provides companies with opportunities to reach target audiences and build personal bonds. Other companies created knowledge-sharing features of social media (Chou, 2019); online brand communities like Facebook groups (Brogi et al., 2013); interaction and entertainment by active online consumers (Godey et al., 2016). Studying each market is crucial, as social media marketing components that affect active users' behavioral intentions may differ. Measuring these activities is a critical component of corporate success (Hammerl, T., Leist, S., & Schwaiger, J., 2019). Every component of social media marketing activity is unique. However, the actual individual engagements may differ in specific social media platforms, i.e., Facebook or Instagram (De Vries et al., 2012). Companies need to evaluate the expansion of social media activity outcomes to fully understand an overall picture of a firm's social media activity effectiveness, as engagement is focused on a brand (Halaszovich & Nel, 2017).

Finally, the following table (2.2) includes social media interaction, which is the degree to which customers interact and communicate on social media. It has changed the way brands and their customers communicate with each other. Social media has provided a place where users can discuss specific products or brands with other customers (Muntinga et al., 2011). Zhu & Chen (2015) classify social media interaction into two parts, referring to content-based or profile-based activities that depend on the connection's nature. According to their study, content-based activities are based on content, comments, and views on social media users are interested in (Zhu & Chen, 2015). In contrast, profile-based activities focus on individual members with related information/topics. Its' aim is to encourage mutual connection because they like the user behind the profile. Table (2) below defined trendiness as the newest hot

topics and information that social media channels offer (Naaman, Becker, & Gravano, 2011). Social media channels are becoming the primary search and trendiness platforms because they are perceived as more reliable sources than traditional brand-sponsored promotional activities like Tv advertising/billboards (Mangold & Faulds, 2009).

Table 2 - Definitions for the components of Social Media Marketing Activities

SMMA	Definition	Reference
Sharing	It is defined as the volume of which customers communicate with each other using social media channels.	Kietzmann et al., 2011
Customization	It is defined as the extent to which the demand for customers is satisfied through a service.	Schmenner, 1986
	It is defined as a strategy to generate positive perceived control and customer satisfaction by providing customers with optimized information about product/service.	Ding & Keh, 2016 Nam & yeo, 2011
Interaction	It is defined as the degree to which customers interact and communicate with each other in social media.	Kietzmann et al., 2011
	It motivates the development of user-generated content. It changes the dynamics of brand-customer communication.	Daugherty et al., 2008 Kaplan et al., 2010
Trendiness	It is defined as providing recent information about products and services.	Godey et al., 2016
	It is defined, as customers perceive social media as a trust-worthier source of information than traditional-marketing activities.	Mangold & Faulds, 2009

From the above table (2), a question may arise in this study; what are the components of luxury brands' social media marketing activities that impact customer brand engagement in the Egyptian market? i.e., Does sharing, customization, Interaction, and the Trendiness of luxury brands existing on social media may influence customer brand engagement?

This study expands the understanding on how luxury brands may fortify customer engagement through social media marketing activities. A research gap may arise where this study will propose the effectiveness of customer perception of social media marketing activities on brand engagement in the luxury market. This paper aims to develop a research instrument to measure social media marketing activities in terms of sharing, customization,

interaction, and trendiness, through the Instagram platform that may impact customer brand engagement and affect customers' purchase intention. As a result, this research tried to tackle whether the luxury brands firms succeeded in taking the privilege of social media in marketing for their brands and its impact on customer engagement. Moreover, how it affected customers for accepting price premiums and their purchase intentions in the Egyptian market. Therefore, this research article is an effort to fill the gap identified in the literature. The extent to which customers engage online to the luxury brand's related content through the Instagram platform. This study sheds light on how luxury brands can use their social media channels (Instagram) using social media marketing activities to allow customers to engage with the brand. The second stage in the current research attempts to measure the effect of customer online engagement on customers' purchase intentions and acceptance of price premiums. In this context, the following part of the literature (2.3) will present the concept of engagement and customer engagement definitions.

2.2.5. Summary

This section addressed the construct of social media marketing activities, considering three main topics. First, the section reflected its notion, scope, and definitions. Second, the section provided the different components stated by past literature. It entailed the different components used in this study to explore the construct of social media marketing activities. The research tried to overcome the lack of agreement regarding a single definition with insights from different literature standpoints. The section provided that the potential benefit of social media marketing activities for the entrepreneurial firm is its ability to generate value for customers and brands. New perspectives on the study of social media marketing activities are required to understand the dimensions of this construct. Third, this section provided some of the drawbacks of social media marketing activities. After presenting the first construct of the study, the next section will focus on the second main construct: online customer engagement.

2.3. The Concept of Engagement

The concept of engagement is not a modern notion (Brandão et al., 2019). The marketing literature studied the engagement concept (Hollebeek, 2011) based on its great variety and wealth of information (Brandão et al., 2019). The engagement is a multi-dimensional concept

that considers consumers' interactive brand-related experiences (Brodie et al., 2013). It has been of interest to practitioners and academics in many social sciences, for example, sociology, psychology, political science, and organizational (Hollebeek et al., 2014; Brodie et al., 2011; Bowden, 2009).

Earlier research on the consumer-to-business relationship has focused on measuring purchase behaviors as a performance indicator of the brand. However, such measures fail to capture consumers' active role in influencing a broader network of entities, including potential customers (Lemon & Verhoef, 2016; Van Doorn et al., 2010; Verhoef, Reinartz, & Krafft, 2010). Thus, the importance of understanding customer engagement stems from the need to understand behaviors of "individuals who interact with brands, without necessarily purchasing" them (Vivek, Beatty, & Morgan, 2012, p. 127). Despite being a relatively recent investigation subject in the business literature, there are distinct concepts and definitions of consumer brand engagement (Dessart et al., 2016). The following section (2.3.1) introduces customer engagement definition.

2.3.1. Defining Customer Engagement

Customer Engagement refers to "*customer behaviors that go beyond transactions and may be specifically defined as a customer's behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers*" (Van Doorn *et al.*, 2010, p. 254). Givili et al. (2018) approved this definition and referred to the term engagement to customer behaviors beyond the buying process. Marketing research literature has attached various meanings to the engagement notion, along with disputable and doubtful definitions (Hollebeek et al., 2014; Brodie et al., 2011; Calder et al., 2009). For instance, one stream of research has studied the term engagement and defined it as a psychological process that arises from experience (Calder et al., 2008; Bowden, 2009; Hollebeek, 2011). Hollebeek et al. (2016) defined customer engagement as a term related to the consumer's cognitive, emotional, behavioral, and social investment when interacting with a brand. This definition was in line with Brodie et al. (2011, p. 9) definition, "*a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g., a brand).*" Other scholars defined customer engagement as a set of actions consumers apply when interacting with others in the brand community and reviewing brand-related information with them (Rossmann et al., 2016; Gvili et al., 2018).

The previous argument was sufficient as it defined customer engagement in a service relationship context. However, Verhoef et al. 2010 (p. 249) defined customer engagement as *"word of mouth, blogging, or providing customer ratings for a product or brand"*. Other scholar proposed that customer engagement is defined as *"customer contributions of resources such as knowledge, skills, and time, to facilitate the focal firm's development of its offering"* (Jaakkola & Alexander 2014, p. 255). It is relevant in contexts where *"customers can co-create value, co-create competitive strategy, collaborate in the firm's innovation process, and become endogenous to the firm"* (Harmeling et al., 2017, p. 341). Later on, Harmeling et al. (2017) added an unnecessary confusion to customer engagement definition; customer's deliberated contribution to a firm's marketing function apart from the financial assistance of the firm. Jaakkola & Alexander (2014, p. 248) suggest a convincing argument, in which customer engagement is defined as *"behaviors through which customers make voluntary resource contributions that have a brand or firm focus but go beyond what is fundamental to the transaction"*. Pansari & Kumar (2017, p. 295) defined customer engagement as "*the mechanics of a customer's value addition to the firm, either through direct or/and indirect contribution.*" Thus, in contributing to firms' view, customer engagement is thought to improve firm performance by encouraging direct and indirect contributions, i.e., purchase as a direct contribution and word of mouth (WOM) as an indirect contribution.

Moreover, other scholar defined customer engagement behaviorally rather than psychologically outcome; it does not exclude the relevance of psychological paradigms: involvement, brand love, satisfaction, cognitive, and affective commitment. Although, it allows these paradigms to vary independently (Harmeling et al., 2017; Pansari et al., 2017). The previous definition aligns with Dick & Basu's (1994) early findings; Customer engagement can be seen as a behavioral outcome, which means actions outside the purchasing transaction, which can benefit from clearly distinguishing the concept from behavioral loyalty (i.e., repeat purchases). In comparison, psychological customer engagement is defined as "*Activities engaged in by the consumer that are not directly related to search, alternative evaluation, and decision-making involving brand choice*" (Vivek et al., 2012, p. 128). "*Curiously, many researchers claiming a psychological perspective emphasize its interactive nature asserting that customers choose to invest resources in particular brand interactions*" this was a definition stated by Hollebeek et al. (2016 p.3).

2.3.2. The Benefits of Customer Engagement to Brands

When customer engagement occurs voluntarily in response to product experiences or marketing communications with no firm's intended actions to motivate or empower the customer, the brand/product engenders more trust and is more memorable than firm traditional paid advertising methods (de Matos & Rossi, 2008). Customer engagement is twice as effective as media advertising, four times more effective than personal selling, and seven times more effective than printed advertising (Harmeling et al., 2017). Hollebeek et al. (2019) identified three customer engagement benefits: customer interpersonal operant resource development and co-creation. These benefits are considered as customer engagement consequences, which can also coincide with customer engagement. Operant resource development is defined as customer's perceived modification (for example, growth) in their brand-related operant resources, knowledge, and skills throughout acting as the initiator or recipient of brand-related knowledge sharing with other individuals (Vargo & Lusch, 2008). Bento et al. (2018) criticized these benefits stated by Hollebeek et al. (2019). The three variables mentioned above (interpersonal operant, resource development, and co-creation) should not be interpreted as customer engagement dimensions. Instead, they are conceptually related concepts that may occur with customer behavior simultaneously.

From the previous discussion, we can say that a customer engagement construct is relevant only as part of a process leveraging firm resources into success. This study argues that customer engagement as intrinsic motivation or a psychological state alone cannot directly add value to the firm performance. Customer engagement as a psychological mind state indicates that consumers "*include important brands as part of their self-concept*" (Sprott et al. 2009, p. 92) or "*feel internal emotion from brand attachments*" (Paruthi & Kaur 2017, p. 128). Although consumers may engage with brands relevant to their self-concept and feel internal emotions, consumers must also perform brand-enhancing actions from a marketing success standpoint (De Oliveira Santini, 2020). Customer activities are required, including transactions, and perhaps via behaviors that work on brand-related social media content to act as advertising. Thus, customer engagement has been conceptualized as an activity, such as collecting experiences, intentions to give recommendations, or including activities related to specific consumer/brand interactions (De Oliveira Santini, 2020).

The following section (2.3.3) discusses the definitions and dimensions offered by prior researchers.

2.3.3. Bringing Together the Definitions and Dimensions of Customer Engagement

The following table (2.3) gives definitions proposed by past research for customer engagement. It shows different customer brand engagement dimensions through the years and their effect on customers' purchasing behavior. For instance, Verhoef et al. (2010) defined customer engagement as a behavioral indication towards the brand or company beyond the purchasing process. One of the consequences was the customer-to-customer interaction in terms of word of mouth. This definition is analogous to Vivek et al. (2012, p. 127) "*Beyond the purchase, events, and activities engaged in by the consumer that are not directly related to search, alternative evaluation and decision-making involving brand choice*." He added that one of the consequences was the word of mouth and customers' participation in activities related to the brand, like creative events.

A recent definition for customer engagement is "*A customer's motivationally driven, volitional investment of focal operant resources (including cognitive, emotional, behavioral, and social knowledge and skills), and operand resources (e.g., equipment) into brand interactions in service systems*" (Hollebeek et al., 2019 p.167). As Customer engagement represents a behavioral manifestation of knowledge exchange between customers, corporations, and other customers. From this perspective, the customer engagement process includes participation in related activities, including initiating and sharing brand reviews and recommendations (Gvili et al., 2018). The following table (3) will represent some of the customer engagement definitions and dimensions.

Table 3 - Defining Customer Engagement and its dimensions

Definition	Customer engagement dimensions	Reference
"A behavioral manifestation toward the brand or firm that goes beyond transactions"	• Blogging • Co-creation with new product development activities. • Providing customer ratings and reviews. • Customer-to-customer interactions (e.g., word of mouth).	Verhoef et al. (2010, p. 247)

Definition	Customer engagement dimensions	Reference
"A psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g., a brand) in service relationships"	• Cognitive • Emotional • Behavioral	Brodie et al. (2011, p. 260)
"Beyond the purchase, events and activities engaged in by the consumer that are not directly related to search, alternative evaluation and decision-making involving brand choice"	• Feedback to marketers, consumers, and society. • Participation in activities like skill development, creative events, online activities, and product innovation. • Word of mouth.	Vivek et al. (2012, p. 127)
"Voluntary, discretionary customer behaviors with a firm focus, customers' interactive, co-creative experiences with a firm"	• Compliance (e.g., showing respect to employees, following organizational rules and procedures). • Cooperation (e.g., providing information and assistance to employees). • Feedback (e.g., suggestions for product improvements, participation in new product development). • Helping other customers (e.g., encouraging other customers to show appropriate behaviors, helping others to have better service experiences). • Positive word of mouth (e.g., recommendations, referrals).	Verleye et al. (2014, p. 69)
"Behavior through which customers make voluntary resource contributions that have a brand or film focus but go beyond what is fundamental to transactions"	• Augmenting actions (e.g., posting content on social media, inventing, alternating alternate uses for products).	Jaakkola & Alexander (2014, p. 248)

Table 3 continuation

Definition	Customer engagement dimensions	Reference
	• Co-developing actions (for example; customer support, ideas for new or improved products, involvement in product development and innovation). • Influencing activities (word of mouth, blogging, recommendations, referrals). • Mobilizing actions (for example: recruitment, and/ or boycotts).	
"It comprises customer purchasing behavior, customer referral behavior, customer influencer behavior and customer knowledge behavior"	• Firm performance	Kumar & Pansari (2015, p. 299)
"The attitude, behavior, the level of connectedness (1) among customers, (2) between customers and employees, and (3) of customers and employees within a firm"	• Customer purchases (e.g., posting content on social media, inventing alternate uses for products) • Customer referrals. • Customer influence (e.g., word of mouth) Customer knowledge (e.g., feedback and ideas for innovations).	Kumar & Pansari (2016, p. 2)
"A customer's motivationally driven, volitional investment of focal operant resources (including cognitive, emotional, behavioral, and social knowledge and skills), and operand resources (e.g., equipment) into brand interactions in service systems"	• Customer resource integration. • Customer knowledge sharing (sharing information or experience with other customers). • Customer learning (e.g., customer socialization, training, education, and post-purchases learning).	Hollebeek et al. (2019, p. 6)

Finally, when mentioning customer engagement, it is important to state customers' brand interactions through online platforms and electronic word-of-mouth (Klein et al., 2016). Electronic word of mouth (E-W.O.M) communication reinforces brand image hence

strengthening brand engagement (Bento, 2018). Moreover, positive word of mouth is critical to brands' success and should be considered by brand managers, since consumers are more willing to engage in word-of-mouth events when they denote novelty (Berger, 2014). The following section (2.3.4) will discuss customer engagement in the online context. It gives more details about online customer engagement and the three-building blocks of the framework carried in this research.

2.3.4. Online Customer Engagement

In the online context, empirical studies revealed that customers are motivated to engage in non-transactional behaviors. The reason behind this is customers anticipate benefits such as enhanced knowledge, reputation, social benefits, and economic benefits such as cost savings (Harmeling et al., 2017). Prior research supports these claims, where they developed scales on measuring customer brand engagement (Hollebeek et al., 2014; Sprott et al., 2009). However, construing customer engagement as any activity beyond purchase subsumes a wide variety of customer behaviors (product returns, product usage, product disposal, brand learning).

The current study is in line with the behavioral perspective of customer engagement, the notion of consumers online brand-related activities was defined as "*a set of brand-related online activities on the part of the consumer that vary in the degree to which the consumer interacts with social media and engages in the consumption, contribution, and creation of media content*" (Schivinski et al., 2016, p. 66). In context with behavioral engagement on social media, all consumers' activity is considered a passive-to-active concept, distinguishing between three levels of behavior: consumption, contribution, and creation of brand-related content on social media. Thus, in the current study, we elaborate on these key theoretical components (consumption, contribution, and creation) in developing a three-levels of customer engagement social media framework.

Consumption requires social media activities related to a passive engagement level, which is the minimum level of customer engagement. Consumption includes viewing and reading brand-related posts on Facebook and watching pictures on a brand's Instagram page without actively participating (Muntinga et al., 2011; Schivinski et al., 2016). Contribution involves interactions with peers and the brand itself. It requires initiative to some extent from the consumer, which is the mid-level of customer engagement. Contribution includes

commenting, sharing, and discussing commercials through Facebook or Instagram, turning consumers into brand endorsers (Muntinga et al., 2011; Schivinski et al., 2016). Creation, carry out the act of actively publishing, producing and co-developing brand-related content on social media. It is considered the highest level of customer engagement. Creation encompasses publishing reviews, originating posts, uploading user-generated media on Facebook or Instagram (Muntinga et al., 2011; Schivinski et al., 2016).

Moreover, consumer online brand-related activities have a strategic role as social media channels have ultimately shifted how firms communicate with their customers (Lamberton & Stephen, 2016). These online channels like the Facebook/Instagram influence consumers' perceptions and behavior towards brands (Schivinski et al., 2016). In this online context, social media became one of the credible primary sources of information during the decision-making process, with consumers relying on information from peers given their independence, relevance, and credibility (Hollebeek et al., 2014). The current study emphasizes Kunz et al. (2017) dual perspective of customer engagement to acknowledge the vital role the customer plays in creating value that benefits both the firm and the customer.

In conclusion, previous research has investigated the relationship between luxury brands' social media marketing efforts and customer engagement. However, these studies suffer from inconsistency between the conceptualization and operationalization of the customer engagement construct. For instance, Dhaoui (2014); Pentina, Guilloux, & Micu (2018) conceptualized customer engagement as a multidimensional construct composed of cognitive, emotional, and behavioral aspects. They measured only behavioral engagement due to the limited ability to capture cognitive and emotional customer engagement in social media platforms. Moreover, most of the studies focused on customer engagement's behavioral aspect measured customers' behavioral intentions instead of their actual behaviors (e.g., Jahn, Kunz, & Meyer, 2012).

This research comes from the traditional hierarchy-of-effects model to establish cognitive frameworks of customer engagement of brand-related social media content. The study attempted to fill the gap and investigate online customer engagement, adopting Schivinski's (2016) three constructs of online behavioral customer engagement activities (consumption, contribution, and creation) and their effect on customers' purchase intention and price premium.

2.3.5. Summary

This section entailed the concept of online customer engagement. It started with introducing the notion of engagement, then the concept of customer engagement. It introduced the benefits of customer engagement to brands. Second, it presented the term online customer engagement, and it provided more attributes regarding this concept. The researcher attempted to clarify the lack of agreement regarding a single definition of customer engagement by bringing together different definitions and dimensions with insights from past literature viewpoints. Third, the section provided the three-building blocks of the construct of online customer engagement carried out in the current research. With this research's central rationale, the following discussion will outline an overview of general literature about the third construct, purchase intention, followed by a more focused review of the fourth construct of the study, price premium. This study focuses on purchase intention rather than behavior, as consumer intention has broader implications and will usually positively impact consumers' actions (Iglesias et al., 2011; Chandon et al., 2005; Schlosser et al., 2006). Many findings have supported this relation and have studied the significance of purchase intention in brand consumption (e.g., Zeithaml, 1988; Iglesias et al., 2011; Yoo & Lee, 2000). This research labels Egyptian consumer purchase intention in global Luxury brand consumption.

2.4. Purchase Intention

An earlier definition for purchase intentions was the subjective probability that consumers perform a specific behavior (Ajzen & Fishbein,1977). Other research defined customers' purchase intentions as Customers' tendency to purchase a given brand (Boyd & Mason, 1999). Later on, Kim & Ko (2012) defined purchase intentions as the consumers wish to purchase that product, either in the long term or short term. They also defined purchase intention as a mix of consumers' interest and the possibility of purchasing a product/brand. Intentions indicate the subjective likelihood of performing a specific action. The notion has been extended to customers' purchase intentions, which describes the probability of consumers executing the buying action (Manzoor et al., 2020). Kim & Ko (2012) added that if customer equity is a behavioral variable accounting for actual purchasing records, purchase intention is an attitudinal variable for measuring customers' future contributions to a brand. Another research stated that if consumers are concerned about getting a specific product, there is a purchase intention in their minds (Al-Ja'afreh & Al-Adaileh, 2020). The former statement was

confirmed by Tsai et al. (2020) as they stated that consumers with greater purchase intention are more likely to purchase a product.

As a result, for earlier findings, purchase intentions strongly relate to attitude and preference toward a brand or a product. Measuring purchase intentions assume customers' future behavior based on their attitudes. Forecasting customers' future behavior becomes a crucial issue for a firm; this is why customers' future behavior should be estimated precisely (Kim & Ko, 2012). Other study findings stated that purchase intentions mostly happen when consumers have a positive reputation toward brand/ products (Al-Ja'afreh & Al-Adaileh, 2020).

Furthermore, a customer's purchase intention can be viewed as the customer's willingness to search relevant information and select preferred brands that customers can consider for actual future purchases (Pham et al., 2020). As a result, researchers can readily gather data on customer purchase intention to analyze customers' actual purchase behavior (Chandon et al., 2005). These findings were supported earlier by Ajzen & Fishbein (1977), who indicated that customer purchase intention predicts customer purchase behavior. Other findings confirmed that customer purchase intention and actual purchase behavior are positively correlated (Pham et al., 2020). Other scholars proposed that rather than suggesting a high risk of actually making a purchase, positive purchasing intentions often indicate the positive engagement of the customer toward products (Manzoor et al., 2020). Customers' purchase intentions indicate predictable behavior where studies use purchase intention to forecast what customers buy when they shop next time (Hajli et al., 2017).

Finally, to the researcher's knowledge, past studies intended to find the impact of social media marketing activities on purchasing intentions. The earlier research wanted to detect the influence of the firms' efforts on the customers' purchasing behavior. However, the current research aims to determine the impact of customers' online engagement behavior on other customers' purchasing behavior. Thus, a research gap arises as this study proposes the influence of online customer engagement on Egyptian consumers' purchase intentions in the luxury market. Moreover, the findings of this study may allow luxury brands to forecast the future purchasing behavior of Egyptian customers. The following section introduces the price premium concept.

2.5. Price premium

Netemayer et al. (2004) defined willingness to pay a premium price as the amount customers are willing to pay for a brand rather than another. Homburg et al. (2005, p. 84) defined willingness to pay price premium as "*the highest price level at which the consumer is willing to pay for the goods or services*." These definitions were consistent with Aaker's (1996) earlier definition; he stated that the price premium is defined as the sum consumers are willing to pay for a brand, compared to other relevant brands, and can be either negative or positive. Another similar definition for price premium refers to the relatively higher price of products than similar products (Farris et al., 2010). Other studies defined price premium from the firm's standpoint, stating that a price premium is an amount above a reference point that a company charges for a good or service (Kienzler et al., 2021).

Also, willingness to pay a price premium for a product occurs when there is certainty about what the product can offer. A high price in marketing is both a financial and quality indicator; customers expect higher quality with higher prices (Salem et al., 2018). Hence, paying a high price for a product shows the value (Phau, Teah, & Chuah, 2015), especially in the luxury brand market where the current study takes place. In addition to that, willingness to pay more occurs when the product's value exceeds the consumers' perceived value towards the product (Dean et al., 2012). The price premium is the measure that best could justify the selection of a brand at the individual level and explains the brand's aggregated market shares (Anselmsson et al., 2017). Other research mentioned that the level of satisfaction towards certain brands impacts consumer behavior, which influences their willingness to pay premium prices, and as a result, their overall assessment of the brand and its products becomes more favorable (Haase et al., 2018).

Moreover, the current research explored Egyptian consumer behavior in the luxury market. Price premium has proven crucial in understanding varied consumer behaviors in the luxury brands market (Phau, Teah, & Chuah, 2015). As mentioned earlier in the past research products in the luxury market have different pricing criteria (Wathieu & Bertini, 2007). Earlier findings interpreted price premium as a discriminating element in the self-selection of less price-sensitive customers (Shaked & Sutton, 1982). This research investigated the price premium as past research claimed that firms priced the products above customer willingness to pay in the luxury market, whereas high prices increase customer perceived value (Wathieu

& Bertini, 2007). Another research considered the price premium as a credible signal of the value of intangible benefits of the product (Milgrom & Roberts, 1986).

Price premium also acts as a mechanism for a customer's self-expression or a sign of wealth, and it can also be a cue for the product's quality (Rao & Monroe, 1996). A consumer's degree of willingness to pay without affecting his/her decision is associated when merging price premium with purchase intention (Salem et al., 2018). Salem et al. (2018) findings were a starting point in the final phase of the current study as it aims to investigate consumer behavior through merging price premium and purchase intention. As a result, the current research seeks to understand better the Egyptian customer's willingness to pay a price premium. To the researcher's limited knowledge, there is a shortage of studies exploring what consumers post through their engagement on social media and its impact on customers' acceptance of price premiums in the luxury market.

Finally, the extant luxury brand literature has tried to understand consumers' behavioral intentions. Earlier researchers have also highlighted the differences in luxury consumption among developed and emerging markets (Sharma et al., 2020). This research attempts to comprehend the Egyptian consumer behavior in an emerging market like Egypt. The following discussion will give an overview of the luxury brand market where the study will take place. The next section will start with defining the term brand and explain the concept of luxury brands.

2.6. The Luxury Brand

In earlier findings, Kapferer (1997) defined luxury in an economic context as objects whose price/quality is the highest in the market. He added that luxury defines beauty as an art applied to functional items. Kapferer (1997) added that luxury items provide extra pleasure and flatter all senses for an individual. Luxury is any product/service that falls outside necessities/needs and is usually affordable by the rich (Hussain, M., 2017). This definition follows Wiedmann (2009), who defined luxury as non-essential products/services contributing to luxurious living. Individuals consuming luxury adds indulgence and convenience beyond the necessity needs. A luxury product/ service does not merely represent each segment's maximum range but differs according to the social, cultural, and historical subjectivities (Dekhil et al., 2017).

Nowadays, defining luxury is a hedonic fantasy where characteristics of traditional Luxury goods such as exclusivity, aesthetics, and authenticity make the experience luxurious (Wirtz et al., 2020). This definition is consistent with Ko et al. (2019), who defined luxury as a product or service of high quality, the high price that offers authentic worth, prestige and inspires a consumer's connection. Kapferer & Laurent (2016) added to the term Luxury the rarity concept as the definition was luxury is rare, crafted high quality, leading to high prices. Kastanakis & Balabanis (2014), in their definition of luxury, focused on gaining status as the core goal of luxury consumption for interdependent consumers, while consumers with an independent self-concept focus on self-communication, hedonism, and utilitarianism. The previous definition was consistent with Dion & Arnould (2011), who defined luxury as; a good or service that can offer both status and pleasure to consumers. They added that luxury is not possessing an object but about a consumer's relationship with this object. An earlier definition for Kapferer & Bastien (2009) argued that Luxury goods must come with an excellent service. They defined luxury as a social phenomenon with a human connection, as Luxury goods are handcrafted and accompanied by outstanding personal service. Berthon et al. (2009) argued that there is no delineation of luxury brands. Berthon et al.'s (2009) definition focus on three perspectives of luxury: the quality of luxury goods (functional), the signals of prestige and exclusivity to others (symbolic), and the hedonic customer experience (experiential).

Finally, much research highlights the complex meaning of luxury (Gurzki & Woisetschläger, 2017), which has led to luxury being viewed as a concept with fragmented meanings (Brun, 2017). Despite the wide range of Luxury literature, previous attempts to find a consensus for

the luxury concept definition remain unfilled. Ko et al. (2019) added that no generally accepted description of luxury has developed. Luxury researchers agreed that defining luxury is hard (Tynan et al., 2010). Nevertheless, as Ward & Chiari (2008) explained, the need to consume a luxury product is not only linked to the consumers' psychological wants. The main psychological benefit for consumers was differentiating luxurious from non-luxurious products (Nia & Zaichkowsky, 2000). However, luxurious products' demands evolve with consumers' dynamic cultural changes (Hussain, M., 2017). These cultural changes are crucial in the current study as with a different culture than the western culture.

The highest category of prestigious brands describes the luxury brand (Muniz & Guzmán 2021). A brand can be a name, logo, or symbol, but it can be a guarantee, identification, or reputation to consumers. A symbol motivates consumers' cognitive processes and brings a meaning behind it. In 1960, the American Marketing Association defined a brand as "*A name, term, sign, symbol or design, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors*." This definition was criticized as being too mechanical and preoccupied with the product. Afterward, De Chernatony et al. (1998) proposed a definition for the term brand it stated that a brand is a complex multidimensional construct and could be synthesized in twelve themes, i.e., legal instrument, logo, company, shorthand, risk reducer, identity system, an image in consumers' mind, relationship, value system, adding value, and evolving entity. However, *"real brand management begins much earlier, with a strategy and a consistent, integrated vision. Its central concept is brand identity, not brand image*" (Kapferer, 1992, p. 11).

Past research indicated that a brand is not just a logo, name, or visual appeal; it defines the organization. It describes the value it entails on which a customer can depend on and creates a relationship over time (Sawant, 2012). Brands act as a signal in the consumer's mind that allows him/her to recognize a product and reclaim information from memory to make decisions. Brands to consumers are attached to the meanings, interpretations, and satisfaction it promises (Hestad, 2016). Thus, branding is the strategy in which a brand and its name are equivalents (Yu Xie & Boggs, 2006). A consumer-brand relationship is a psychological bond that consumers form with brands (Fournier, 1998).

Nowadays, a new definition for the term brand is a name and a symbol associated with a familiar, trustworthy purchasing experience appealing to both the head and the customer's heart (Kenarova-Pencheva et al., 2019). One of the characteristics of luxury brands is that

customers expect premium quality, which is the general perception by the individuals about the brands. Many research suggests that a status-conscious consumer is concerned about the brand's status, and the brand paid out for is socially valued (Husain et al., 2022). An object of desire that pleasures consumers are characteristics of a luxury brand (Berry, 1994). Therefore, consumers perceive luxury brands based on the ability to induce exclusivity, brand awareness, brand identity, and perceived quality (Phau & Prendergast, 2000).

There is an agreement in the literature to define luxury brands as a product whose usage creates self-esteem to the consumer, separately from any functional utility (Nia & Zaichkowsky, 2000). Jackson (2004) defined a luxury brand as exclusivity, image, status, and premium pricing, distinguishing a luxury fashion brand. Jackson (2004) added that these characteristics are combined to make them desirable for reasons other than their function as an item. This definition is consistent with Nia & Zaichkowsky's (2000) previous definition. Moore & Birtwistle (2004) argued that Luxury brands are iconic products designed with integrity. They added that the manufacturer has high control over the product, endorsement, distribution, and premium pricing. In other words, the luxury brands continually deliver premium quality, premium prices with a tightly regulated distribution.

Other scholars defined luxury brands from customers' psychological standpoint. It encompasses several physical and psychological values, such as perceived unique value, social value, hedonic value, conspicuous value, and quality value (Kim et al., 2009). Kapferer & Bastien (2009) defined a luxury brand as having two main features: indulging in individuals' pleasures (a luxury for one's self) and evidence of success (a luxury for others). They added that being unique is what counts for consumers when it comes to luxury. According to Kapferer & Bastien (2009), a luxury brand is built throughout a long period by the excellent management of resources in a specific way, particularly by respecting the luxury brand's status.

Later on, another definition stated that a high-fashion brand is often synonymously used by prestigious and luxury brands. Luxury brands hold significant intangible worth and have enduring positive brand images at the primacy of design, fashion, quality, and status (Juggessur & Cohen, 2009). Okonkwo (2009) defined luxury brands as prominent brands with distinct identities among other markets. He added to the definition that luxury brands have an elite global reputation and emotional appeal. Okonkwo (2009) attached to the definition that luxury brands' main characteristics are unique, artistic, and innovative. Another definition

consistent with Okonkwo's (2009) definition stated by Berthon et al. (2009) is that luxury brand is clear ownership that is aesthetically pleasing. It offers status to the individual, where consumers can enjoy its possession inconspicuously or conspicuously. It has some degree of rarity, exclusivity, and a social mystique. Berthon et al. (2009) added that some characteristics of luxury brands compile what a brand does (functional) and what a brand means to the individual (experiential) and the collective (symbolic). An earlier definition stated that the luxury brand must encompass six main components: brand name, creators of the brand, the locations, the creations, recognition icons, and the brand's history (Kratz & Bruce, 2007). Luxury brands have authenticity features, like heritage and pedigree (Beverland, 2005). He added that luxury brands' characteristics are stylistic consistency, quality commitments, relationship to place, production method, and downplaying commercial considerations. Atwal & Williams (2017) added to the definition of luxury brands' main characteristics; entertainment, education, escapist, and esthetic, which will change according to consumer participation levels and connection with the brand.

Contrary to the past definitions, Godey et al. (2009) criticized the idea of defining luxury brands. He considered that luxury brands are synonymous with selectivity, if not exclusivity and rarity, and their definition and measurement of luxury are highly subjective. One of the settlement areas in the brand luxury literature is the lack of agreement concerning defining a luxury brand (Berthon et al., 2009; Christodoulides et al., 2009; Fionda & Moore, 2009). A precise definition of a luxury brand, compared to a non-luxury brand, does not exist (Figueiredo & Eiriz, 2020).

Previous studies improved knowledge but increased brand luxury confusion. The reason behind this confusion is the specific definitions, approaches, and different names, types, and numbers of dimensions in brand luxury typologies (Miller KW et al., 2012). Moreover, according to the social class, the Luxury brands concept has a dichotomous meaning, where some luxurious brands for some people might be ordinary for others (Kaufmann et al., 2012). There is a difference between luxury brands related to the upper range of luxury and those related to the lower range of luxury. Earlier research stated that consuming a luxury brand is a means to reach higher social status than only the economic or physiological utility of products (Bagwell et al., 1996). Consumers who purchase luxury brands share similar perceptions, which is synonymous with buying status. Consumers from different social groups purchase luxury brands to achieve a mutual goal, indicating their prestigious status (Rashid,

M., & Chattaraman, V., 2019). However, not all luxury brands possess the same degree of exclusivity and distinctiveness. For instance, the Cartier brand may have a more significant luxury image in the jewelry market than in the apparel or fragrance market (Nia & Zaichkowsky, 2000). Past studies acknowledge that all luxuries are not identical and that people's unique definitions of luxury define whether they perceive luxury and sustainability as compatible (Figueiredo & Eiriz, 2020).

As a result of reduced production costs, luxury brands have created reasonably priced premium products to attract middle-class consumers who want to follow wealthier classes' lifestyles (Atwal & Williams, 2017). Atwal &Williams (2017) added that luxury brands have shifted from traditional to experiential luxury marketing. Whereas traditional marketing views consumers as rational decision-makers concentrated on the functional characteristics and benefits of products. While experiential marketing views consumers as emotional beings, concentrated on achieving pleasurable experiences. The new luxury brand fashion era witnessed brand-positioning strategies that combine prestige with reasonable price premiums to attract regular middle-class consumers. These strategies significantly differ from traditional luxury strategies, maintaining prestige and high price premium to maintain brands' exclusivity and uniqueness. Therefore, the products/services are available in the market but just out of the ordinary consumer's reach (Paul, 2019). Although some authors have acknowledged the existence of masstige strategies, few empirical studies have been conducted in this area (Paul, 2019; Truong, McColl, & Kitchen, 2009). The existence of the masstige brand resulted in the emergence of new concepts in the luxury market.

Finally, Ahn, Park & Hyun (2018) asserted that luxury markets are characterized as one of the fastest-growing brand segments with high profit. Despite the critical economic circumstances' worldwide, luxury market is continuing to grow (Walsh et al., 2018). The globalization, wealth creation, international travel, digital communication, and/or cultural convergence could be reasons behind this remarkable growth (Okonkwo, 2009; Walsh et al., 2018).

2.7. Research Model

In line with scant past research and aiming to gain further empirical insights into the luxury brands market in an Emerging market like Egypt, this study takes place. In the online context,

investigating customer attitudes toward luxury brands can be a fruitful empirical exercise. The starting point of the present study encompasses the understanding of the influence of social media marketing activities on online customer engagement. It also encompasses a more profound knowledge of the impact of online customer engagement on customers' purchase intentions and price premiums in the luxury brand market.

Figure 2 presents the research model. The following sections explain the rationale behind the hypotheses' formulation considering the relationships of the previously conveyed constructs: social media marketing activities, online customer engagement, purchase intentions, and price premiums. They further, assess the mediating effects of online customer engagement between social media marketing activities, purchase intention, and price premium. development.

Figure 2 – Research Model
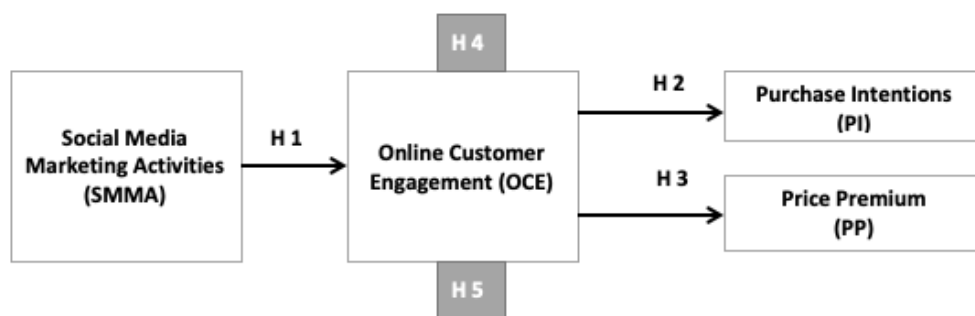
Source: elaborated by the author

- **The social media marketing activities and online customer engagement**

The past literature attended to customer engagement antecedents and consequences, including the potential impact of the brand's perceived social media marketing activities on online customer engagement (Cheung et al., 2020). For instance, Barger (2016) argued that social media channels should be an effective platform for strengthening interaction between consumers and brands, thus contributing to online brand engagement. Barger et al. (2016) recommended attention to content on social media platforms to encourage consumers to engage with posts in the social media-based brand community, thus reinforcing online customer engagement. De Vries et al. (2017) argued that interactive and multisensory brand posts could positively influence customer engagement and strengthen brand popularity. The practices of luxury brands through social media marketing activities impact customer

engagement through the Instagram platform. Many articles have documented examples of luxury brands engaged in interaction, trendiness, sharing, and customization-focused activities on social media (Heine & Berhaus, 2014; Hughes et al., 2019; Kontu & Vecchi, 2014; Phan et al., 2011).

For instance, Chanel assembled a collection of photos of iconic people wearing the Chanel jacket in the Little Black Jacket art exhibition. She placed them in the virtual museum on its microsite. Visitors to the site could go from one "room" to another and hear other people walking around as if in a real museum (Heine & Berghaus, 2014). Burberry (Phan et al., 2011; Straker & Wrigley, 2016) encouraged their consumers to share personal experiences through stories or pictures on the brand-owned social networking sites. Several luxury brands, including Burberry, also live-stream runway shows (Kontu & Vecchi, 2014) and disseminate the latest fashion trends utilizing social media (Chen & Wang, 2017). In addition, WeChat, a popular social, mobile application in China, allowed Coach to send personalized communications to its customers (Ng, 2014). Therefore, the research expected social media marketing activities positively related to online customer engagement. Hence, it is expected that:

⇒ **Hypothesis 1:** *Social Media Marketing Activities (SMMA) have a positive relationship with Online Customer Engagement (OCE).*

- **The online customer engagement and purchase intention**

Online Customer engagement is an ongoing firm-customer exchange that promotes constructive transactional benefits (Clement et al., 2021; Lee et al., 2019). "*Purchase intention represents the likelihood that an individual will purchase a particular product based on the interaction between customer needs, attitude and perception towards the product or brand*" (Beneke et al., 2016, p.176). Ariffin et al. (2018) added that purchase intention could be considered a consumer's interest in buying a particular brand. Chakraborty (2019) also suggested that purchase intention determines the strength of consumer willingness to purchase. It is crucial to identify consumers' purchase intention as consumers' actions that are predicted through their intention (Chakraborty, 2019). Recent research asserted that customer engagement positively impacts purchase intention directly and indirectly (Clement et al., 2021). Many studies have established a positive relationship between customer engagement and purchase intention in digital marketing (Clement et al., 2021; Husnain et al.,

2017). A study in a 3D environment (such as live streaming marketing) indicates that customer engagement is an antecedent to more significant purchase intention (Hajli et al., 2017). Hsieh & Chang (2016) also uncovered a positive relationship between brand engagement and purchase intention. As such, customer purchase behaviors are critical consequences of customer engagement (Clement et al., 2021). The current study focused on transaction outcomes; (purchase intentions in the online context). The research model of online customer engagement indicates that consumption, contribution, and creation of online content (through the Instagram platform) impact purchase intention. Therefore, the research expected online customer engagement to relate to customers' purchase intentions positively. Hence, it is expected that:

⟹ **Hypothesis 2:** *Online customer engagement has a positive relationship with purchase intentions.*

- **The online customer engagement and price premium**

The price premium is the maximum amount a consumer is willing to spend on a product or service. The willingness to pay a price premium has proven crucial in understanding different consumer behaviors in luxury fashion (Phau, Teah, & Chuah, 2015). Past literature has examined the contexts under which consumers are willing to pay more for their preferred brands (DelVecchio & Smith, 2005; Rao & Monroe, 1996). Past research merged price premium with purchase intention as the degree of willingness a consumer would like to pay without affecting his purchase decision (Zhang & Kim, 2013). Nevertheless, there is less research evidence that focuses on the influence of online customer engagement on price premiums to our limited knowledge. Therefore, the research expected online customer engagement to relate to customers' price premium positively. Hence, it is expected that:

⟹ **Hypothesis 3:** *Online customer engagement has a positive relationship with price premium.*

2.7.1. Mediation Hypotheses

According to Hayes (2009), "*Mediation refers to a sequence of causal relations by which X exerts its effect on Y by influencing intervening variables*" (p.415). The research considered specific cases of the constructs that have a mediation effect. The next chapter (3) presents the mediation analysis in detail. Nevertheless, the following section introduces the rationale for

studying the mediation effect of online customer engagement on social media marketing activities, purchase intentions, and price premium.

- **The mediation effect of online customer engagement**

Past studies have confirmed the mediation effect of customer engagement in the social media context (Dessart, 2017), leading to a higher level of consumer behavioral intention (Ji et al., 2021). However, past research argued that customer engagement mediates the relationship between social media marketing activities, featuring (entertainment, informativeness, and promotional rewards), and consumer behavioral intention (Ji et al., 2021). Therefore, there is insufficient evidence for mediating online customer engagement featuring (consumption, contribution, and creation) that influence social media marketing activities featuring (interaction, sharing, trendiness, and customization) and purchase intentions.

To the best of our knowledge, in the previously mentioned context, the mediating effects of the online customer engagement constructs have not been investigated. Therefore, this gap has inspired us to develop the following hypothesis:

⇒ ***Hypothesis 4:*** *Online customer engagement mediates the influence of social media marketing activities on customers' purchase intentions.*

As a behavioral factor of the topic under study, perceptions of prices are related to willingness to pay (price premium) evaluations (Krishna, 2002). Past studies indicated that increased perceptions of value are associated with customer engagement, leading to an increased willingness to pay (Marbach et al., 2016). Those customers perceive prices more positively than unengaged customers (Bergel et al., 2019). Although past literature typically focused on customer engagement as an antecedent, our contribution lies in shedding light on the mediating effect of online customer engagement between social media marketing activities and price premium. That is why this study developed the following hypothesis:

$\Rightarrow$ **Hypothesis 5:** *Online customer engagement mediates the influence of social media marketing activities on customer's acceptance to price premium.*

2.7.2. Summary

This section presented the research's model of the impact of social media marketing activities in the luxury brands context. In summary, the suggestion is that firms can enhance online customer engagement and strengthen customer-brand relationships by using the social media platform (Instagram). The view of online customer engagement argues for the importance of interactive consumer experiences and consumer-brand relationships. These relationships build engagement and encourage marketers to create brand experiences using different social media marketing activities (Cheung et al., 2020).

The understanding of social media marketing activities applied by luxury brands can influence the customers' purchase intentions and acceptance of price premiums. These suggestions support our research model for the social media marketing activities as an originator of the current study. The section emphasized the rationale and the objectives of the study to frame the conceptual model. Moreover, it presented the hypotheses originated from the literature review analysis and the conceptual model development efforts. Table (4) summarizes the hypothesis development.

Table 4 - Summary of the hypotheses

	Hypotheses
H1	*Social Media Marketing Activities (SMMA) have a positive relationship with Online Customer Engagement.*
H2	*Online customer engagement has a positive relationship with purchase intentions.*
H3	*Online customer engagement has a positive relationship with price premium.*
H4	*Online customer engagement mediates the influence of social media marketing activities on customers' purchase intentions.*
H5	*Online customer engagement mediates the influence of social media marketing activities on customer's acceptance to price premium.*

RESEARCH METHODOLOGY

3.1. Introduction

The research methodology chapter shows the stages developed to present the research objective and answer the research questions. First, the chapter presents the overall research design of the study. Then the empirical study (quantitative study) is described. It includes the data collection method, the sampling design, the statistical analysis, and measuring the variables. The chapter also shows the hypotheses that emerged from the conceptual model. Finally, the technical specificities concerning data collection, methods, and the scales, used to approach data in the study are evolved. The following section discusses the study's research design, empirical research, and philosophy.

3.2. Research Design

"*A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure*" (Kothari et al, 2004, P.50). As mentioned earlier in the literature review chapter, this study is about the impact of social media marketing activities on online customer engagement and its influence on customers' purchase intentions and price premiums. Therefore, this research aims to investigate:

i.   The effect of social media marketing activities done by luxury brands on online customer engagement.

ii.   The effect of online customer engagement on the customers' purchase intentions and price premium in the luxury brands market.

Consequently, the starting point of the empirical study was the following research questions:

Question 1: What are the social media marketing activities applied by luxury brands on their Instagram platform?

Question 2: What is the impact of luxury brands' social media marketing activities on online customer engagement on the Instagram platform?

Question 3: What is the impact of online customer engagement on customers purchase intentions and willingness to pay a premium price for a luxury brand?

This research took place in the Egyptian market. The researcher investigated Egyptian consumers active on social media channels and following luxury brands in the fashion

industry, specifically on the Instagram platform. As the study tests hypothesis in a large population like the Egyptian market, the researcher used a survey method (questionnaire) to gather the data. Thus, this study's empirical research approach is based on quantitative analysis. Later on, section (3.5) will clarify the research methodology choice (quantitative method), (3.6) data collection method (Survey), followed by section (3.6.1) the research instrument (questionnaire).

The following section (3.3) is the empirical study, which presents the research's appointed research questions and research hypotheses.

3.3. Empirical Study

The empirical study has a quantitative nature. The researcher developed this empirical study to answer the research questions, testing the conceptual model previously developed in the literature review chapter. Also, this empirical study tests the hypothesis developed from the research model (figure 1) previously mentioned in the literature review chapter. The study explored the following research hypotheses to answer the previously mentioned (section 3.2) research questions:

> *H1: Social media marketing activities influence online customer engagement.*
>
> *H2: Online customer engagement influences customers purchase intentions*
>
> *H3: Online customer engagement influences customers price premium.*
>
> *H4: Online customer engagement mediates the influence of social media marketing activities on customers' purchase intentions.*
>
> *H5: Online customer engagement mediates the influence of social media marketing activities on customers' price premium.*

After determining the research hypotheses, the following section (3.4) presents the research philosophy, related to knowledge development and the nature of that knowledge.

3.4. Research Philosophy

The research philosophy that a researcher adopts encompasses essential assumptions about how the researcher views the world (Saunders et al., 2009). These assumptions also underpin the research strategy and methods that the research chooses as part of this strategy. The researcher prefers working with social reality and that the end product of such research can

be law-like generalizations related to those produced by the physical and natural scientists. As the research reflects the positivism philosophy, the researcher adopted the natural scientist's philosophical stance (Saunders et al., 2009). As the study looks to find the causal relationship between variables, assumes that there are social facts with an objective reality apart from individuals' beliefs. Positivism takes the stance of a natural scientist where the researcher will work with observable social reality, and the result of the research can be law-like generalizations (Saunders et al., 2009). Positivism believes that the world is objective.

Accordingly, a positivist researcher generally seeks out facts in terms of relationships between variables—the researcher focuses on quantitative methods used to test and prove hypotheses. Then, there is a focus on falsification rather than verification, given the complexity of organizational phenomena. The positivist challenge is to evaluate all required variables to confirm that a relationship is consistent in like conditions (Swanson & Holton, 2005).

Additionally, the positivist exerts effort to establish the generalizability of findings based on careful sampling (Swanson & Holton, 2005). Another critical component of being a positivist is that the researcher would claim to be external to the data collection process, which means little can be done to modify the substance of the data collected. The assumption is that the researcher is independent of and neither affects nor is affected by the research theme (Saunders et al., 2009).

In opposition, positivism critics argue that rich insights into this complex world are lost if such complexity is minimized to a series of law-like generalizations (Saunders et al., 2009). From the positivist point of view, the study uses empirical evidence from the past literature to develop the research hypotheses that will be tested to answer the research question quantitatively. However, this justifies the pragmatic philosophy (positivist) chosen in this study as it seems to be the most practical philosophy that enabled the answer to the research questions quantitatively, which is highly appropriate for the research context. That is why the method of empirical research adopted for this study is based on quantitative methods. The researcher used a quantitative approach as the proposed study seeks to explain the causes of social facts changes, primarily through objective measurement (Firestone, 1987).

The following section (3.5) encompasses the research methodology chosen in this study: the quantitative method, the data source of investigation, the data collection methods, and the instruments used to collect the data.

3.5. Research Methodology Choice (Quantitative Method)

This empirical study adopts a mono method, which is the quantitative method. The mono method involves using a single data collection technique and corresponding single analysis measures to answer research questions. As mentioned in the previous section (2), the research's empirical study has a quantitative nature. Quantitative methods are used mainly as a synonym for any data collection technique (such as questionnaires) or data analysis procedures (such as statistics and graphs) that uses or generates numerical data (Saunders et al., 2009).

The quantitative method is appropriate for this study, as it tested a large population (Egyptian consumers following luxury brands on the Instagram platform). The quantitative technique also employs correlational designs to reduce error, bias, and other noise that keeps one from clearly perceiving social facts (Cronbach, 1975). Moreover, choosing quantitative research using a questionnaire is because this method is suitable as it focuses on using data to test a hypothesis. Also, because each respondent will respond to the same question, this method provides a more efficient way of collecting many responses from a large sample (Saunders et al., 2009).

The data source of the investigation is primary data collected by a survey using a questionnaire.

The data originated by the researcher is primary data for the specific purpose of addressing the research problem (Nunan et al., 2020). The researcher carefully reviewed the antecedent literature to establish variables that this researcher seeks to investigate to address the research objectives and answer research questions. In chapter (2) literature review was conducted to find suitable measurement scales that could be adopted and implemented in the existing study. The process of adapting the measurement scales to the study context is problematic. Nevertheless, it was crucial to have a reliable starting point, as the topic under the study's perspective is known.

The following section (3.6) presents the collection method of this study (Survey), including a description of the research instrument (questionnaire) used to collect the data.

3.6. Data Collection Method (Survey)

The research adopts the survey strategy as a method to collect primary data. The survey

strategy is known in business and management research and is associated with the deductive approach (Saunders et al., 2009). Survey strategy is used for exploratory and descriptive study as it can be used to answer 'who,' 'what,' 'where,'' how much' and 'how many' questions (Saunders et al., 2009). The survey strategy also possesses these advantages; it enables the researcher to gather quantitative data quantitatively using descriptive and inferential statistics. The survey allows collecting a large amount of data from a sizeable population in a highly economical way. The survey strategy is straightforward to explain and understand.

This study sought to understand Egyptian customers' perceptions on this topic by developing an online survey. This survey targeted Egyptian individuals who actively use the Instagram platform. The Appendix includes the English language versions of the survey instrument. The following subsection (3.6.1) introduces the instrument for data collection(questionnaire), followed by the description of the questionnaire structure and content.

3.6.1. Research Instrument (Questionnaire): Development and Structure

The researcher conducted an online questionnaire through an online survey using the "*Survey Monkey*" application for the empirical study's data collection. Internet-based questionnaires provide scholars with access to a unique population as target respondents, while the participants' identity and privacy are protected (Wright, 2005). The researcher created the questionnaire in English. The English version of the questionnaire was sent to the respondents.

The questionnaire allows asking the same set of questions to each respondent in a predetermined order (DeVaus, 2002). This online strategy is also an efficient and economical way to collect a large amount of data for quantitative analysis. According to Bryman (2003), questionnaire design is more critical for a high response level than the questionnaire's length. Although there are some limitations to collecting data using a questionnaire, for example, a low return rate of the duly filled in questionnaires, bias due to no-response is often unspecified. Researchers use questionnaires when the population under study are educated and cooperating. The control over the questionnaire may be lost once it is sent. There is inbuilt inflexibility due to the difficulty of modifying the approach once the questionnaires have been sent. There is also the possibility of ambiguous replies or inattentions of replies to particular questions. It is not easy to know whether willing respondents are truly representative. Adding to the previous drawback, using a questionnaire to collect data is likely to be the slowest method (Kothari et al, 2004).

The rationale for choosing a questionnaire for this study is because it yields a relatively high response rate. The researcher made efforts to avoid the previous potential problems associated with the use of the questionnaire. This research questionnaire preserves the participants' confidentiality and gives the confidence that the right persons responded or participated. For example, to limit the possibility that the questions misunderstood, several questions were asked for each variable. However, while it is true that surveys measure beliefs rather than actions, it is not viewed as a problem, since beliefs are what to be included in this research.

As mentioned above in section (3.6), the empirical quantitative study conducted an online survey to collect the data through a questionnaire shown in details in Appendix (A). A questionnaire is an instrument that consists of several questions printed or typed in a definite order on a form or set of forms (Johnson & Turner, 2007). The questionnaire construction is complex and requires procedures to serve its purpose and collect data that enables the researcher to understand the phenomenon under study (Johnson & Turner, 2007). The researcher used an online questionnaire instead of a paper-and-pencil as the respondents were not within the researcher's reach.

The researcher faced a challenge to design questions in a way that captures the essence of the hypotheses. Therefore, the questions have to be couched in understandable, unambiguous language that the respondents understand. For example, to limit the possibility of misunderstanding the questions, several questions were asked for each scale. The respondents were introduced to the questionnaire to identify the role social media marketing activities applied, from their perspective by luxury brands on their official Instagram page. Moreover, the extent to which these social media activities allow those customers to engage online through their Instagram page and its effect on their purchase intentions and acceptance of the luxury brand's price premium.

Additionally, the researcher assured the respondents' anonymity and confidentiality, as the author mentioned, to collect the survey data for academic purposes only, which does not contain any personal information. The purpose was that the respondents did not feel their privacy invaded or disrupt. The researcher designed the questionnaire to be filled-in eight to ten minutes. The questionnaire encompasses six groups of questions; the first section begins with demographic questions about the respondents. The second section includes questions about the luxury brands. While, third, fourth, fifth, and sixth sections correspond to the

research's main construct. The upcoming sections include further detail about these questions.

3.6.1.1. Demographic Questions

Demographic questions were designed to gather information about respondents' characteristics. The section includes questions about the respondents' gender, marital status, age, educational level, occupation, residence area, average monthly income, number of adults, and children in the household.

The answers to the demographic questions were mandatory as the researcher mentioned earlier that the answers are anonymous. The form does not gather any personal data, and there is no risk in responding to these questions. The objective was that the respondents did not feel their privacy invaded.

3.6.1.2. Identification of the Luxury Brand

The second section is concerned with the luxury brand the respondent follows on the Instagram page and their familiarity with this luxury brand. The section also includes the respondents' previous luxury brand purchases. Moreover, this section includes the respondents' degree of interaction with their favorite luxury brand that they follow through its Instagram official page, e.g., comment/like or reshare their posts/stories.

These questions assured that the respondent follows their favorite luxury brand on their official Instagram page. If the respondent's answer was "NO" as he/she is not following any of the luxury brands through its official Instagram page, the questionnaire ends automatically. It means he/she is not from the targeted population. The objective was that this section's answers would build up the keys for the upcoming sections of the questionnaire.

3.6.1.3. The Questionnaire Main Sections

The core of the questionnaire revealed the primary constructs of the research. The fundamental construct of the research consists of four sections. The answers to these sections were mandatory; the respondent cannot end the questionnaire without finishing the questions of this part, and the purpose is to guarantee the completion of the questionnaire to assure appropriate data for the analysis.

i. First Section: Social Media Marketing Activities (SMMA)

The first section includes questions about the luxury brand's social media marketing activities, including those variables; sharing, interaction, trendiness, and customization. These questions' objective is to discover the social media marketing activities that the luxury brand applies through their Instagram official page from the customers' perspective. The source of the social media marketing activities scale is from Kim & Ko (2012). The scale encompasses 17 items, where five items measure *sharing*, three items measure *interaction*, four items measure *trendiness*, and five items measure *customization*. The scale was considered a reliable and valid measurement tool. The researcher measured the items using a five-point Likert scale. Respondents' answers varied between 1 (strongly disagree) to 5 (strongly agree). The following table (5) shows the social media marketing activities scale questions.

Table 5 - Social Media Marketing Activities scale questions

Social Media Marketing Activities (SMMA)	
Variable	**Source** *(Kim & Ko, 2012)*
Sharing	1. The brand X shares interesting posts of the products on Instagram.
	2. The brand X shares interesting videos on its Instagram.
	3. The brand X shares informative hash-tags on its Instagram page.
	4. The brand X shares informative captions on Instagram.
	5. The brand X shares important links on its Instagram page.

Table 5 continuation

Social Media Marketing Activities (SMMA)	
Variable	**Source** *(Kim & Ko, 2012)*
Interaction	1. The brand's Instagram enable information sharing with others.
	2. Conversation or opinion exchange with others is possible through brand X's Instagram.
	3. It is easy to provide my opinion through brand X's Instagram.
Variable	**Source** *(Kim & Ko, 2012)*
Trendiness	1. Brand X that I follow has the latest information on the brand's Instagram page.
	2. The latest information on Instagram page enables me to identify X brand easily.
	3. brand X that I follow has trending information on Instagram page.
	4. More trendy information about X brand enables me to identify the X brand easily.
Variable	**Source** *(Kim & Ko, 2012)*
Customization	1. Brand X offers customized information search on its Instagram page.
	2. Brand X's Instagram page provides customized service.
	3. Brand X's Instagram page provide lively feed information I am interested in.
	4. It is easy to use brand X's Instagram page.
	5. Brand X's Instagram page can be used anytime, anywhere.

ii.   Second Section: Online Customer Engagement

The third section of the questions regarding online customer engagement; its variables are customers' consumption, contribution, and creation of luxury brand's content through the Instagram page. The source of the online customer engagement scale is Schivinski et al. (2016). The scale encompasses 16 items, five items measure consumption, six items measure contribution, and five items measure creation. The scale was considered a reliable and valid measurement tool. The researcher measured the items using a five-point Likert scale. Respondents' answers varied between 1 (strongly disagree) to 5 (strongly agree).

The following table (6) shows the questions of the online customer engagement scale.

Table 6 - Online Customer Engagement Scale questions

Online Customer Engagement (OCE)	
Variable	**Source** *(Schivinski et al., 2016)*
Consumption	1. I read posts related to brand X on Instagram.
	2. I read fan page(s) related to brand X on Instagram.
	3. I watch pictures/graphics related to brand X.
	4. I follow blogs related to brand X.
	5. I follow brand X on Instagram.
Variable	**Source** *(Schivinski et al., 2016)*
Contribution	1. I comment on videos related to brand X on their Instagram page.
	2. I comment on posts related to brand X on their Instagram.
	3. I comment on pictures/graphics related to brand X on their Instagram
	4. I share brand X related posts on Instagram.
	5. I "Like" pictures/graphics related to brand X on Instagram.
	6. I "Like" posts related to brand X on Instagram.
Variable	**Source** *(Schivinski et al., 2016)*
Creation	1. I initiate posts on Instagram related to brand X.
	2. I post pictures/graphics related to brand X on Instagram.
	3. I post videos that show brand X on Instagram.
	4. I write posts related to brand X on Instagram.
	5. I write reviews related to brand X on Instagram.

iii.   Third Section: Purchase Intentions and Price Premium

Finally, the fourth part is concerned with customers' purchase intentions and price premium. As a crucial part of the research, these questions' objective is to determine the effect of Instagram's customer engagement on customers' intention to buy luxury brands and their acceptance of price premium. The price premium scale is from Netemeyer et al. (2004), consisting of 3 items. The scale of purchase intention is from Bilgin et al., (2018), consisting of 4 items. The researcher measured the items using a five-point Likert scale. Respondents' answers varied between 1 (strongly disagree) to 5 (strongly agree).

The following tables (7) and (8) shows the questions of the price premium and customer's purchase intention.

Table 7 - Price Premium

Variable	Source (Netemeyer et al., 2004)
Price premium	I am willing to pay a higher price for X brand than for other brands.
	The price of X brand would have to increase quite a bit before I would switch to another brand.
	I am willing to pay a lot more for X brand than for other brands.

Table 8 - Purchase Intention

Variable	Source (Bilgin et al., 2018).
Purchase Intention	Interacting with this brand's Instagram help me make decisions better before purchasing their products and services.
	Interacting with X brand's Instagram page increase my interest in buying their product.
	I will definitely buy products as marketed on X brand's Instagram page.
	I have high intention to become this brand customer.

3.7. Sampling Design

A sample design is a clear plan for collecting a sample from a given population. It refers to the researcher's technique in selecting items for the sample (Kothari et al., 2004). A population is "*any collection of objects or entities that have at least one common characteristic*" (Jaeger, 1990, p. 138). Sampling techniques provide a range of methods that enable the researcher to lessen the amount of data the researcher needs to collect by considering only data from a sub-group rather than all possible elements (Saunders et al., 2009).

This research applied a non-probability sampling technique (the convenience sample). Non-probability sampling provides an array of alternative techniques to select samples based on the researcher's subjective knowledge (Saunders et al., 2009). Kothari et al. (2004) added that non-probability sampling is a technique that does not estimate the probability that each item in the population has been included in the sample. Additionally, non-probability sampling methods enable the researcher to select the sample purposively and reach difficult-to-identify population members (Saunders et al., 2009). Swanson & Holton (2005) added that surveys of hard-to-distinguish populations frequently apply a nonprobability sample.

The rationale for choosing a non-probability sampling technique is that the research population is the Instagram platform users, which by January 2020 were 10,652,000 in Egypt. As this is considered a massive population, the researcher used a non-probability using a convenience sampling method. The non-probability sample provides the advantage of being relatively economical and convenient to construct (Swanson & Holton, 2005). The researcher used non-probability sampling, as it applies subjective judgment and uses a convenient selection of members from the population. Non-probability sampling methods produce cost savings for surveys; the resulting samples resemble probability sample data (Saunders et al., 2009).

Although, the main drawback for the nonprobability sample is that they guarantee that all available population members will have an equal chance of being included in the sample (Swanson & Holton, 2005). Non-probability sampling techniques include convenience sampling, snowball sampling, and quota sampling (Swanson & Holton, 2005).

As referred earlier, in this study we used convenience sampling that indicates choosing sample members based on easy availability or accessibility (Swanson & Holton, 2005). Convenience sampling involves randomly selecting cases that are easiest to obtain for the research sample and to the very short timescales available for the researcher. Moreover, the sample size in this technique is often intended to represent the total population under investigation (Saunders et al., 2009).

The researcher continues the sample selection process until approaching the required sample size. Some researchers criticized the convenience sampling technique as influences beyond the researcher's control and prone to bias. They continued that the cases take part in the sample only because of the ease of obtaining them (Saunders et al., 2009). The research found this method (convenience sampling) appropriate for the current study. The following sample size table (3.9) (Sample sizes for different sizes of the population at a 95-confidence level) provides a rough guide to the different minimum sample sizes required from different population sizes, with a 95 percent confidence level for several margins of error (Saunders et al., 2009).

The current research took place in Egypt in 2020 for Egyptian Instagram users who were 10,65,2000. According to the following equation, the sample size of the present study will be 385. The confidence level (Z-score) is 95%, and the margin of error is 5%.

$$\text{Sample size} = \cfrac{\cfrac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\cfrac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

N = population size • e = Margin of error (percentage in decimal form) • z = z-score

Source: Kothari et al., 2004

Due to time constraints, the research continued the sample collection and could not reach more than 385 respondents for the questionnaire. In the context of the present study the researcher excluded five respondents who are "not familiar at all "with their favorite luxury brand on the Instagram page. The sample after cleaning is three hundred eighty that should be included in the analysis, the next chapter discussed the descriptive details of the respondents.

Table 9 - Sample sizes for different sizes of population at a 95-confidence level. (Assuming data are collected from all cases in the sample)

	Margin of Errors			
Population	**5%**	**3%**	**2%**	**1%**
50	44	48	49	50
100	79	91	96	99
150	108	132	141	148
200	132	168	185	196
250	151	203	226	244
300	168	234	267	291
400	196	291	343	384
500	217	340	414	475
750	254	440	571	696
1 000	278	516	706	906
2 000	322	696	1091	1655
5 000	357	879	1622	3288
10 000	370	964	1936	4899
100 000	383	1056	2345	8762
1 000 000	384	1066	2395	9513

10 000 000	384	1067	2400	9595

The following sections introduce the data collection journey. To ensure the highest quality possible in the data gathering process, the researcher carried out a pretest, as the researcher started the data collection after applying a pretest for the questionnaire. Therefore, the following section (3.8) will introduce the survey pretest.

3.8. Questionnaire Pre-Test

As recommended by the past literature, the researcher performed a pre-test questionnaire before the final administration (Nunan et al., 2020). For pre-testing the questionnaire, the researcher undertook a pre-test, it is a rehearsal of the primary survey (questionnaire) (Kothari et al., 2004). The objective was to identify errors and faults that can provide a bias in the answers. Moreover, the pre-test purpose is to refine the questionnaire so that respondents will have no difficulties answering the questions and there will be no problems in recording the data. Such a pre-test survey reveals the questionnaires' and the survey techniques' weaknesses (Kothari et al., 2004). The researcher can improve the questionnaire by deleting or adding questions from experience gained after conducting the pre-test.

The researcher performed an online pre-test with a sample of 30 Egyptian individuals who have an Instagram page and interested in the luxury brand market, as the researcher mentioned in the introductory part of the questionnaire. The questionnaire was named *"Social media marketing activities in Luxury brands market."* The pre-test questionnaire covered the items presented in section (3.6) on a five-point Likert scale. The researcher also added her e-mail at the end of the introductory section to help the respondents contact her if they faced any problem answering the survey. Firstly, the researcher collected the data for the pre-test by sending the questionnaire to friends and family members who have an Instagram page and are interested in luxury brands. The respondents highlighted minor problems concerning some terms in the questionnaire and grammar typos. It provided a refinement of the final version of the questionnaire in terms of clarifying some spelling mistakes. Some of the respondents mentioned that the questionnaire was too long.

Finally, once the researcher designed the questionnaire in the English language, the pre-test was tested and revised, and the sample selected, the questionnaire is now ready to collect the designated data. As mentioned above in section (3.6), the researcher used an online survey

platform, "Survey Monkey," to design the questionnaire. The data collected with the questionnaire's online distribution started on the 26th of November 2020 up to the 1st of March 2021. During this time, the researcher distributed the final version of the questionnaire using two ways. First, a link was created and used in personalized e-mails sent individually. Second, the link was sent and posted through groups on social media platforms (e.g., Facebook and Instagram), asking for volunteers interested in luxury brands to fill in the questionnaire.

After setting the questionnaire structure, an error may arise because of the defective measuring instrument. The use of complex words, vague meanings, and response choice omissions are a few points that make the measuring instrument inadequate and may result in measurement errors. These are the significant considerations researcher used in evaluating a measurement tool. To the extent possible, the researcher attempts to eliminate, neutralize or otherwise deal with all the potential sources of error to avoid contaminating the final results.

3.9. Measurement Validity and Reliability

As the researcher has chosen a questionnaire as an instrument for collecting data for the intended study, this sound measurement must meet the tests of *validity and reliability* (Kothari, C.R., 2004). These are the significant considerations researcher should use in evaluating a research instrument (Questionnaire). "*Validity refers to the extent to which a test measures what we actually wish to measure.*" "*Reliability has to do with the accuracy and precision of a measurement procedure.*" (Thorndike et al., 1991; p.162).

3.9.1. Validity

First, *validity* is a critical standard and indicates the degree to which the instrument chosen for data collection measures what it aims to measure. *Validity* can also be thought of as utility; it is the extent to which differences found with a measuring instrument reflect real differences among those being tested (Kothari, C.R., 2004). A scale can be valid if it examines the full scope of the research question in a balanced way.

This study examined the *Face validity* to ensure that items comprising a particular concept truly measure it. Second, *construct validity* was assessed before testing the model to ensure that results generated using each measure fit the theories that the test is designed around.

Construct validity is the extent to which the measurement questions of the study measure the presence of those constructs that are intended to measure (Saunders et al., 2009).

Discriminant validity and *convergent validity* were both tested to evaluate *construct validity* (Sekaran & Bougie, 2016). *Discriminant validity* is the degree to which two conceptually similar concepts are distinguished. The empirical test is the correlation between measures, but this time the summated scale is correlated with a similar but conceptually distinct measure. The correlation should be low, demonstrating that the summated scale is sufficiently distinct from the other similar concept (Hair et al., 2010). Data analysis chapter demonstrates the results of the discriminant validity for the current study.

Finally, *convergent validity* examines the applicability of the theorized variables, and it was evaluated using factor analysis (multivariate technique). It is necessary to verify a high correlation between items measuring the same variable (Hair et al., 2010).

3.9.2. Reliability

Second, this section discusses *reliability*, which is defined as evaluating the reproducibility and consistency of a research instrument. The *reliability* of the scale used in this study was increased by asking questions in more than one way within the questionnaire (Swanson, & Holton, 2005). A measuring instrument is reliable if it provides consistent results. A reliable measuring instrument does contribute to validity, but a reliable instrument must be a valid instrument. For instance, a scale that consistently overweighs objects by five kgs is reliable, but it does not provide a valid weight measure. However, the other way is not correct; i.e., a valid instrument is always reliable (Kothari, C.R., 2004).

The reliability of the study was measured using SPSS 25 by calculating Cronbach's Alpha. Cronbach's Alpha is a frequently used measure of scales' reliability and can take on any value less than or equal to 1, including negative values, although only positive values make sense. However, higher values of Cronbach's Alpha are more desirable. A reliability coefficient of 0.7 or higher is considered acceptable in most social science (Price, J. L., 1997). Hair et al. (2010) added that Cronbach's alpha is a measure of reliability that ranges from 0 to 1, with values of 0.60 to 0.70 deemed the lower limit of acceptability (Kothari, C.R., 2004).

3.10. Data Analysis

The researcher established a four-step data analysis methodology to test the model developed in the research model section; the social media marketing activities and their impact on online brand engagement that may influence price premium and customer's purchase intention in the Egyptian market. This research entails different statistical techniques. This section presented the primary data analysis techniques used in this research. The first step included the data set construction and the descriptive analysis of the data derived from the questionnaire. The purpose was essential to present the sample and describe the data. In this step, the researcher used SPSS 25 statistical software. Responses derived from the questionnaire were gathered, arranged, and coded using the SPSS 25 software. Therefore, it is crucial to develop a coded collection of variables, values, and labels using statistical programs such as SPSS.

According to Hair et al. (2010), data entry and cleaning are essential since it helps the researcher conclude the data collection process. In addition, cleaning data was done to avoid misleading results for this study (Hair et al., 2010). However, the data cleaning process was manageable in this study. As the researcher used the "Survey Monkey" application mentioned above in section (3.6) to form the questionnaire, she ensured that all the questions are fully answered; for example, if the respondent did not answer a question, the application automatically goes back to the question.

The researcher used in the second step running AMOS 22. It was essential to analyze the suggested scales in detail given the selection of the scales from previous research, as mentioned in the literature review chapter, and the significant modifications performed to adapt the scales to the context of the present study. For that reason, the third step, the researcher performed an exploratory factor analysis (EFA) to understand the structure of the used variables. Finally, the fourth step, the researcher entailed a confirmatory factor analysis (CFA) to ensure that the variables and factors from the exploratory factor analysis (EFA) represented the data.

The following subsections includes the descriptive analysis, factor analysis, followed by the subsections exploratory factor analysis (EFA), and confirmatory factor analysis (CFA).

3.10.1. Descriptive Analysis

Descriptive statistics describe, simplify, and summarize data by using different tables and graphs. Descriptive statistics appear in various forms that describe the research's data in

numerous and efficiently comprehensive ways (Bell et al., 2018). The following chapter will introduce the multiple descriptive statistics methods, e.g., diagrams, pie charts, and bars. Moreover, the chapter will also include the key concepts that help present numbers through statistical means: the "mean," "median," and "mode." The mean, median, and mode signify the average value, most recurrent occurring, and the mid-value of the questionnaires. One way of relating the dispersion is within the standard deviation, and it is how values separate from the mean value (Saunders et al., 2009). The more significant the difference of the values, the more they differ from the mean (Zikmund et al., 2013).

3.10.2. Factor Analysis

Factor analysis is an interdependence technique whose main objective is to define the underlying patterns between the study variables, and it enables identifying structure among those variables, which are the building blocks of the relationships (Hair et al., 2010). Furthermore, factor analysis provides the tools for analyzing the composition of the interrelationships (correlations) between many variables (for example, test scores, test items, and questionnaire responses) by defining sets of profoundly interrelated variables, known as factors (Hair et al., 2010). The highly intercorrelated variables (factors) represent dimensions within the data (Hair et al., 2010). In context with Hair et al.'s (2010) previous definition, Kline (1994 p.5) stated that" *a factor is a dimension or construct which is a condensed statement of the relationships between a set of variables*."

Moreover, factor analytic techniques can fulfill the research purposes from either an exploratory or confirmatory perspective—previous literature classified factor analysis into exploratory and confirmatory (Kline, 1994). Although, there was a debate supporting factor analysis; Some researchers suggest that factor analysis is only for exploratory purposes, which helps search for structure among a set of variables or data reduction methods. Other researchers suggested applying both exploratory and confirmatory factor analysis (Hair et al., 2010).

This research applied both exploratory factor analysis and confirmatory factor analysis in the empirical quantitative study developed. The rationale for applying both Exploratory factor analysis and confirmatory factor analysis was, according to Fabrigar et al. (1999), it is helpful to consider both, as exploratory factor analysis provides insights for verifying confirmatory

factor analysis. In conclusion, the researcher used statistical procedures to analyze the research variables simultaneously and simplifying complex data.

The following subsection covers the exploratory factor analysis in details.

Exploratory Factor Analysis (EFA)

The objective of conducting exploratory factor analysis is to explore the field and the primary constructs that constitute the study's object (Kline, 1994). Hair et al. (2010) supported that the exploratory factor analysis investigates the data and provides the researcher with information on how many factors are needed to represent the data. According to the author, in a complex field such as social sciences, it is essential to simplify studying the real-life environment by indicating the relevant variables to study. All measured variables are related to every factor by a factor loading estimate in the exploratory factor analysis (Hair et al.,2010). The unique feature of exploratory factor analysis is that the factors are derived from statistical results, not from theory which means that the researcher runs the software and allows the underlying pattern of the data to determine the factor structure (Hair et al., 2010).

In applying exploratory factor analysis in this study, the first stage explored the variables and confirmed the structure and dimensions obtained by prior scales found in the past literature. The researcher used standard factor analysis in order to conduct an exploratory factor analysis with the dataset. This approach considers the common or shared variance of the variables. Hence, the variance is assessed through the correlations with all the other variables presented in the analysis resulting in different factors (Hair et al., 2010). The researcher assessed the measured variables and analyzed the relationship between factors and the factor loading estimates pattern. The objective was to understand which variables load highly in a specific factor, comparing with smaller loadings in the other factors (i.e., loadings < .4) (Hair et al., 2010).

The following section presents the confirmatory factor analysis. Although originally factor analysis was developed as an exploratory statistical process, as time went by, factor analysis became means to test hypotheses (Kline, 1994). Therefore, the researcher performed the confirmatory factor analysis (CFA) to test if the developed structure of the variables and factors statistically represents the data (Hair et al., 2010). Confirmatory factor analysis cannot be adequately conducted unless the researcher can specify the number of constructs within data to be analyzed and which specific measures are assigned to each of these constructs. In

contrast, exploratory factor analysis is conducted without the knowledge of either of these things. Exploratory factor analysis does not provide an assessment of fit. Confirmatory factor analysis provides an assessment of fit (Hair et al., 2010).

Confirmatory Factor Analysis (CFA)

"Confirmatory factor analysis (*CFA) is a way of testing how well measured variables represent a smaller group of constructs*" (Hair et el., 2010 p. 693). In confirmatory factor analysis, the researcher can assess each scale item's contribution and incorporate how the scale measures the concept (i.e., reliability). Therefore, confirmatory factor analysis contributes to evaluate and refine the measurement model. Furthermore, the scales are integrated into estimating the relationships later on, between dependent and independent variables in the structural model (Hair et al., 2010).

During the development of a measurement model, it was essential to assess the construct validity and reliability. First, the researcher assessed the construct validity through convergent validity and discriminant validity, as mentioned earlier in this chapter in section (3.9). The purpose was to know how well the indicators capture their specified constructs. Convergent validity was verified at the Average Variance Extracted (AVE) estimates are equal to or higher than 0.5. Another metric usually used to access convergent validity which should be greater than 0.7 (Hair et al., 2010). The researcher examined discriminant validity by comparing the average variance extracted (AVE) with the square construct correlation between any two constructs (Fornell & Larcker, 1981).

According to the following equation:

$$\sqrt{AVE} > \text{Construct correlation between two constructs}$$

Hair et al. (2010) supported that the average variance extracted estimates for two factors should also be greater than the square of the correlation between the two factors to provide discriminant validity evidence. This comparison provides strong evidence for good discriminant validity if all constructs' correlations are lower than the average variance extracted square root (Hair et el., 2010). Construct reliability should be of value 0.7 or higher to indicate adequate convergence (Hair et el., 2010).

Finally, all the variables and factors were specified according to the previous factor analysis results and following the literature. The objective was to confirm the variables to specify a Structural Equations Modeling (SEM). With the prior construct measures in place, the

researcher established the structural relationships between the constructs and translate them into a form suitable for structural equation model (SEM) analysis (Hair et al., 2010).

The following section (3.10.3) introduced the structural equation model (SEM) in a more detailed sequence.

3.10.3. Structural Equation Modelling (SEM)

Hair et al. (2010) stated that "*structural equation modeling (SEM) can examine a series of dependence relationships simultaneously*" (p. 627). Structural equation modelling (SEM) is a multivariate technique applied to simultaneously determine a series of interrelated dependence relationships. Although the structural equation model grows out from multiple regressions, it serves as a more robust method (Hair et al., 2010). While multiple regression analysis measures only a single relationship, structural equation modelling considers complex relationships (Hair et al., 2010).

The structural equation model considers interactions, measurement error terms, multiple latent independent constructs, multiple latent dependable constructs, and nonlinearity (Hair et al., 2010). The structural equation model is a confirmatory analysis used for theory testing rather than theory development. Moreover, it enables academics to build and modify research models. Furthermore, the structural equation model enables testing the entire research model through its ability to consider multiple interrelated relationships. The structural equation model (SEM) determines a series of separate but interdependent multiple regression equations simultaneously by defining the structural model used by the statistical program. The most apparent contrast between the structural equation model and other multivariate techniques is using different relationships for each of a set of dependent variables (Hair et al., 2010).

The rationale for applying the SEM is that in the structural equation, the dependent variables in one relationship can become independent variables in subsequent relationships, providing a rise to the interdependent nature of the structural model (Hair et al., 2010). Therefore, this study applied the Structural Equation Modelling (SEM) as this statistical analysis examines the causal and effect relationship between several independent and dependent variables simultaneously (Byrne, 2013; Hair et al., 2010). Furthermore, the structural model expresses these dependence relationships among independent and dependent variables, even when a dependent variable becomes an independent variable in other relationships. Thus, the

relationships translated into a series of structural equations (similar to regression equations) for each dependent variable (Hair et al., 2010).

The structural equation model (SEM) examines the structure of interrelationships expressed through a series of equations. These equations describe the relationships among constructs (dependent and independent) variables involved in the study (Hair et al., 2010). Also, the researcher applied the structural equation model to reinforce the testing of the variables to assure their validity.

Three characteristics distinguish the structural equation model (Hair et al., 2010):

- *It assesses multiple and interrelated relationships among variables.*

- *It can present unobserved notions in the study and measurement of errors.*

- *It defines a model to explain the entire relationship among variables of the study.*

The following table (10) shows the fit indices demonstrating the goodness of fit applied in the current study.

Table 10 - Fit indices demonstrating goodness-of-fit

Absolute Fit Indexes			
Statistics	**Name**	**Value**	**Reference**
$\chi 2$	Chi-Square GOF	Significant ρ-value expected	
$\chi 2 /d f$	Normed Chi-Square	Ratios of 3:1 is associated with better-fitting model	**Marsh, & Hocevar, 1985.**
GFI	Goodness of fit model	Between 0 to 1 indicating better fit (above 0.90)	**Hair et al.,2010**
RMSEA	Root Mean Square error of approximation	Between 0.05 to 0.08.	**Browne, & Cudeck,1992**
RMR	root-mean-square residual	Between 0 and 1.	**Hair et al.,2010**
Incremental fit indices			
Statistics	**Name**	**Value**	**Reference**
TLI	Tucker-Lewis Index	Less than 0 or above 1	**Bentler & Bonett, 1980**
CFI	Comparative Fit Index	Between 0 and 1	**Hair et al.,2010**

3.11. Summary

This chapter presented the various steps of the construction of the empirical study. It included the research instrument developed to explain the process culminating in the questionnaire.

The data analysis methodologies were discussed, including factor analysis and the structural equation modeling approach implemented. After presenting the methodology, the next chapter will embrace the results and review the analysis carried out in the research.

DATA ANALYSIS AND FINDINGS

4.1. Introduction

The chapter is organized considering the data set preparation which includes the sample profile, followed by the descriptive statistics for the responses of the questionnaire-related for each variable. The chapter also includes the process of refinement of the core construct of the models; i) Social Media Marketing activities (SMMA), ii) online customer Engagement and iii) Purchase Intentions and Price premium. At the end of the chapter displayed the structural equation modelling (SEM) performed to test the relationships hypothesized for the current study.

4.2. Sample Profile

The present study sample is formed of Instagram users in Egypt who follow luxury brands. Three hundred and eighty-five questionnaires composed the valid responses which were analyzed. The characteristics of the respondents were analyzed in four different dimensions, first, the individual respondents, second, household respondents, third, the context of luxury brands in Egypt, fourth following Luxury brands on the Instagram platform.

First, according to the results obtained, the majority were Female with 87%, and the remaining was Male 13%. The results obtain a massive gap between the gender responding to the questionnaire, indicating a bias towards the female gender and not capturing all the male opinions.

According to the sample profile, the highest percentage of the respondents was the age category from 25-34, representing 54.5%. The minor class was respondents below 25 years old with 11%. The questionnaire failed to obtain responses in the age category 45-54 and above 55. The majority of the respondents were Single, with 59% from the sample distribution—the minor percentage of 0.8% for the Divorced/Separated. The result is coherent with the dominant age group and consequential life stage. The questionnaire failed to capture widowed respondents, as seen below in table (4).

The level of formal education in the sample is high where, the majority of the respondents were "university degree" holders representing 51.4% of the sample size, followed by the post graduate with 38.7%. There was very small contribution from both of high school and below and Institute diploma which contribute by 8 and 4 participants respectively.

For the occupation, most of the respondents presented 31.7% for (College/school teacher, engineer), followed by banking field with 22.60% while the minority were in the

administrational/clerk field with 3.4%. It is possible to verify that respondents have different positions more than 50% occupied high-level occupation College/school teacher, engineer, these results may be related to the high level of education that most respondents presented with university and post graduate.

The majority of the respondents were from urban areas presenting 96.4% indicating a massive gap for capturing the rural area in Egypt. Table (11) provides the demographics for individual respondents in terms of gender, age group, educational level, marital status, residence area, and occupation.

Table 11 - Demographics for Individual respondents

		Frequency	Valid %	Cumulative %
Gender **(Q1)**	Female	335	87.0%	87.0%
	Male	50	13.0%	13.0%
	Total	385	100.0%	100.0%
Marital status **(Q2)**	Divorced/ separated	3	0.8%	0.8%
	Married	155	40.3%	40.3%
	Single	227	59.0%	59.0%
	Total	385	100.0%	100.0%
Age (**Q3**)	Below 25	46	11.9%	11.9%
	25-34	210	54.5%	54.5%
	35-44	129	33.5%	33.5%
	Total	385	100.0%	100.0%
Top education level. **(Q4)**	High school and below	7	1.8%	1.8%
	University degree	198	51.4%	51.4%
	Institute diploma	4	1.0%	1.0%
	Master Degree	149	38.7%	38.7%
	PhD degree	25	6.5%	6.5%
	Other (Student)	1	0.3%	0.3%
	Other	1	0.3%	0.3%
	Total	385	100.0%	100.0%
Residence area. **(Q5)**	Rural area	14	3.6%	3.6%
	Urban area	371	96.4%	96.4%
	Total	385	100.0%	100.0%
Occupation. **(Q6)**	Professionals (e.g., College/school teacher, engineer).	122	31.7	31.7
	Banking field.	87	22.60	22.60
	Sales/marketing/human resource field.	46	11.90%	11.90%
	Self employed	40	10.40	10.40
	Student	26	6.80	6.80
	Medical field	19	4.90	4.90
	Administration/ clerical	13	3.40	3.40
	Other	32	8.30	8.30
	Total	385	100.00	100.00

Secondly, the sample is next described regarding the demographics of the household respondents. Table (12) provides the Household respondents in terms of average monthly income, the number of adults in the household, and number of children in the household. The results indicated that he majority of the household respondents were for those monthly incomes from "16,000 to 21,000 Egyptian pounds," with 21.6%% of the sample size, followed by 15.6% for those whose income from 10,000 L.E. to 15,000 L.E, indicating medium-income Egyptian respondents. The results showed that 53.5% of the respondent household included only two individuals in the same household. The majority of the sample contribution has no children which represents 60%. The minority from the sample distribution who have three children which represents 4.2%.

Table 12 - Demographics for Household respondents

		Frequency	Valid %	cumulative %
Average monthly household income. **(Q7)**	Less than 10,000 L. E	48	12.5%	12.5%
	From 10,000 L.E. to 15,000 L.E.	60	15.6%	15.6%
	From 16,000 L.E. to 21,000 L.E.	83	21.6%	21.6%
	From 22,000 L.E. to 27,000 L.E.	32	8.3%	8.3%
	From 28,000 L.E. to 33,000 L.E.	32	8.3%	8.3%
	From 34,000 L.E. to 39,000 L.E.	56	14.5%	14.5%
	40,000 L.E. and above.	74	19.2%	19.2%
	Total	385	100.0%	100.0%
The number of adults in the household **(Q8)**	1	16	4.2	4.2
	2	206	53.5	53.5
	3	68	17.7	17.7
	4	69	17.9	17.9
	5	21	5.5	5.5
	6	4	1.0	1.0
	7	1	0.3	0.3
	Total	385	100.0	100.0
		Frequency	Valid %	cumulative %
	0	231	60.0	60.0

	1	68	17.7	17.7
	2	70	18.2	18.2
	3	16	4.2	4.2
Number of children in the household (less than 18 years old). **(Q8)**	4	-	-	-
	5	-	-	-
	6	-	-	-
	7	-	-	-
	Total	385	100.0	100.0

4.2.1. The Context of the Study: Luxury Brands Consumption in the Egyptian Sample

Third, the majority of the respondents, 90.4% of the sample distribution, purchased a luxury brand before, 9.5% of the whole sample did not purchase a luxury brand before as shown in the table (12) below. However, the researcher did not exclude those who had not purchased a luxury brand before. The reason behind this is that the study's main aim was to analyze those who are following luxury brands on the Instagram platform and their engagement with the brand as they may have an intention for future purchase.

The researcher explored if Egyptian consumers purchased any luxury brand over the last year (2020); most respondents did not purchase any over the past year, with a percentage of 41.80% across the sample distribution. It is possible to verify this answer as the respondents answered the questionnaire in 2021; due to covid restrictions and the lockdown that occurred worldwide. However, according to the sample distribution, the top purchased brands in Egypt in 2020 were Fendi and Burberry, with 8.6%. The majority of the respondents follow Fendi through the Instagram Platform, representing 20.8% of the sample distribution. These findings can be related to the sample distribution indicating that Fendi is the top purchased Luxury brand in Egypt for 2020. This section included the frequency tables.

Table 13 - The context of Luxury Brands in Egypt

		Frequency	Valid %	cumulative %
Respondents purchased a luxury brand before **(Q10)**	No	37	9.6	9.6
	Yes	348	90.4	90.4
	Total	385	100.0	100.0
Respondents purchased luxury brands over the last year. **(Q11)**	None	161	41.80	41.80
	Burberry	38	9.90	9.90
	Fendi	38	9.90	9.90
	Dior	36	9.40	9.40

	Louis Vuitton	35	9.10	9.10
	Yves Saint Laurent	31	8.10	8.10
	Gucci	30	7.80	7.80
	Azza Fahmy	14	3.60	3.60
	Chanel	9	2.30	2.30
	other	35	8.49	8.49
	Total	385	100.0	100.0

4.2.2. Egyptian Following Luxury Brands on the Instagram Platform

Fourth, the sample is next characterized considering respondents' awareness of luxury brands as the primary intention of the study is to examine the Egyptian consumer behavior towards luxury brands through the Instagram platform. As seen in the table (13) below, the majority of the respondents representing 55.6%, are "Strongly Familiar" with the luxury brand, and 28.1% are "Familiar" with their favorite luxury brand on the Instagram platform.

The researcher intendent to know if the respondents are aware of the luxury brand they follow on Instagram through its webpage. The majority of the sample is aware that the luxury brand they follow on the Instagram platform is on the Web, with 88.1% of the sample distribution; however, 11.9% of the sample distribution are not aware of the luxury brand on the Web. These results imply that Egyptian consumers tend to check the luxury brand's website, which may increase their future purchase intentions, as the website contains more details about the product characteristics, product availability, pricing, store location, and contacts.

The sample distribution indicated that 75.3% of the respondents interact with their favorite luxury brand through the Instagram page by commenting, liking, or resharing the brands' stories or photos. These results imply that Egyptian consumers tend to engage with the luxury brand through Instagram.

Table 14 - Consumers Following Luxury Brands on the Instagram

		Frequency	Valid %	cumulative %
Respondents' favorite luxury brands that they follow on Instagram. **(Q12)**	None	15	3.9	3.9
	Burberry	51	13.2	13.2
	Fendi	80	20.8	20.8
	Dior	65	16.9	16.9
	Louis Vuitton	66	17.1	17.1
	Yves Saint	20	5.2	5.2
	Gucci	29	7.5	7.5
	Azza Fahmy	32	8.3	8.3
	Chanel	12	3.1	3.1
	Other	15	3.9	3.9
	Total	385	100.0	100.0
Respondents' familiarity with their favorite luxury brand they follow on the Instagram **(Q13)**	Not Familiar at	5	1.3	1.3
	Weakly Familiar	16	4.2	4.2
	Neutral	42	10.9	10.9

Table 14 continuation

		Frequency	Valid %	Cumulative %
	Familiar	108	28.1	28.1
	Strongly Familiar	214	55.6	55.6
	Total	385	100.0	100.0
The respondent's awareness of their favorite luxury BRAND on the Web **(Q14)**	No	46	11.9	11.9
	Yes	339	88.1	88.1
	Total	385	100.0	100.0
		Frequency	**Valid %**	**Cumulative %**
The respondent's interaction with their favorite luxury BRAND on the Instagram official page. "e.g., comment/like or re-share their posts/stories". **(Q15)**	No	95	24.7	24.7
	Yes	290	75.3	75.3
	Total	385	100.0	100.0

In the context of the present study after exploring the sample profile, the researcher excluded five respondents who are "not familiar at all "with their favorite luxury brand on the Instagram page. The sample after cleaning is three hundred eighty that should be included in the analysis. The following section (4.3) presents the descriptive statistics for the responses of the questionnaire-related for each variable of the current study.

4.3. Preliminary Data Analysis

The researcher coded the variables using the following techniques. Social media marketing activities consist of 4 constructs *(Sharing, Interaction, Trendiness, and Customization).* *Sharing,* which consists of five items ranging from SH1 to SH5. *Interaction* consists of three items ranging from IN1 to IN3. Trendiness consists of four items ranging from TR1 to TR4. Customization consists of five items ranging from CU1 to CU5. The online customer engagement variable consists of 3 constructs (Consumption, contribution and creation). Consumption consists of five items ranging from Cons1 to Cons5, Contribution, which consists of six items ranging from Cont1 to Cont6. Creation consists of five items ranging from CR1 to CR5. Price premium consists of three items ranging from PP1 to PP3 and finally Purchase Intention, which consists of four items ranging from PI1 to PI4.

4.3.1. The Descriptive Responses for "Social Media Marketing Activities"

The first set of items explored social media marketing activities presented in "**Sharing, Interaction, Trendiness, and customization."** The researcher wanted to point out the social media marketing activities applied by the luxury brands on the Instagram platform throughout the eyes of Egyptian consumers.

First, for the variable *"Sharing",* as seen in table (4.4) below the percentile 25% value for all five items represents neutral except for SH1 which, was "Agree." The percentile 75% for all items shows agree except for SH1, "Strongly Agree." The median and mode value for all items were "Agree." These results indicate an agreement level across all items constructing the variable *"Sharing".* The researcher can verify from the sample distribution that respondents following luxury brands through their Instagram page agreed that these pages, to a great extent, apply "Sharing". As mentioned earlier in the Literature review, *Sharing* is how users to exchange, distribute, and receive content using social media applications (Kietzmann, 2012), the Instagram platform in the current study. The researcher can confirm that Egyptian consumers can relate to the term *Sharing*. The researcher concluded that consumer's favorite luxury brand share content through the social media platform (Instagram). The following table (15) represents the descriptive statistics for the items constructing the **"Sharing"** variable.

Table 15 - Descriptive Statistics of Sharing items

Sharing items	Median	Mode	Mini	Max	Percentiles	
					25	75
SH1: "BRAND X" shares interesting posts of the products on its Instagram page.	4.00	4	1	5	4	5
SH2: "BRAND X" shares interesting videos on its Instagram page.	4.00	4	1	5	3	4
SH3: "BRAND X" shares informative hash-tags on its Instagram page.	4.00	4	1	5	3	4
Sharing items	Median	Mode	Mini	Max	Percentiles	
					25	75
SH4: "BRAND X" shares informative captions on its Instagram page.	4.00	4	1	5	3	4
SH5: "BRAND X" shares important links on its Instagram page.	4.00	4	1	5	3	4

Second, for the term *"Interaction"* as seen in the following table (4.5), the percentile 25% and 75% values for all the three items were "Neutral" and "Agree," respectively. The "Median" and "Mode" values for all items were "Agree." The majority of the responses related to the term *"Interaction"* as they were "Agree/strongly agree". *"Interaction"*, which is the users who contribute to brand-related social media platforms to meet like-minded others, interact, and talk about specific products/services (Muntinga et al., 2011). The researcher can verify that the Egyptian Instagram users can notice that their favorite luxury brands apply the *"Interaction"* activity through their official Instagram page.

The next table (16) represents the descriptive statistics for the items constructing the **"Interaction"** variable.

Table 16 - Descriptive Statistics of Interaction items

Interaction items	Median	Mode	Mini	Max	Percentiles	
					25	75
IN1: "BRAND X" enables information sharing with others on its Instagram page.	4.00	4	1	5	3.00	4
IN2: Conversation or opinion exchange with others is possible through "BRAND X" Instagram page.	4.00	4	1	5	3.00	4
IN3: It is easy to provide my opinion through "BRAND X" Instagram page.	4.00	4	1	5	3.00	4

Third, for the term "Trendiness", as seen in the following table (4.6), the percentile 25% value for all the four items represents "Agree" except for TR3, "Neutral." The percentile 75% for all items was "Agree." The "Median" and "Mode" values for all items were "Agree." These results indicate an agreement level across all items constructing the "Trendiness" variable. "Trendiness" is disseminating the latest and trendiest information about products or brands. Trendiness is the extent to which a brand provides the newest information about its products and services (Godey et al., 2016). For the variable "Trendiness", the researcher verified that the Egyptian Instagram users could notice that their favorite luxury brands share the trendiest information about products through their official Instagram page by applying the "Trendiness" activity. The next table (4.6) represents the descriptive statistics for the items constructing "Trendiness" variable.

Table 17 - Descriptive Statistics of Trendiness items

Trendiness items	Median	Mode	Mini	Max	Percentiles	
					25	75
TR1: "BRAND X" has the latest information on its Instagram page.	4.00	4	1	5	4.00	4
TR2: The latest information on the "BRAND X" Instagram page enables me to identify BRAND X easily.	4.00	4	1	5	4.00	4
TR3: "BRAND X" has the most trending information on its Instagram page.	4.00	4	1	5	3.00	4
TR4: More trendy information about the "BRAND X" enables me to identify BRAND X easily.	4.00	4	1	5	4.00	4

Fourth, for the term customization as seen in table (17), The percentile 25% value for CU1, CU2&CU3 were "Neutral" and "Agree" for both of CU4 & CU5. The percentile 75% value for CU1, CU2 & CU3 was "Agree" and "Strongly Agree" for both CU4&CU5. The "median and mode value for CU1, CU2 & CU3 was "Agree" and "Strongly Agree" for both of CU4&CU5. The results indicates that most of the answers for the variable *"Customization"* varied between "Agree and Strongly Agree." In the social media context, *"Customization"* is how social media channels provide a customized information search and customized services (Schmenner, 1986). The researcher van verify that the Egyptian consumers agreed that the Instagram page of their favorite luxury brand they follow apply the *"Customization"* activity.

The next table (18) represents the descriptive statistics for the items constructing "Customization" variable.

Table 18 - Descriptive Statistics of Customization items

Customization items	Median	Mode	Mini	Max	Percentiles	
					25	75
CU1: "BRAND X" offers customized information search on its Instagram page.	4.00	4	1	5	3.00	4.00
CU2: "BRAND X" Instagram page provides customized service.	4.00	4	1	5	3.00	4.00
CU3: "BRAND X" Instagram page provide lively feed information I am interested in.	4.00	4	1	5	3.00	4.00
CU4: It is easy to use "BRAND X" Instagram page.	5.00	5	1	5	4.00	5.00

CU5: "BRAND X" Instagram page can be used anytime, anywhere.	5.00	5	1	5	4.00	5.00

4.3.2. The Descriptive Responses for "Online Customer Engagement"

The second set of items present the online customer engagement descriptive answers of its construct, including *consumption, contribution and sharing.* In these set of items researcher investigated online customer engagement from the perception of Egyptian customers. In our study, online means the social media platform (Instagram page) that the consumers use to interact with a specific luxury brand as mentioned earlier in the questionnaire in "question 12". The consumer plays an active role with the luxury brands they follow on the Instagram platform in this stage.

First, for the variable *"Consumption"*, as seen in table (18), the percentile 25% value for Cons1, Cons2, and Cons4 was "Neutral" and "Agree" for Cons3&Cons5. The percentile 75% for all items was "Strongly Agree." The "Median" value for all items was "Agree" except for Cons5, which is "Strongly Agree." The "Mode" value for all items was "Strongly Agree" except for Cons1 "Agree." From the sample, the researcher can verify that respondents, to a great extent, interact with their favorite luxury brand through its official Instagram page. The term *Consumption* is viewing and reading brand-related posts on social media platforms and watching pictures on a brand's Instagram page without actively participating (Muntinga et al., 2011; Schivinski et al., 2016).

The next table (19) represents the descriptive statistics for the items constructing *"Consumption"* variable.

Table 19 - Descriptive Statistics of Consumption items

Consumption items	Median	Mode	Mini	Max	Percentiles	
					25	75
Cons1: I read posts related to "BRAND X on Instagram.	4.00	4	1	5	3.00	5
Cons2: I read fan page(s) related to "BRAND X" on Instagram.	4.00	5	1	5	3.00	5
Cons3: I watch pictures/graphics related to the "BRAND X" on Instagram page.	4.00	5	1	5	4.00	5
Cons4: I follow blogs related to the "BRAND X".	4.00	5	1	5	3.00	5
Cons5: I follow "BRAND X" on Instagram.	5.00	5	1	5	4.00	5

Second, for the variable contribution, as seen in the following table (4.9) the percentile 25% value for Cont1, Cont2, Cont3& Cont4 was "Disagree". The percentile 25% value for Cont5& Cont6 was "Agree". The percentile 75% value for Cont1, Cont2, Cont3 and Cont4 is "Agree" and is "Strongly Agree" for Cont5& Cont6. The "Median" value for Cont1, Cont2, Cont3, and Cont4 was "Neutral," and for Cont5 and Cont6, "Strongly Agree." The "Mode" value for Cont4 was "Disagree", for Cont1 and Cont2 was "Agree", and for Cont5 and Cont6 was "Strongly Agree". The results indicate that Egyptian consumers might not be encouraged to share content or originate content for the luxury brand through the social media platform (Instagram). Where the past literature defined Contribution as it includes commenting, sharing, and discussing commercials through Facebook or Instagram, turning consumers into brand endorsers.

The next table (20) represents the descriptive statistics for the items constructing the "Contribution" variable.

Table 20 - Descriptive Statistics of Contribution items

Contribution items	Median	Mode	Mini	Max	Percentiles 25	75
Cont1: I comment on videos related to the "BRAND X" on their Instagram page.	3.00	4	1	5	2.00	4.00
Cont2: I comment on posts related to the "BRAND X on their Instagram page	3.00	4	1	5	2.00	4.00
Cont3: I comment on pictures/graphics related to the "BRAND X" on their Instagram.	3.00	4	1	5	2.00	4.00
Cont4: I share the "BRAND X" related posts on my Instagram page.	3.00	2	1	5	2.00	4.00
Cont5: I "Like" pictures/graphics related to the "BRAND X" on Instagram.	5.00	5	1	5	4.00	5.00
Cont6: I "Like" posts related to the "BRAND X" on its Instagram page.	5.00	5	1	5	4.00	5.00

Third for the variable *"Creation",* as seen in the following table (21), The minimum and maximum answers for all items were "Strongly Disagree" and "Strongly Agree," respectively. The percentile 25% and 75% values for all items were "Disagree" and "Agree," respectively. The "Mode" value for all the items was "Disagree," except for CR5, which was "Agree." The "Median" value for all the items was "Neutral. These results indicate a level of disagreement; however, it is approaching neutral for all items constructing the *"Creation"* variable. Creation encompasses publishing reviews, originating posts, uploading user-generated media on

Facebook or Instagram (Muntinga et al., 2011; Schivinski et al., 2016). The researcher verified that the answers are contrary to the past literature that revealed that customers are motivated to engage in non-transactional behaviors, where customers anticipate benefits (enhanced knowledge, reputation, social benefits, and economic benefits such as cost savings) (Harmeling et al., 2017).

The next table (21) represents the descriptive statistics for the items constructing "Creation" variable.

Table 21 - Descriptive Statistics of Creation items

Creation items	Median	Mode	Mini	Max	Percentiles	
					25	75
CR1: I initiate posts on my Instagram page related to "BRAND X".	3.00	2	1	5	2.00	4.00
CR2: I post pictures/graphics related to the "BRAND X" on my Instagram page.	3.00	2	1	5	2.00	4.00
CR3: I post videos that show the "BRAND X" on my Instagram page.	3.00	2	1	5	2.00	4.00
CR4: I write posts related to the "BRAND X" on my Instagram page.	3.00	2	1	5	2.00	4.00
CR5: I write reviews related to the "BRAND X" on my Instagram page.	3.00	4	1	5	2.00	4.00

4.3.3. The Descriptive Responses for "Price premium" and "Purchase Intentions"

The following items investigated the Egyptian consumers "*Price premium, and Purchase intentions*". From the descriptive responses shown in the following table (22), the researcher can assure that respondents' answers are near to "Agree" which indicate that consumers may be willing to pay an extra price level for their favorite luxury brands. As shown in the following table (4.11), the percentile 25% and 75% values for all the items were "Neutral" and "Agree," respectively. The "Mode" and "Median" values for all the items were "Agree." The results can verify that the Egyptian consumers may intend to pay price premium for their favorite brand over other competing brands. The second set of items investigated the *"Purchase intentions"* where the researcher intended to measure Egyptian customers' future contributions to a luxury brand after exploring the social media marketing activities of this luxury brand. An earlier definition for purchasing intention is the subjective probability that consumers perform

a specific behavior (Ajzen & Fishbein,1977). These results indicate a slight agreement level for all items constructing the purchase intention variable where, as seen in table (4.11) the percentile 25% for all the items shows "Neutral" except for PI4, which is "Agree." The percentile 75% for all the items is "Agree." The "Median and "Mode" value for all items was "Agree."

The following table (22) represents the descriptive statistics for the items constructing **"Price premium"** and **"purchase intentions"** items.

Table 22 - Descriptive Statistics of Price Premium and Purchase Intentions

Price premium Items	Median	Mode	Mini	Max	Percentiles	
					25	75
PP1: I am willing to pay a higher price for "BRAND X" than for other brands.	4.00	4	1	5	3.00	4.00
PP2: The price of "BRAND X" would have to increase quite a bit before I would switch to another brand.	4.00	4	1	5	3.00	4.00
PP3: I am willing to pay a lot more for the "BRAND X" than for other brands.	4.00	4	1	5	3.00	4.00
PI1: Interacting with "BRAND X" Instagram page helps me make decisions better before purchasing their products.	4.00	4	1	5	3.00	4.00
PI2: Interacting with "BRAND X" Instagram page increases my interest in buying their products.	4.00	4	1	5	3.00	4.00
PI3: I will definitely buy products as marketed on "BRAND X" s Instagram page.	4.00	4	1	5	3.00	4.00
PI4: I have the intention to carry on buying "BRAND X" products.	4.00	4	1	5	4.00	4.00

4.4. Testing the Normality of the Variables (Skewness and Kurtosis)

The following table (23) the descriptive statistics for each variable, representing the "*Mean*," *Median*, and the "*Standard deviation*," indicating the location of the responses. *Mean* is the average value calculated by adding up the values of each case for a variable and dividing by the total number of cases. The *Median* is the middle value when all the values of a variable are arranged in rank order. *Standard deviation* is the statistic that describes the degree of spread of data values around the mean for a variable, including numerical data (Saunders et al., 2009). Moreover, this section proposed the Skewness and kurtosis of the variables. *Skewness* describes the balance of the distribution; that is, is it unbalanced and shifted to one side (right or left), or is it centered and symmetrical with about the same shape on both sides. Hair et al. (2010) also added that if a distribution is unbalanced, it is skewed (left or right). *Kurtosis* is the "peaked-ness" or "flatness" of the distribution compared to the normal distribution. Kurtosis relates to the height of the distribution. A positive skew indicates a distribution shifted to the left, while a negative skewness reflects a shift to the right (Hair et al., 1998). The generally used critical values are ±2.58 (0.01 significance level) and ±1.96, corresponding to a 0.05 error level (Hair et al., 1998). Likert scales were used to measure the variables ranging from 1 (strongly disagree) to 5 (strongly agree), the minimum values of all latent variables are 1, and the maximum values of these variables are 5.

The following table (23) shows the results of the current study.

Table 23 - Descriptive Statistics

Descriptive Statistics							
	Mean	**Median**	**Std. Deviation**	**Skewness**	**Kurtosis**	**Minimum**	**Maximum**
Sharing	3.7964	4.0000	0.72592	-0.229	-0.128	1.40	5.00
Interaction	3.6571	4.0000	0.77964	-0.389	-0.025	1.00	5.00
Trendiness	3.8786	4.0000	0.62241	-0.198	0.148	2.00	5.00
Customization	3.9621	4.0000	0.63502	-0.466	-0.129	1.40	5.00
Consumption	4.0083	4.0000	0.91965	-0.802	0.252	1.00	5.00
Contribution	2.8981	3.0000	1.12565	-0.023	-1.007	1.00	5.00
Creation	2.7725	2.8000	1.14454	0.082	-1.125	1.00	5.00
Price premium	3.6580	4.0000	0.88319	-0.718	0.778	1.00	5.00

Purchase Intention	3.7675	4.0000	0.79949	-0.885	1.573	1.00	5.00

As demonstrated in the above table (23), the Mean score for the variables of the study is of high value ranged between "4" and "3.6," indicating the response (Agree). In comparison, the "Contribution and Creation" variables have a "Mean" score of low value with (2.8) and (2.7) (Disagree). The standard deviation for the variables has a value less than 1, which means that the data remain near the "Mean." Nevertheless, contribution and creation have the greatest standard deviations greater than "1," which means data are spread far from the "Mean." From table (4.12), according to the "Skewness and Kurtosis" results, the researcher can conclude that all the variables are not normally distributed. The skewness of all the variables has a negative value which means that the distribution is skewed to the left; the respondents' opinion is deviated to "Agree" and "strongly Agree." The "*Creation*" is the only variable that has a positive skewed value which means that the distribution is skewed to the right; the responses are deviated to "Disagree and "strongly Disagree." Kurtosis are positive for the variables; "Trendiness, Consumption, Customer based brand equity, Brand loyalty, indicating a peaked distribution for the responses. While kurtosis is negative for "*Sharing, Interaction, Customization, Contribution, Price premium and Purchase intentions*" indicating a flat distribution.

Finally, Skewness and Kurtosis of the variables of the current study are within the acceptable ranges. The distributions of the variables are approximately normal, which means that the structural equation model (SEM) can test the relationships among these variables. The researcher used the AMOS software program to perform the structural equation model (SEM) technique. The performance of the AMOS program enhances with large sample size.

4.5. Measurement Model (1)

The following sections started with the scale refinement. The researcher originated with an Exploratory factor analysis, which explores the data and provides the researcher with information about how many factors are needed to interpret the data in the most suitable form (Hair et al., 2010).

4.5.1. Social Media Marketing Activities Scale Refinement

Social media marketing activities (SMMA) were particularly relevant to analyze separately. The researcher adapted the main structure of social media marketing activities by the variables (***sharing, interaction, customization, and trendiness***) from the previous research

(Kim and Ko, 2012). The objective was to identify the structure in this context, allowing the factors to freely emerge from the data and confirm the structure of the scale.

Table 24 - Results of KMO and Bartlett tests of SMMA

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.923
Bartlett's Test of Sphericity	Approx. Chi-Square	4757.171
	df	136
	Sig.	.000

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA) tests whether the partial correlations between variables are minor (Hair et al., 2010). The value of KMO should be at least 0.5. The closer this value is to one, the higher its accuracy. As shown in the above table (4.13) the KMO test is significant as its sig value is less than 0.05, the KMO value is 0.923 which is higher than 0.7 so factor analysis is an appropriate method for data reduction.

The following table (25) summarize the final correlation matrix for the social media marketing activities.

Table 25 - Correlations for SMMA

	Sh1	Sh2	Sh3	Sh_4	Sh5	Int1	Int2	Int3	Trend1	Trend2	Trend3	Trend4	Cust1	Cust2	Cust3	Cust4	Cust5
Sh1	1																
Sh2	.783**	1															
Sh3	.633**	.710**	1														
Sh4	.665**	.724**	.801**	1													
Sh5	.512**	.590**	.694**	.723**	1												
Int1	.536**	.573**	.635**	.646**	.638**	1											
Int2	.446**	.503**	.510**	.512**	.587**	.679**	1										
Int3	.423**	.536**	.595**	.566**	.499**	.587**	.583**	1									
Trend1	.545**	.487**	.429**	.468**	.387**	.493**	.524**	.481**	1								
Trend2	.505**	.460**	.397**	.464**	.395**	.411**	.395**	.482**	.607**	1							
Trend3	.546**	.592**	.530**	.567**	.485**	.597**	.477**	.554**	.618**	.584**	1						
Trend4	.513**	.464**	.464**	.504**	.408**	.497**	.418**	.476**	.631**	.626**	.672**	1					
Cust1	.449**	.524**	.539**	.542**	.595**	.505**	.585**	.452**	.509**	.445**	.638**	.478**	1				
Cust2	.408**	.552**	.573**	.552**	.600**	.469**	.503**	.482**	.339**	.392**	.512**	.326**	.675**	1			
Cust3	.477**	.542**	.536**	.576**	.569**	.472**	.515**	.518**	.526**	.499**	.583**	.453**	.651**	.633**	1		
Cust4	.419**	.437**	.426**	.420**	.436**	.358**	.399**	.380**	.341**	.293**	.440**	.317**	.392**	.376**	.432**	1	
Cust5	.352**	.368**	.348**	.367**	.363**	.360**	.376**	.397**	.348**	.286**	.411**	.358**	.385**	.341**	.417**	.805**	1

The final step of EFA consisted of verifying the final scale's internal consistency. To that purpose, the researcher adopted the Cronbach's Alpha coefficient (Hair et al., 2010). The

closer to 1 this coefficient is, the more reliable and homogeneous the scale is. The Cronbach's Alpha coefficients obtained for social media marketing activities final scale, considering each construct separately, were above 0.90 for Sharing, Interaction, Trendiness, and Customization, confirming that the final scale is reliable.

Finally, table the following (26) below confirms that the scale is reliable, and the included variables are critical to the scale. Additionally, table (26) presented the corrected item-total correlation and the Cronbach's alpha if the item is deleted for all variables. Cronbach's alpha is the most widely used measure of the reliability coefficient, which assesses the consistency of the entire scale. The generally agreed-upon lower limit for Cronbach's alpha is 0.70. However, it may decrease to 0.60 in exploratory research (Hair et al., 2010). The former traduces the relationship between each variable and the full scale and should have a value greater than 0.3 to have a reliable scale. The latter reports the impact on Cronbach's Alpha coefficient if each variable is removed from the scale. Suppose this value is lower than Cronbach's alpha coefficient; the respective variable benefits the scale.

Table 26 - Reliability statistics for final SMMA scale variables (Measurement Model 1)

	Corrected Item-Total Correlation	Cronbach's Alpha for the item	Cronbach's Alpha if Item Deleted
Shaing_1	.700		.942
Shaing_2	.763		.940
Shaing_3	.764	0.914	.940
Shaing_4	.789		.940
Shaing_5	.734		.941
Interaction_1	.730		.941
Interaction_2	.690	0.828	.942
Interaction_3	.686		.942
Trendiness_1	.654		.942
Trendiness_2	.611	0.868	.943
Trendiness_3	.752		.941
Trendiness_4	.642		.943
Customization_1	.721		.941
Customization_2	.666		.942
Customization_3	.721	0.838	.941
Customization_4	.560		.944
Customization_5	.527		.945

The researcher performed confirmatory factor analysis (CFA) to refine and validate the measures. This procedure also allowed to test the convergent and discriminant validity of the measurement model (Hair et al., 2010). The measurement model of the ***social media marketing activities (SMMA)*** scale, which includes the ***Sharing, Interaction Trendiness, and Customization*** constructs included 17 items in the exploratory factor analysis (EFA). All constructs were allowed to correlate freely, and the measurement items were loaded to the respective construct. Therefore, the next step is accessing the modification indices to improve model fit. The errors of the items in the same factor presenting highest modification indices were thus correlated. The errors were specified for each measurement variable where the final scale after considering the errors included 13 items.

The final measurement model for the social media marketing activities (SMMA) construct presented acceptable measures of goodness of fit presented in the following table (4.16). The model presented a χ2 of 174.912 and 59 degrees of freedom (df) and the following values of the goodness of fit indices: *GFI = 0.936; RMSEA = 0.072; RMR = 0.026; TLI = 0.951; CFI = 0.963 and, χ2/df = 2.965.* Therefore, the values suggested that the measurement model fits the data.

Table 27 - Summary of goodness of fit measures for SMMA (Measurement Model 1)

Measures	GFI	RMSEA	RMR	TLI	CFI	$x^2/$df
Social Media Marketing Activities (SMMA) *Initial scale*	**0.819**	**0.126**	**0.038**	**0.826**	**0.855**	**7.03**
Social Media Marketing Activities (SMMA) *Final scale*	*0.936*	*0.072*	*0.026*	*0.951*	*0.963*	*2.965*
Expected values	Between 0 to 1	Between 0.05 to 0.08.	Between 0 and 1.	Less than 0 or above 1.	Between 0 and 1	Between 2 and 5.
Reference	**(Hair et al.,2010)**	**(Browne, & Cudeck,1992)**	**(Hair et al.,2010)**	**(Bentler & Bonett, 1980)**	**(Hair et al.,2010)**	**(Marsh, & Hocevar, 1985).**

GFI–goodness-of-fit index; RMSEA–root-mean-square error of approximation; RMR–root-mean-square residual; normed fit index; TLI – Tucker Lewis Index; CFI – comparative fit index; X^2 –Chi-square.

After analyzing the standardized regression weights, with all factor loadings above the suggested threshold (0.7) (Hair et al., 2010); The research assessed that all items were relevant to the model. The researcher computed the construct reliability (CR), construct correlations, and average variance extracted (AVE) to verify the convergent and discriminant validity of the social media marketing activity (SMMA) scale confirmatory analysis model.

The research examined the discriminant validity when the squared inter-correlation of two variables is less than the AVE estimate of the underlying variables for all pairs of constructs (Fornell & Larcker, 1981). The results indicated that the inter-correlations for all pairs of constructs for the social media marketing activities (SMMA) have a value less than the square root of the underlying constructs' AVE values, which means that the squared correlations between the constructs are less than the AVE values of the underlying constructs for all latent variables.

The researcher presented those mentioned tests in the above table (28). As seen below, figure 3 illustrates the confirmatory analysis model for the social media marketing activity scale. As can be seen, CR is greater than 0.5, AVE is greater than 0.7, and all the square roots of AVE are greater than all construct correlations, which suggests that there should be no concerns regarding model reliability and validity.

Figure 2 - SMMA Confirmatory Analysis Model
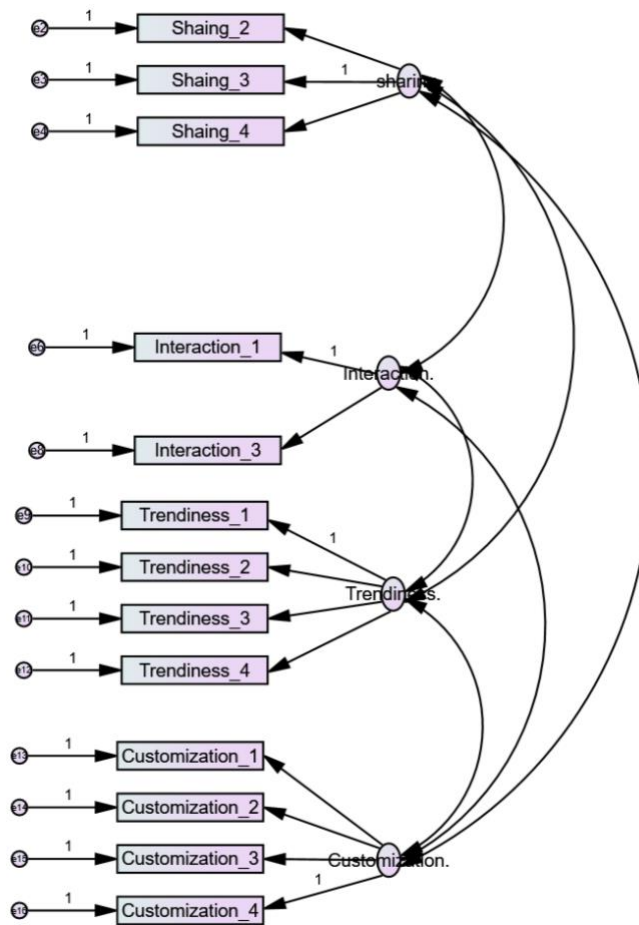
Table 28 - Construct reliability, Construct Correlations and AVE analysis for SMMA (Measurement Model 1)

	C.R	AVE	Sharing	Interaction	Trendiness	Customization
Sharing	0.899	0.749	**0.865**			
Interaction	0.740	0.588	0.894	**0.766**		
Trendiness	0.866	0.619	0.712	0.835	**0.786**	
Customization	0.828	0.553	0.790	0.789	0.777	**0.743**

The values in the diagonal correspond to the square root of AVE.

4.5.2. Online Customer Engagement Scale Refinement

The concept of customers' online brand-related activities is customers' role that varies in how the customer interacts with social media and engages through ***consumption, contribution, and creation*** of online content (Schivinski et al., 2016). Online customer engagement was particularly relevant to analyze separately. According to previous research, the researcher adopted the main structure of online customer engagement by the variables (consumption, contribution, and creation) (Schivinski et al., 2016). In the current study, the context of

applying the construct of ***online customer engagement*** includes the variables corresponding to contribution and creation. The objective was to identify the structure in this context, allowing the factors to freely emerge from the data and confirm the structure of the scale. The following table (29) shows the KMO and Bartlett tests.

Table 29 - Results of KMO and Bartlett tests for Online Customer Engagement

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.925
Bartlett's Test of Sphericity	Approx. Chi-Square	7698.880
	df	120
	Sig.	.000

As shown above in table (29) above the KMO test is significant as its sig value is less than 0.05, the KMO value is 0.925 which is higher than 0.7 so factor analysis is an appropriate method for data reduction. The principal component method will be used in order to get the number of factors within the data as shown in table (4.19) below. The following table (4.19) summarizes the final correlation matrix for the ***online customer engagement.***

Table 30 - correlation for Online Customer engagement

	Cons 1	Cons 2	Cons 3	Cons 4	Cons 5	Cont 1	Cont 2	Cont 3	Cont 4	Con5	Cont 6	Crea1	Creat 2	Cre3	Creat 4	Creat5
Cons1	1															
Cons2	.731**	1														
Cons3	.683**	.719**	1													
Cons4	.675**	.850**	.771**	1												
Cons5	.559**	.430**	.584**	.531**	1											
Cont1	.503**	.565**	.458**	.522**	.320**	1										
Cont2	.518**	.545**	.449**	.529**	.282**	.894**	1									
Cont3	.501**	.531**	.435**	.510**	.315**	.912**	.923**	1								
Cont4	.515**	.497**	.450**	.506**	.271**	.792**	.788**	.818**	1							
Cont5	.600**	.578**	.632**	.634**	.538**	.428**	.411**	.438**	.414**	1						
Cont6	.588**	.586**	.626**	.637**	.519**	.449**	.413**	.441**	.422**	.907**	1					
Creat 1	.451**	.502**	.445**	.531**	.284**	.703**	.705**	.717**	.805**	.393**	.394**	1				
Creat 2	.456**	.504**	.422**	.487**	.219**	.749**	.747**	.758**	.844**	.384**	.426**	.868**	1			
Creat 3	.455**	.522**	.412**	.512**	.226**	.767**	.768**	.777**	.878**	.391**	.418**	.839**	.915**	1		
Creat 4	.486**	.540**	.441**	.547**	.266**	.778**	.782**	.792**	.890**	.405**	.412**	.825**	.892**	.922**	1	
Creat 5	.403**	.525**	.403**	.516**	.234**	.730**	.738**	.739**	.808**	.392**	.396**	.756**	.802**	.844**	.882**	1

The final step of EFA consisted of verifying the final scale's internal consistency. To that purpose, the researcher adopted the Cronbach's Alpha coefficient (Hair et al., 2010). The closer to 1 this coefficient is, the more reliable and homogeneous the scale is. The Cronbach's Alpha coefficients obtained for *online customer engagement* final scale, considering each construct separately, were above 0.90 for **consumption,** *contribution and creation*, confirming that the final scale is reliable.

Finally, the following table (31) below confirms that the scale is reliable, and the included variables are critical to the scale. Additionally, table (31) present the corrected item-total correlation and the Cronbach's alpha if the item is deleted for all variables. Cronbach's alpha is the most widely used measure of the reliability coefficient, which assesses the consistency of the entire scale. The generally agreed-upon lower limit for Cronbach's alpha is 0.70 (Hair et al., 2010). The former traduces the relationship between each variable and the full scale and should have a value greater than 0.3 to have a reliable scale. The latter reports the impact on Cronbach's Alpha coefficient if each variable is removed from the scale. Suppose this value is lower than Cronbach's alpha coefficient; the respective variable benefits the scale.

Table 31 - Reliability statistics for final Online Customer Engagement scale variables (Measurement Model 1)

	Corrected Item-Total Correlation	Cronbach Alpha for the item	Cronbach's Alpha if Item Deleted
Consumption_1	.676		.957
Consumption_2	.723		.957
Consumption_3	.656	0.902	.958
Consumption_4	.731		.956
Consumption_5	.450		.960
Contribution_1	.832		.954
Contribution_2	.827		.954
Contribution_3	.836		.954
Contribution_4	.847	0.914	.954
Contribution_5	.617		.958
Contribution_6	.627		.958
Creation_1	.802		.955
Creation_2	.829		.954
Creation_3	.847	0.967	.954
Creation_4	.865		.954
Creation_5	.801		.955

The researcher performed confirmatory factor analysis (CFA) to refine and validate the measures. This procedure also allowed to test the convergent and discriminant validity of the measurement model (Hair et al., 2010). The measurement model of the ***online customer***

engagement, which includes the ***consumption, contribution and creation*** constructs, included the 16 items comprised from the exploratory factor analysis (EFA). All constructs were allowed to correlate freely, and the measurement items were loaded to the respective construct. Therefore, the next step is accessing the modification indices to improve model fit. The errors of the items in the same factor presenting highest modification indices were thus correlated. The errors were specified for each measurement variable where the final scale after considering the errors, **included 11 items.**

Furthermore, the online customer engagement construct presented acceptable measures of goodness of fit presented in the following table (32). The model presented a $\chi2$ of 132.239 and 41 degrees of freedom (df) and the following values of the goodness of fit indices: GFI = 0.942; RMSEA = 0.077; RMR = 0.042; TLI = 0.975; CFI = 0.981 and, $\chi2/df$ = 3.2. Therefore, the values suggested that the measurement model fits the data.

Table 32 - Summary of goodness of fit measures for Online Customer Engagement (Measurement Model 1)

Measures	GFI	RMSEA	RMR	TLI	CFI	x^{2}/df
Online customer engagement *Initial scale*	**0.73**	**0.18**	**0.12**	**0.81**	**0.84**	**13.22**
Online customer engagement *Final scale*	**0.94**	**0.07**	**0.04**	**0.97**	**0.98**	**3.22**
Expected values	Between 0 to 1	Between 0.05 to 0.08.	Between 0 and 1.	Less than 0 or above 1.	Between 0 and 1	Between 2 and 5.
Measures	GFI	RMSEA	RMR	TLI	CFI	x^{2}/df
Reference	**(Hair et al.,2010)**	**(Browne, & Cudeck,1992)**	**(Hair et al.,2010)**	**(Bentler & Bonett, 1980)**	**(Hair et al.,2010)**	**(Marsh, & Hocevar, 1985).**

GFI–goodness-of-fit index; RMSEA–root-mean-square error of approximation; RMR–root-mean-square residual; normed fit index; TLI – Tucker Lewis Index; CFI – comparative fit index; X^{2} –Chi-square.

After analyzing the standardized regression weights, with all factor loadings above the suggested threshold (0.7) (Hair et al., 2010); The research assessed that all items were relevant to the model. The researcher computed the construct reliability (CR), construct correlations, and average variance extracted (AVE) to verify the convergent and discriminant validity of the online customer engagement scale confirmatory analysis model. The research examined the discriminant validity when the squared inter-correlation of two variables is less than the AVE estimate of the underlying variables for all pairs of constructs (Fornell & Larcker, 1981). The results indicated that the inter-correlations for all pairs of constructs for the online customer engagement have a value less than the square root of the underlying constructs' AVE values, which means that the squared correlations between the constructs are less than the AVE values of the underlying constructs for all latent variables.

The researcher presented those mentioned tests in the following table (33). As seen below, figure 4 illustrates the confirmatory analysis model for the online customer engagement scale. As can be seen, CR is greater than 0.5, AVE is greater than 0.7, and all the square roots of AVE are greater than all construct correlations, which suggests that there should be no concerns regarding model reliability and validity.

Figure 3 - online customer engagement Confirmatory Analysis Model
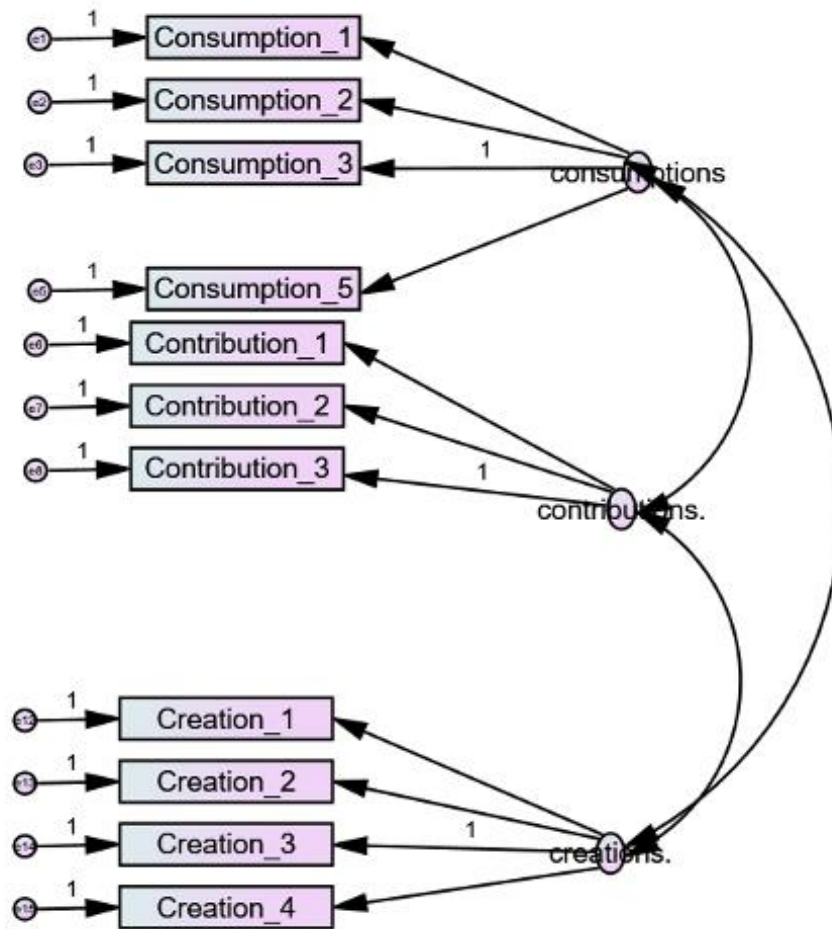
Table 33 - Construct reliability, Construct Correlations and AVE analysis for Online Customer Engagement (Measurement Model 1)

	C.R	AVE	Consumption	Contribution	Creation
Consumption	0.799	0.509	**0.713**		
Contribution	0.968	0.910	0.613	**0.953**	
Creation	0.966	0.878	0.578	0.842	**0.937**

The values in the diagonal correspond to the square root of AVE.

4.5.3. Purchase Intention and Price Premium Scale Refinement

The concept of purchase intentions is the consumers wish to purchase that product, either in the long term or short term according to the past literature (Kim & Ko, 2012), while price premium is the amount consumers are willing to pay for a brand over another competing brand according to (Netemayer et al., 2004). The objective was to identify the structure in this context, allowing the factors to freely emerge from the data and confirm the structure of the scale.

The following table (34) shows the KMO and Bartlett tests.

Table 34 - Results of KMO and Bartlett tests for Purchase Intention and Price Premium

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.877
Bartlett's Test of Sphericity	Approx. Chi-Square	1674.849
	df	21
	Sig.	.000

The KMO test is significant as its sig value is less than 0.05. the KMO value is 0.877 which is higher than 0.7 so factor analysis is an appropriate method for data reduction. The principal component method will be used in order to get the number of factors within the data as shown in table (35) below. The following table (4.24) summarize the final correlation matrix for the online customer engagement.

The following table (4.24) summarizes the final correlation matrix for the ***purchase intentions and price premium.***

Table 35 - Correlation for Purchase Intentions and Price Premium

	Pricepremium_1	Pricepremium_2	Pricepremium_3	PIntention_1	PIntention_2	PIntention_3	PIntention_4
Pricepremium_1	1						
Pricepremium_2	.498[**]	1					
Pricepremium_3	.751[**]	.578[**]	1				
PIntention_1	.565[**]	.489[**]	.551[**]	1			
PIntention_2	.538[**]	.498[**]	.508[**]	.805[**]	1		

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PIntention_3	.595**	.491**	.600**	.727**	.743**	1	
PIntention_4	.554**	.414**	.569**	.499**	.479**	.592**	1

The final step of EFA consisted of verifying the final scale's internal consistency. To that purpose, the researcher adopted the Cronbach's Alpha coefficient (Hair et al., 2010). The closer to 1 this coefficient is, the more reliable and homogeneous the scale is. The Cronbach's Alpha coefficients obtained for **purchase intention** final scale, considering each item separately, were above 0.80, confirming that the final scale is reliable.

Finally, the following table (36) below confirms that the scale is reliable, and the included variables are critical to the scale. Additionally, Table (36) present the corrected item-total correlation and the Cronbach's alpha if the item is deleted for all variables.

Table 36 - Reliability statistics for final scale of Price Premium and Purchase Intentions.

	Corrected Item-Total Correlation	Cronbach's Alpha for the item	Cronbach's Alpha if Item Deleted
Pricepremium_1	.728		.886
Pricepremium_2	.606	0.821	.901
Pricepremium_3	.742		.884
PIntention_1	.761		.882
PIntention_2	.746	0.880	.884
PIntention_3	.785		.879
PIntention_4	.635		.896

The researcher performed confirmatory factor analysis (CFA) to refine and validate the measures. This procedure also allowed to test the convergent and discriminant validity of the measurement model (Hair et al., 2010). The measurement model of the **purchase intentions and price premium** which includes the **purchase intention** construct, included the 7 items comprised from the exploratory factor analysis (EFA). All constructs were allowed to correlate freely, and the measurement items were loaded to the respective construct. Therefore, the next step is accessing the modification indices to improve model fit. The errors of the items in the same factor presenting highest modification indices were thus correlated. The errors were specified for each measurement variable where the final scale after considering errors, the purchase intention and price premium included 5 items.

Furthermore, the purchase intention and price premium construct presented acceptable measures of goodness of fit presented in the following table (37). The model presented a χ2 of 8.325 and 4 degrees of freedom (df) and the following values of the goodness of fit indices: GFI = 0.992; RMSEA = 0.053; RMR = 0.017; TLI = 0.988; CFI = 0.995 and, χ2/df = 2.081. Therefore, the values suggested that the measurement model fits the data.

Table 37 - Summary of goodness of fit measures for Purchase Intention and Price Premium (Measurement Model 1)

Measures	GFI	RMSEA	RMR	TLI	CFI	χ^2/df
Purchase intention and price premium *Initial scale*	**0.923**	**0.13**	**0.046**	**0.918**	**0.949**	**7.529**
Purchase intention and price premium *Final scale*	**0.992**	**0.053**	**0.017**	**0.988**	**0.995**	**2.081**
Expected values	Between 0 to 1	Between 0.05 to 0.08.	Between 0 and 1.	Less than 0 or above 1.	Between 0 and 1	Between 2 and 5.
Reference	**(Hair et al.,2010)**	**(Browne, & Cudeck,1992)**	**(Hair et al.,2010)**	**(Bentler & Bonett, 1980)**	**(Hair et al.,2010)**	**(Marsh, & Hocevar, 1985).**

GFI–goodness-of-fit index; RMSEA–root-mean-square error of approximation; RMR–root-mean-square residual; normed fit index; TLI – Tucker Lewis Index; CFI – comparative fit index; X^2 –Chi-square.

After analyzing the standardized regression weights, with all factor loadings above the suggested threshold (0.7) (Hair et al., 2010); The research assessed that all items were relevant to the model. The researcher computed the construct reliability (CR), construct correlations, and average variance extracted (AVE) to verify the convergent and discriminant validity of the online customer engagement scale confirmatory analysis model. The research examined the discriminant validity when the squared inter-correlation of two variables is less than the AVE estimate of the underlying variables for all pairs of constructs (Fornell & Larcker, 1981).

The results indicated that the inter-correlations for all pairs of constructs for the online customer engagement have a value less than the square root of the underlying constructs' AVE values, which means that the squared correlations between the constructs are less than the AVE values of the underlying constructs for all latent variables.

The researcher presented those mentioned tests in the following table (38). As seen below, table (39) illustrates the confirmatory analysis model for the purchase intention and price premium scale. As can be seen, CR is greater than 0.5, AVE is greater than 0.7, and all the square roots of AVE are greater than all construct correlations, which suggests that there should be no concerns regarding model reliability and validity.

Table 38 - Price Premium and Purchase Intentions Confirmatory Analysis Model

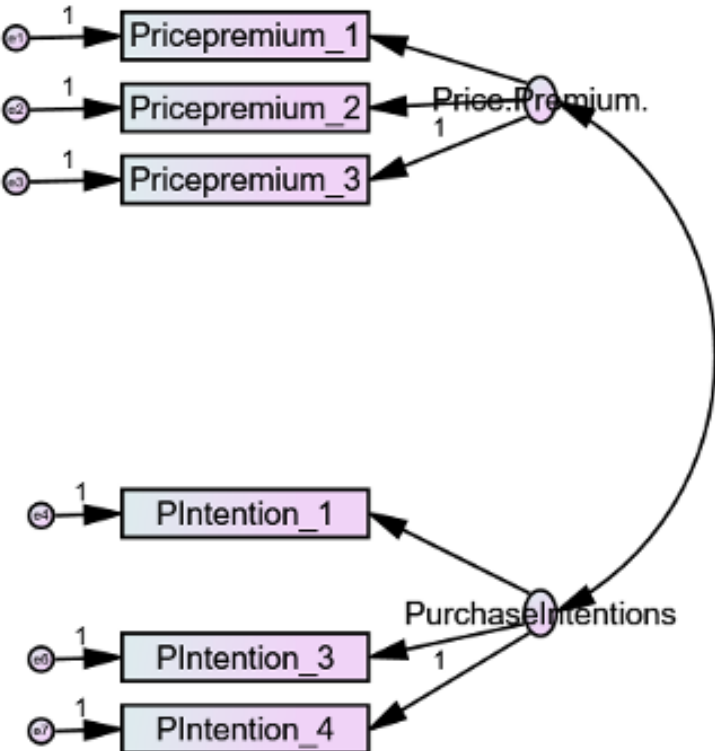**Table 39** - Construct reliability, Construct Correlations and AVE analysis for Purchase Intention and Price Premium (Measurement Model 1)

	C.R	AVE	Purchase intention	Price premium
Purchase intention	0.836	0.634	**0.796**	
Price premium	0.745	0.594	0.873	**0.770**

The values in the diagonal correspond to the square root of AVE.

4.6. Measurement Model (2)

The researcher performed confirmatory factor analysis (CFA) to refine and validate the measures. This procedure also allowed to test the convergent and discriminant validity of the measurement model (Hair et al., 2010). The measurement model of the *social media marketing activities (SMMA)* scale, which includes the *Sharing, Interaction Trendiness, and Customization* constructs included 17 items in the exploratory factor analysis (EFA). The measurement model of the online customer engagement includes *Consumption, Contribution and Creation* constructs includes 16 items in the exploratory factor analysis (EFA). The measurement model of the *Purchase intentions and Price premium*, which included 7 items in the exploratory factor analysis (EFA).

All constructs were allowed to correlate freely, and the measurement items were loaded to the respective construct. Therefore, the next step is accessing the modification indices to improve model fit. The errors of the items in the same factor presenting highest modification indices were thus correlated. The errors were specified for each measurement variable where the final scale after considering, errors included thirty items.

The final measurement model for the measurement model 2 presented acceptable measures of goodness of fit presented in the following table 4.28. The model presented a $\chi 2$ of 1029.823 and 369 degrees of freedom (d f.) and the following values of the goodness of fit indices: *GFI = 0.844; RMSEA = 0.069; RMR = 0.045; TLI = 0.923; CFI = 0.935 and, $\chi 2/d f = 2.791$.* Therefore, the values suggested that the measurement model fits the data.

Table 40 - Summary of goodness of fit measures for measurement model (2)

Measures	GFI	RMSEA	RMR	TLI	CFI	$\chi^{2}/_{df}$
Measurement model 2 *Initial scale*	0.698	0.10	0.080	0.806	0.825	4.809
Measurement model 2 *Final scale*	0.844	0.069	0.045	0.923	0.935	2.791
Expected values	Between 0 to 1	Between 0.05 to 0.08.	Between 0 and 1.	Less than 0 or above 1.	Between 0 and 1	Between 2 and 5.

Reference	(Hair et al.,2010)	(Browne, & Cudeck,1992)	(Hair et al.,2010)	(Bentler & Bonett, 1980)	(Hair et al.,2010)	(Marsh, & Hocevar, 1985).

GFI–goodness-of-fit index; RMSEA–root-mean-square error of approximation; RMR–root-mean-square residual; normed fit index; TLI – Tucker Lewis Index; CFI – comparative fit index; X^2 –Chi-square.

After analyzing the standardized regression weights, with all factor loadings above the suggested threshold (0.7) (Hair et al., 2010); The research assessed that all items were relevant to the model. The researcher computed the construct reliability (CR), construct correlations, and average variance extracted (AVE) to verify the convergent and discriminant validity of the social media marketing activity (SMMA) scale confirmatory analysis model. The research examined the discriminant validity when the squared inter-correlation of two variables is less than the AVE estimate of the underlying variables for all pairs of constructs (Fornell & Larcker, 1981).

The results indicated that the inter-correlations for all pairs of constructs for the measurement model 2 have a value less than the square root of the underlying constructs' AVE values, which means that the squared correlations between the constructs are less than the AVE values of the underlying constructs for all latent variables. The researcher presented those mentioned tests in the following table (41). As seen below; figure 5 illustrates the confirmatory analysis model for the social media marketing activity scale. As can be seen, CR is greater than 0.5, AVE is greater than 0.7, and all the square roots of AVE are greater than all construct correlations, which suggests that there should be no concerns regarding model reliability and validity.

Figure 4 - Measurement model (2) Confirmatory Analysis Model
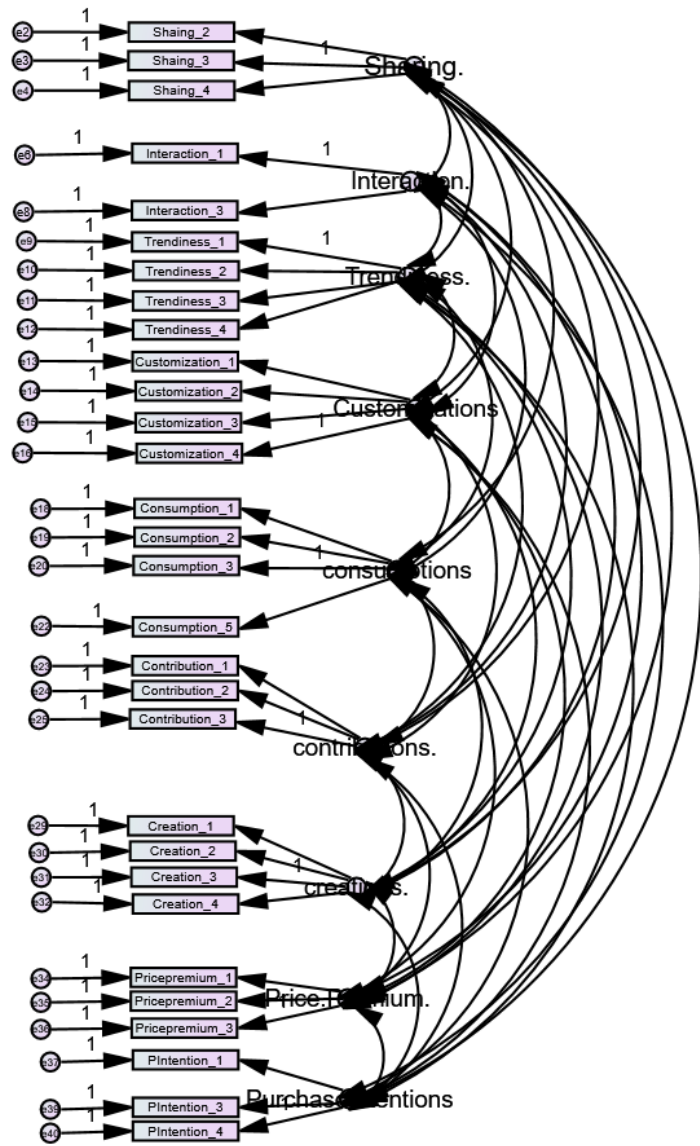
Table 41 - Construct reliability, Construct Correlations and AVE analysis for measurement model (2)

	C.R	AVE	Sharing	Trendiness	Customization	Interaction	Consumption	Contribution	Creation	Price premium	Purchase intention
Sharing	0.900	0.749	**0.865**								
Trendiness	0.815	0.530	0.711	**0.728**							
Customization	0.829	0.554	0.792	0.775	**0.744**						
Interaction	0.741	0.588	0.894	0.832	0.789	**0.766**					
Consumption	0.870	0.629	0.630	0.478	0.680	0.669	**0.793**				
Contribution	0.968	0.910	0.551	0.447	0.562	0.639	0.612	**0.953**			
Creation	0.966	0.878	0.506	0.366	0.581	0.574	0.576	0.842	**0.937**		
Price-premium	0.838	0.635	0.464	0.333	0.569	0.499	0.721	0.501	0.469	**0.796**	
Purchase intention	0.834	0.628	0.477	0.497	0.561	0.561	0.729	0.506	0.506	0.825	**0.792**

The values in the diagonal correspond to the square root of AVE.

4.6.1. Second-order Construct

The Confirmatory Factor Analysis (CFA) was also performed considering the second-order constructs (Hair et al., 2010), namely the *social media marketing activities and online customer engagement.* Therefore, the research proposed a second-order construct in order to present *the Social Media Marketing Activities (SMMA)* which includes *(sharing, interaction, trendiness and customization).* Sharing is indicated through 4 measurement items, Interaction is indicated through 2 measurement items, Trendiness is indicated through 4 measurement items and finally Customization indicated through 4 measurement items.

A second-order construct was also proposed in order to represent the *Online Customer Engagement* which includes *(consumption, contribution and creation).* Consumption indicated through 4 measurement items, contribution indicated through 3 measurement items and, finally creation indicated through 4 measurement items.

Second-order Construct for Social Media Marketing Activities (SMMA)

The second-order construct model showed an overall fit as the first order. The second-order construct model for the social media marketing activities (SMMA) construct presented acceptable measures of goodness of fit presented in the following table (4.30). The model presented a χ2 of 195.185 and 61 degrees of freedom (df) and the following values of the goodness of fit indices: GFI = 0.93; RMSEA = 0.07; RMR = 0.02; TLI = 0.94; CFI = 0.95 and, χ2/df = 3.20. Therefore, the values suggested that the measurement model fits the data.

The following Table (42) also show the t-value and r2. The significant t-values provided robust evidence that the variables represent the underlying constructs and the high values for r2 represented a reliable latent variable. The next figure 6 presents the measurement model with second order factors for *social media marketing activities (SMMA).*

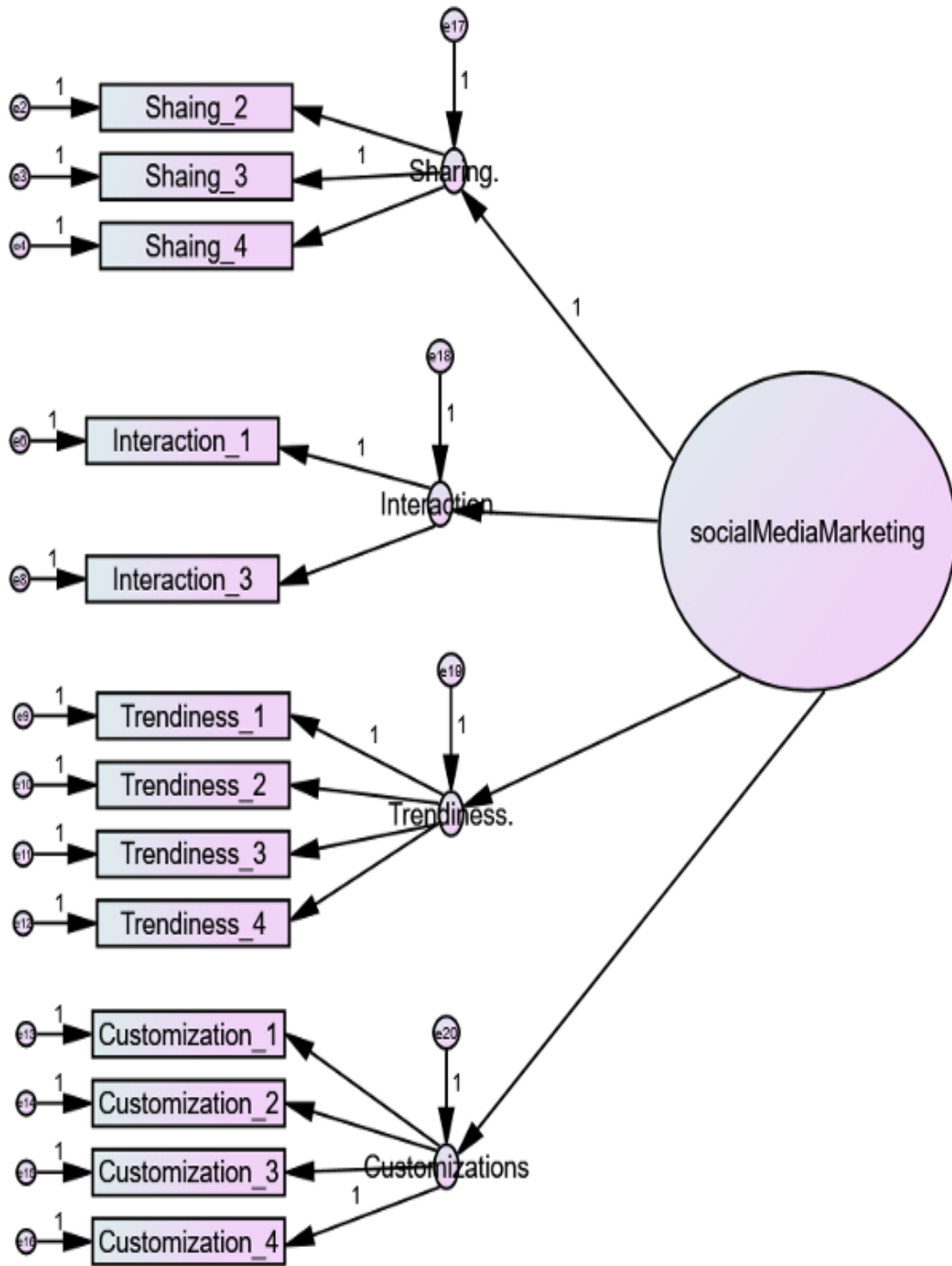**Figure 5** – Second-orderconstruct for SMMA

Table 42 - Summary of goodness of fit for SMMA (Second-order construct)

Measures	GFI	RMSEA	RMR	TLI	CFI	x^2/df
Confirmatory Factor Analysis (SMMA) 1st order	0.93	0.07	0.02	0.95	0.96	2.96
Confirmatory factor analysis (SMMA) 2nd order	0.93	0.07	0.02	0.94	0.95	3.20
Expected values	Between 0 to 1	Between 0.05 to 0.08.	Between 0 and 1.	Less than 0 or above 1.	Between 0 and 1	Between 2 and 5.
Reference	(Hair et al.,2010)	(Browne, & Cudeck,1992)	(Hair et al.,2010)	(Bentler & Bonett, 1980)	(Hair et al.,2010)	(Marsh, & Hocevar, 1985).

GFI–goodness-of-fit index; RMSEA–root-mean-square error of approximation; RMR–root-mean-square residual; normed fit index; TLI – Tucker Lewis Index; CFI – comparative fit index; X^2 –Chi-square.

Table 43 - R2 and t-value for SMMA

	R2	T value
Sharing	0.806	15.363
Interaction	0.942	15.363
Trendiness	0.708	13.411
Customization	0.751	9.498

Second-order construct for Online Customer Engagement

The second-order model showed an overall fit as the first order. The second-order model for online customer engagement construct presented acceptable measures of goodness of fit presented in the following table (4.32). The model presented a χ2 of 132.239 and 41 degrees of freedom (df) and the following values of the goodness of fit indices: GFI = 0.94; RMSEA = 0.07; RMR = 0.04; TLI = 0.97; CFI = 0.98 and, χ2/df = 3.22. Therefore, the values suggested that the measurement model fits the data. The following Table (44) also show the t-value and r2. The significant t-values provided robust evidence that the variables represent the underlying constructs and the high values for r2 represented a reliable latent variable. The next figure (7) presents the measurement model with second-order construct factors for *online customer engagement.*

Figure 6 – Second-order construct for online customer engagement
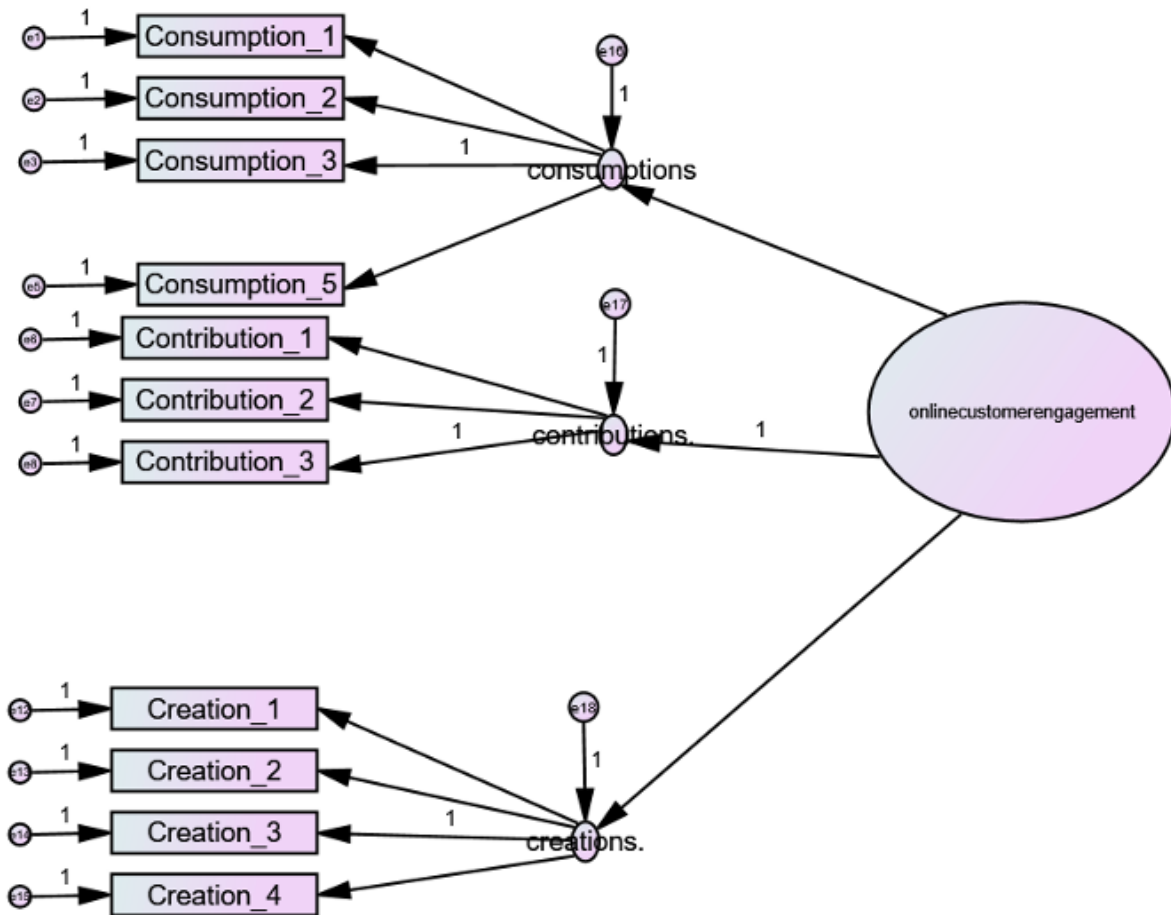
Table 44 - Summary of goodness of fit for Online Customer Engagement (second-order construct)

Measures	GFI	RMSEA	RMR	TLI	CFI	$x^2/$df
Confirmatory Factor Analysis (Online customer engagement) 1st order	**0.94**	**0.07**	**0.04**	**0.97**	**0.98**	**3.20**
Confirmatory factor analysis (Online customer engagement) 2nd order	**0.94**	**0.07**	**0.04**	**0.97**	**0.98**	**3.22**
Expected values	Between 0 to 1	Between 0.05 to 0.08.	Between 0 and 1.	Less than 0 or above 1.	Between 0 and 1	Between 2 and 5.
Reference	**(Hair et al.,2010)**	**(Browne, & Cudeck,1992)**	**(Hair et al.,2010)**	**(Bentler & Bonett, 1980)**	**(Hair et al.,2010)**	**(Marsh, & Hocevar, 1985).**

GFI–goodness-of-fit index; RMSEA–root-mean-square error of approximation; RMR–root-mean-square residual; normed fit index; TLI – Tucker Lewis Index; CFI – comparative fit index; X^2 –Chi-square.

Table 45 - R2 and t-value for Online Customer Engagement

	R2	T value
Consumption	0.421	11.602
Contribution	0.894	11.602
Creation	0.793	17.123

4.7. Structural Equation Model (SEM)

After assessing and validating the measurement model in Confirmatory Factor Analysis, the researcher analyzed and reported the structural model. The purpose of the structural equation model is to test the research hypotheses. The relationships between constructs are determined and graphically represented, as shown in figure 8. The model presented a $\chi 2$ of 1397.437 and 395 degrees of freedom (df) and the following values of the goodness of fit indices: GFI = 0.79; RMSEA = 0.08; RMR = 0.07; TLI = 0.89; CFI = 0.90 and, $\chi 2/df$ = 3.53. Therefore, the confirmation of the good fit allowed to proceed the analysis and table (45) presents the structural model.

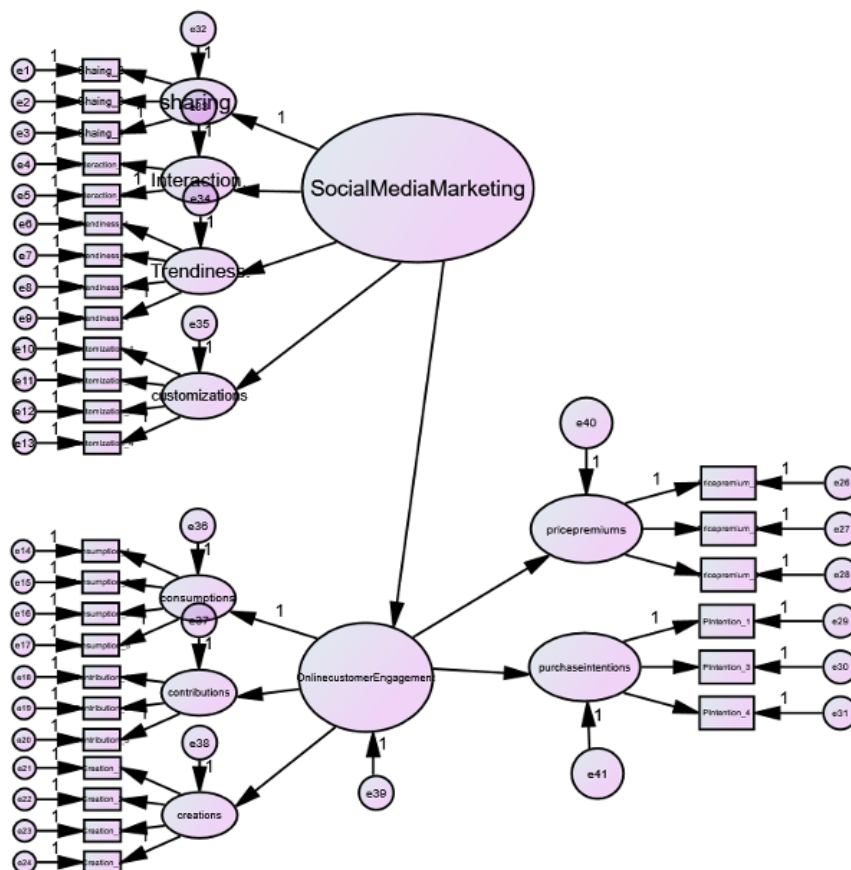**Figure 7** - Structural Equation Model

Table 46 - Summary of goodness of fit for SEM

Measures	GFI	RMSEA	RMR	TLI	CFI	x^2/df
_S.E.M_	**0.79**	**0.08**	**0.07**	**0.89**	**0.90**	**3.53**
Expected values	Between 0 to 1	Between 0.05 to 0.08.	Between 0 and 1.	Less than 0 or above 1.	Between 0 and 1	Between 2 and 5.
Reference	**(Hair et al.,2010)**	**(Browne, & Cudeck,1992)**	**(Hair et al.,2010)**	**(Bentler & Bonett, 1980)**	**(Hair et al.,2010)**	**(Marsh, & Hocevar, 1985).**

GFI–goodness-of-fit index; RMSEA–root-mean-square error of approximation; RMR–root-mean-square residual; normed fit index; TLI – Tucker Lewis Index; CFI – comparative fit index; X^2 –Chi-square.

4.7.1. Results of the Structural Equation Model and Hypothesis

After validating the structural model, the next step consisted of accessing the theoretical hypotheses. The evaluation of the structural relationships and the respective significance provided statistical evidence for assessing the study's hypothesis.

Hypothesis 1: Supported

- *Social Media Marketing Activities (SMMA) have a positive relationship with Online Customer Engagement.*

The results suggested that luxury brands applying social media marketing activities through their official Instagram page positively correlate with online customer engagement. Hence, as the luxury brand applies social media marketing activities by Sharing, Interaction, Trendiness, and Customization, it positively affects the Egyptian customer's online engagement through content Consumption, Contribution, and Creation. *Therefore, Hypothesis 1 is supported, as highlighted by the significant, positive, and high standardized path estimate of 0.719, with a t-value of 9.755 (p<0,001).*

Hypothesis 2: Supported

- *Online customer engagement has a positive relationship with purchase intentions.*

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The results also suggested that online customer engagement positively correlates with Egyptian customers' purchase intentions. Hence, as the Egyptian customers engage through their Instagram platform by consumption, contribution, and creation of the luxury brand's content, it positively affects their future purchase intentions. *Therefore, Hypothesis 2 is supported, as highlighted by the significant and positive standardized path estimate of 0.788, with a t-value of 9.782 (p<0,001).*

Hypothesis 3: Supported

- *Online customer engagement has a positive relationship with price premium.*

The results also suggested that online customer engagement positively correlates to Egyptian customers' acceptance to price premium. Hence, as the Egyptian customers engage through their Instagram platform by consumption, contribution, and creation of the luxury brand's content, it positively affects their future acceptance to price premium. *Therefore, Hypothesis 3 is supported, as highlighted by the significant and positive standardized path estimate of 0.752, with a t-value of 9.582 (p<0,001).*

After the discussion of the study's hypotheses, the following table 47 presents a summary of the findings from hypothesis 1 to hypothesis 3.

Table 47 - Summary of the hypotheses

	Path	t-value	p	Standardized Estimate (S.E)	Results
H 1	*SMMA > online customer engagement*	9.755	***	0.763	Supported
H 2	*Online customer engagement > Purchase Intentions*	9.782	***	0.788	Supported
	Path	**t-value**	**p**	**Standardized Estimate (S.E)**	**Results**
H 3	*Online customer engagement > Price Premium*	9.582	***	0.752	Supported

*** p < 0,001
** p< 0,01

<u>Mediation Hypotheses</u>

The research adopted the two-step mediation analysis proposed by Hair et al. (2010) in the present study to test the mediation hypotheses. This approach compares two models, one with a direct path between two constructs that are considered a priori related (path c in Figure 4.8), and another with an indirect path between the two constructs. In Figure 9 this path is formed by the path *a*, between the independent variable and the mediator variable, and the path between the mediator and the dependent variable. Path c in the following model is called the total effect. The effect of IV on DV may be mediated by a process or mediating variable M, and the variable IV may still affect DV. Considering the analysis of mediation, the following section presents the results referring to hypotheses 4 and 5.

Figure 8 - Illustrative Figure of Mediation.
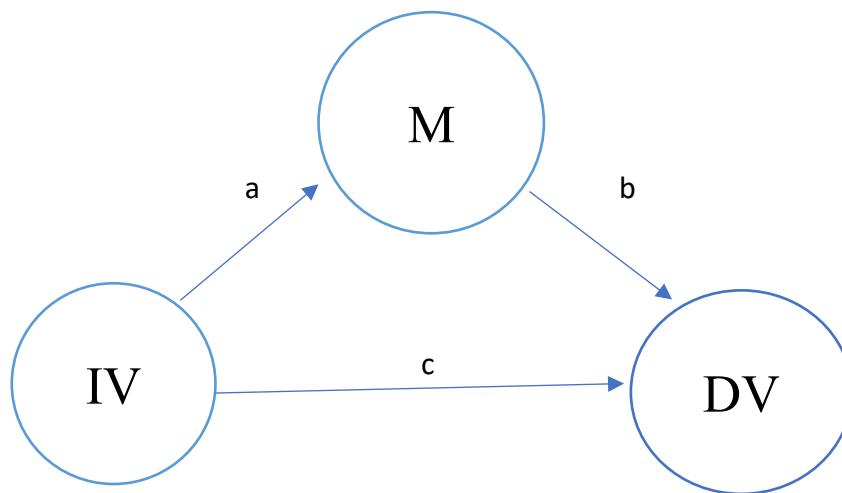
IV – independent variable, M – mediator variable; DV – dependent variable.
Source : Hair et al., 2010

Hypothesis 4: Supported

- *Online customer engagement mediates the influence of social media marketing activities on customers' purchase intentions.*

Figure 9, in the introduction of the mediation section shows an illustrative model for mediation. The section below shows the two models to be accessed. In the first model figure 9, included the direct path between social media marketing activities on price premium and purchase intentions. Thus, only social media marketing activities path and online customer engagement error were removed compared with the original SEM model. The second model (Figure 10) included the mediation path of online customer engagement. Besides the

differences in the paths mentioned above, everything else remains, as shown before in the structural model.

Hypothesis 5: Supported

- *Online customer engagement mediates the influence of social media marketing activities on customer's acceptance to price premium.*

Figure 9 - Assessment of online customer engagement: Model including direct path between social media marketing activities on price premium and purchase intentions.
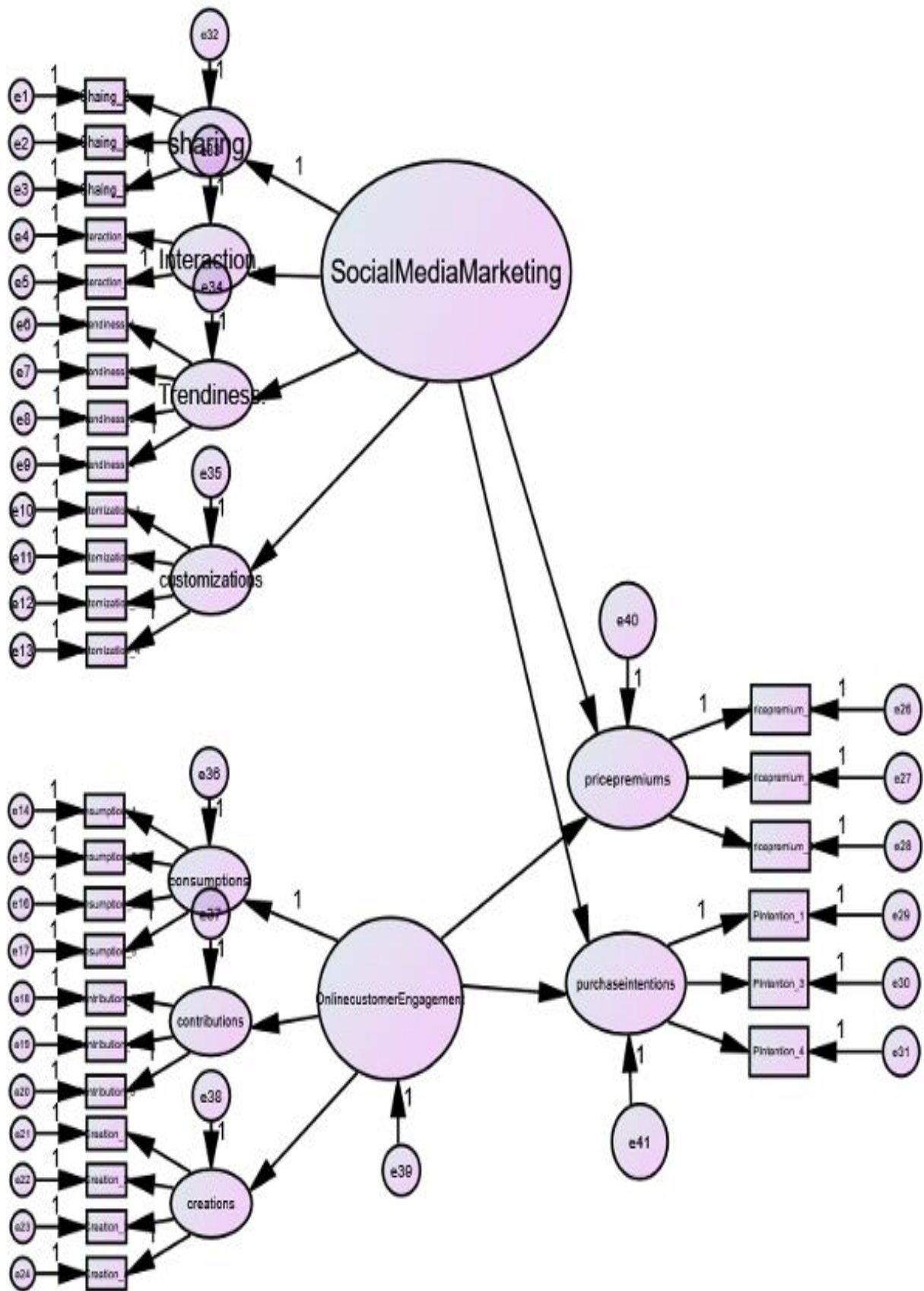
Figure 10 - Assessment of Online Customer Engagement: Model including mediation of Online Customer Engagement between Social Media Marketing Activities on Price premium and Purchase intentions.
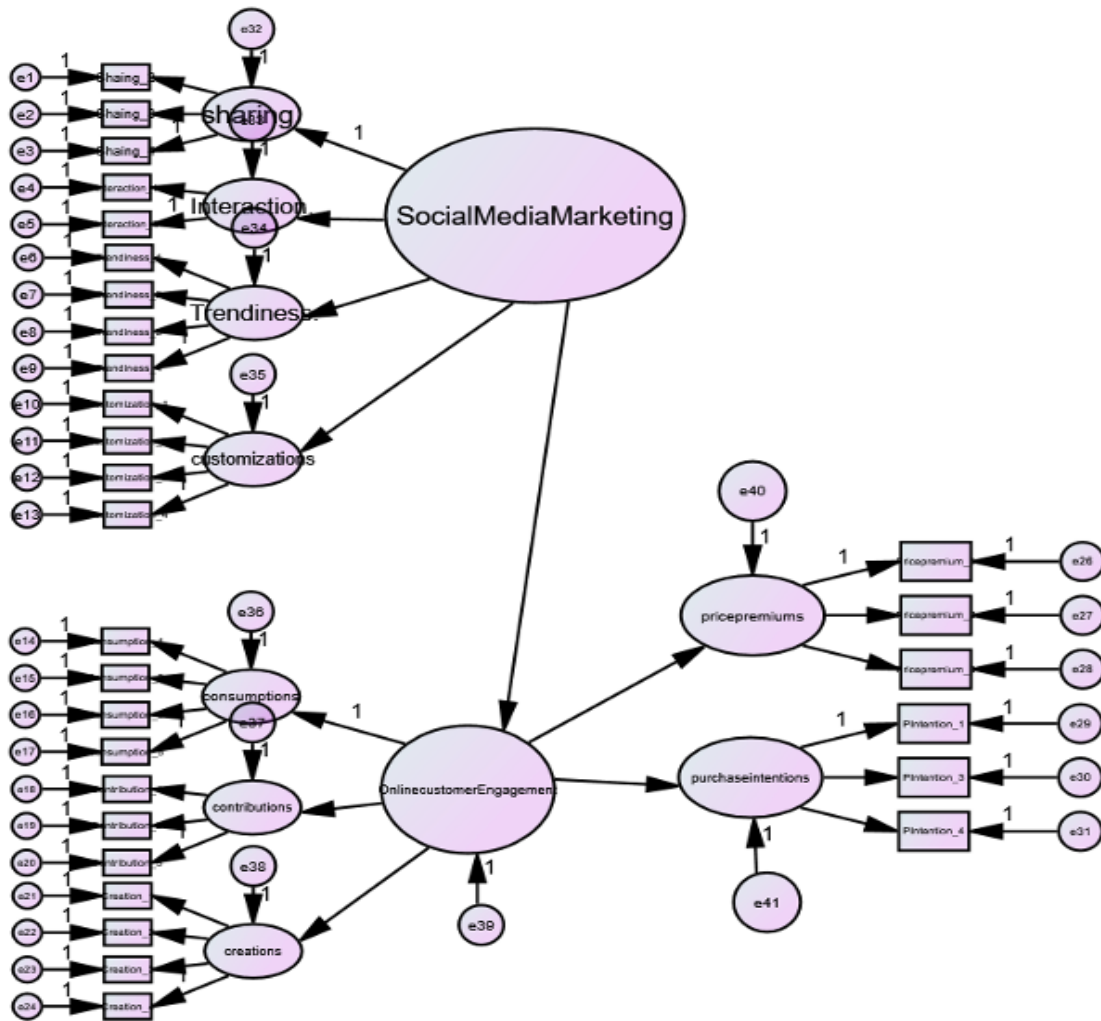
Table 48 - Summary of Goodness of Fit.

Measures	GFI	RMSEA	RMR	TLI	CFI	$\chi^2/$df
_S.E.M_	0.79	0.08	0.07	0.89	0.90	3.53
Model 1 (direct path)	0.78	0.09	0.22	0.87	0.88	4.03
Model 2 (mediation path)	0.79	0.08	0.07	0.89	0.90	3.52
Values (Hair et al.,2010)	Between 0 to 1	Between 0.05 to 0.08	Between 0 and 1	Less than 0 or above 1	Between 0 and 1	=3 or Less than 3

As shown in figure 11, the standardized path estimates remain the same when comparing the second model with the original SEM model (see table 48 above). These findings concluded that hypotheses H4 and H5, which declare that online customer engagement mediates the

influence of social media marketing activities on price premium and purchase intentions, can be supported.

The research applied the mediation analysis using the bootstrapping technique. It is a technique that splits the sample into several sub-sets of data, analyzes them, and then combines the obtained estimates to validate the model. Using such a technique allows splitting the effect between two variables into its direct and indirect components, besides the total component, which was mentioned by (Hair et al., 2010).

The following table 49 summarizes the obtained estimates and significance for each component of the effect between social media marketing activities, online customer engagement, price premium, and purchase intentions. As can be seen, both the existence of total and indirect effects is significant. Conversely, the direct effect is not significant ($\rho > 0.05$). These results mean that the indirect relationship (by the mediation of online customer engagement) is significant, but also that, since the direct relationship between social media marketing on price premium and purchase intentions is not significant, the mediation is total.

Table 49 - Summary of bootstrapping analysis to access online customer engagement mediation.

Effect	S.M.M.A > online customer engagement	Online customer engagement > Price Premium	Online customer engagement > Purchase Intentions
Indirect	-	0.001	0.001
Direct	0.000	-	-
Total	0.000	0.001	0.001

*** p < 0,001; ** p< 0,01

The table (49) summarizes the obtained estimates and significance for each component of the effect between social media marketing activities, online customer engagement, price premium, and purchase intentions. As can be seen, both the existence of total and indirect effects is significant. These results mean that the indirect relationship (by the mediation of online customer engagement) is significant.

4.8. Summary

The previous section presented and illustrated the results of the Empirical Study and offered its discussion. The data collected was analyzed, assessing the objectives and the hypotheses

earlier developed. Utilizing a series of statistical techniques made it possible to interpret the results considering the study's conceptual model.

Table 50 - Summary of the Results.

	Hypothesis	Path	Results
H1	*Social Media Marketing Activities (SMMA) have a positive relationship with Online Customer Engagement.*	SMMA $\longrightarrow$ (Online Customer Engagement)	Supported
H2	*Online customer engagement has a positive relationship with purchase intentions.*	(Online customer engagement) $\longrightarrow$ (Purchase Intentions)	Supported
H3	*Online customer engagement has a positive relationship with price premium.*	(Online customer engagement) $\longrightarrow$ (Price Premium)	Supported
H4	*Online customer engagement mediates the influence of social media marketing activities on customers' purchase intentions.*	SMMA $\longrightarrow$ (Online Customer Engagement) $\longrightarrow$ (Purchase Intentions)	Supported
H5	*Online customer engagement mediates the influence of social media marketing activities on customer's acceptance to price premium.*	SMMA $\longrightarrow$ (Online Customer Engagement) $\longrightarrow$ (Price premium)	Supported

CONCLUSIONS

5.1. Introduction

This chapter presents the overall conclusions of the study considering the results of the empirical study carried out. The purpose is to provide a comprehensive view of the Social Media Marketing Activities (SMMA) applied by the luxury brands through the Instagram platform that contributes to online customer engagement and enhances customers' purchasing intentions and price premiums. The chapter addresses the main research conclusions to document the general achievements of the study. Moreover, this chapter presented the managerial implications and limitations, which is particularly relevant since it is within the study's cautionary that new perspectives about the topic under investigation can contribute to the luxury brand's business.

5.2. Research Contribution

The starting point of the present study was to understand the social media marketing activities that impact online customer engagement and correspondingly will influence purchase intentions and price premiums in luxury fashion brands. The author applied this study on the Instagram platform as it has a visual component that connects perfectly with fashion brands, including pictures, videos, boomerangs, layout, stories, and live. These visual components, as one of the Instagram platform characteristics, concern the current study of luxury fashion brands, which allows customers to engage (Holton et al., 2016).

Moreover, one main rationale for studying customers' behavior only through the Instagram platform is to restrict the research arena in exploring the social media platforms. The research concentrated on the luxury fashion brands and whether these luxury brands employ social media marketing activities on the Instagram platform. Luxury fashion brands create and share high-quality branded content via different shapes of communication (e.g., audio, video, and picture). The present study inspects these previously mentioned forms of communication through social media (Instagram). In order to provide a deeper understanding of the research inquiry, the researcher applied a quantitative method.

The research questions explain the quantitative nature of the study:

1. *What are the social media marketing activities applied by luxury brands on their Instagram platform*?

Additionally, the researcher tackled questions considering the previous social media marketing activities:

2. *What is the impact of luxury brands social media marketing activities on online customer engagement on the Instagram platform?*

3. *What is the impact of online customer engagement on customers' purchase intentions and willingness to pay a premium price for a luxury brand?*

One of the study's most relevant contributions is providing a more profound knowledge of social media marketing activities by establishing the scope of the construct and its components (*sharing, trendiness, customization, and interaction*). Social media marketing is a mean to connect and interact with existing and potential customers and build long-lasting relationships (Chan & Guillet, 2011). Social media marketing activities promote brands/companies through online channels, including blogging, sharing photos, and online posts (Yazdanparast et al., 2016). As mentioned earlier, the existing literature has not reached to a mutual agreement on defining the components of social media marketing activities.

In this study and the particular case of the Instagram platform, the researcher established the realm SMMAs as being formed by: *sharing, trendiness, customization, and interaction*. Previous researchers for social media marketing, like Godey et al. (2016), characterized social media marketing components as entertainment, interaction, trendiness, customization, and word-of-mouth. Another researcher, Seo & Park (2018), added the component of perceived risk to entertainment, interaction, trendiness, and customization as social media marketing components. In addition, Bilgin (2018) analyzed the components of advertisement to entertainment, interaction, trendiness, advertisement, and customization as the components of social media marketing activities. In identifying social media marketing activities, Jayasuriya et al. (2018) considered word of mouth as a component of social media marketing activities, adding to it the interaction, trendiness, customizations, and sharing to adjust the components to the social media context.

The rationale for applying *sharing, trendiness, customization, and interaction* as the components of the SMMA construct emerged from previous research and the context of the study. The foremost common components for SMMAs in the literature are *sharing, trendiness, customization, and interaction*. The current study focused on the activities applied by the brand's Instagram page without any interference from the customers. Thus, the research

studied the dimension of the activities done by the brand online through the Instagram platform which are *sharing, trendiness, customization, and interaction. Sharing* is the extent to which users exchange, distribute, and receive content using social media applications (Kietzmann, 2012) and the degree to which luxury brands share content using their Instagram platform. *Customization* in social media platforms is based on communicating with individual users. In the social media context, specifically the Instagram platform, customization provides customers with optimized information about the product they sell. For instance, some luxury brands' Instagram page has a view shop button that can directly transfer the customer to the brand's shop page with sufficient information about the product. Other luxury brands do not have this feature, making it harder for the customer to preview the available products. The *Interaction* component through social media offers a space for customers who contribute to social media platforms to communicate and exchange ideas (Seo & Park, 2018). *Trendiness* regards spreading the latest and trendiest information about products or brands. Trendiness is the extent to which a brand provides the newest information about its products and services (Godey et al., 2016). For instance, some luxury brands share the newest collection on the Instagram platform in posts or stories to keep their customers updated with the brands' products. Some luxury brands do not post stories regularly on the Instagram platform, so customers are unaware of the new products available. To the researcher's knowledge, the efforts witnessed in the literature regarding social media marketing activities were limited, and no precise model has been developed specifically for the objectives proposed in this study.

Furthermore, the research analyzed the effect of social media marketing activities on online customer engagement, in particular through the Instagram platform. The study explored the online customer engagement construct through its components: *consumption, contribution, and creation*. The luxury brands' Instagram page tend to perform online brand-related activities. The notion of customers' online brand-related activities entails "*a set of brand-related online activities on the part of the consumer that vary in the degree to which the consumer interacts with social media and engages in the consumption, contribution, and creation of media content*" (Schivinski et al., 2016, p. 66). In context with behavioral engagement on social media platform, all customer activity is considered a passive-to-active concept, distinguishing between three levels of behavior: consumption, contribution, and creation of brand-related content (Schivinski et al., 2016) on the Instagram platform.

Therefore, the current study elaborated on these components (*consumption, contribution, and creation*) for online customer engagement through the Instagram platform. *Consumption* includes viewing and reading brand-related posts and watching pictures on a brand's Instagram page without actively participating. *Contribution* includes commenting, sharing, and discussing commercials through social media platform turning consumers into brand endorsers. *Creation*, carry out the act of actively publishing, producing and co-developing brand-related content on social media (Muntinga et al., 2011; Schivinski et al., 2016).

Moreover, this research contributed to assess the impact of online customer engagement (*consumption, contribution, and creation)* on purchase intentions. Customers' purchase intentions strongly relate to attitude and preference toward a brand or a product. Measuring purchase intentions consider customers' future behavior based on their attitudes. Forecasting customers' behavior becomes a crucial issue for a firm, which is why customers' behaviour should be evaluated precisely (Kim & Ko, 2012). The rationale for analyzing the purchase intentions is that customers' purchase intentions can be viewed as the willingness to search for relevant information and select preferred brands that customers can consider for actual future purchases (Pham et al., 2020).

Additionally, the study contributed to gauge the impact of online customer engagement (*consumption, contribution, and creation)* on willingness to pay a premium price. As the research took place in the luxury fashion brands market, it was crucial to analyze the extent to which customers are willing to tolerate a higher price. Customers' willingness to pay a premium price for a product occurs when there is certainty about what the product can offer. A high price in marketing is both a financial and quality indicator; customers expect higher quality with higher prices (Salem et al., 2018). This study expands the idea by establishing a social media platform setting and looking at online customer and premium price- acceptance. Finally, we can say that as luxury fashion brands apply the social media marketing activities reflected in all its components (*sharing, trendiness, customization, and interaction*) through the brand's Instagram platform, induces online customer engagement (*consumption, contribution, and creation*). Customers engaging with the brand online through the Instagram platform affect future purchase intentions and customers' willingness to accept price premiums.

i.   *Luxury Brand Social Media Marketing Activities (SMMA) and Online Customer Engagement*

The functionality of social media marketing activities is based on customers' experience of the luxury brands through the Instagram platform. As the luxury brands employ the four social media marketing activities; *sharing, trendiness, customization, and interaction,* customers tend to engage through *consumption, contribution, and creation* of online brand-related content through the Instagram platform. The study highlighted on the process of online customer engagement voluntarily without any direct interference from the brand. The luxury brands' Instagram platform does not directly inform the customers to share, like, or repost stories related to the brand, but when applying SMMAs through *sharing, customization, interaction, and trendiness,* the luxury brands trigger customers to engage with the brand.

ii.   *Relationship between Online customer engagement and purchase intentions.*

The Customers who engage with the luxury brands through the Instagram platform by consuming, liking, and reposting the online posts leverage customers' purchase intentions. Thus, online customer engagement (*consumption, contribution, and creation*) through the digital channel (Instagram platform) induces existing and future customers to have an intention to purchase (purchase intentions). Therefore, online customer engagement reflected in consuming, contributing, and creating stories and posting or resharing related to the brand on the Instagram platform influences customers' purchase intentions.

iii.   *Relationship between Online customer engagement and willingness to pay a premium price.*

Purchasing a luxury brand is about expecting high quality, so the willingness to pay a price premium for a product occurs when there is certainty about what the product can offer. This study indicated that online customer engagement (*consumption, contribution, and creation)* leads to customers' acceptance of price premiums as customers engage through the Instagram platform; this influences the customers' acceptance of price premiums.

iv.   *The mediating role of online customer engagement*

To dig deeper in studying the social media marketing activities the researcher used mediation analysis. The research applied statistical mediation analysis to determine whether the effect

of one variable on a second variable is relocated through a third variable (MacKinnon et al., 2012). The mediator in this research was the online customer engagement (*consumption, contribution, and creation).* The existence of online customer engagement as a mediator enriches the relation between social media marketing activities and customers' purchase intentions and acceptance of price premiums. We can say that as luxury brands apply the social media marketing activities through the Instagram platform it prompts customers' purchase intentions and price premium.

Finally, this study confirms that the perceived social media marketing activities as a second-order construct of the four dimensions (*Sharing, Trendiness, Customization, and Interaction*) lead to online customer engagement. The study also validated that online customer engagement as a second-order construct to the dimensions (*Consumption, contribution, and Creation)* develops customers' purchase intentions. The study confirmed that online customer engagement as a second-order construct to the dimensions promotes customers' acceptance to price premium. Finally, the study showed a positive mediating role for the online customer engagement between social media marketing activities and purchase intentions. The study affirmed that there is a positive mediating role for the online customer engagement between social media marketing activities and willingness to pay a premium price.

5.3. Managerial Implications

Social media platforms offer massive opportunities for fostering relationships with customers in an online environment. This research has important implications for practitioners. The study provides an essential instrument for online marketers to evaluate the perceived effectiveness of their social media marketing activities. The research may assist global luxury companies in understanding customers' motives behind engaging with luxury brands through the Instagram platform, leading to increased purchasing intentions and acceptance of price premiums.

The research adds value to the luxury brands' companies to develop appropriate marketing strategies in an emerging market like Egypt. The social media marketing scale embeds insights into the need for enhanced business-to-customer interactions, delivering customers more relevant and tailored information about the brand and ultimately improving customer-business relationships. This study referred that the social media marketing scale is applicable, and luxury brands firms should approach it. The suggested scale will facilitate online marketers to monitor and improve social media marketing activities by collecting crucial information from customers on the various dimensions. Every component of social media marketing activity is unique. The study revealed that managers should take into consideration all the four components of the social media marketing activities construct reflected in *Sharing, Trendiness, Customization, and Interaction*. All the dimensions are crucial as they all impact online customer engagement through *Consumption, Contribution, and Creation* not a specific dimension by itself. The dimensions will lead to a future increase in the current and expected customers purchase intentions and their acceptance of the brand's price premium.

The managers can use this scale as a monitoring tool for luxury brands, ensuring that their Instagram page operates the four dimensions of social media marketing activities (*Sharing, Trendiness, Customization, and Interaction*). For instance, brand managers should consider allowing the Instagram platform to be a place for the channel users to communicate about the brand by applying the sharing dimension. The luxury brand's Instagram platform should offer trendiness information about the products, including the new items, sizes, prices, and stores. The managers responsible for the brand's official Instagram platform should enhance the customization dimension. Customizations can be done by providing customers with optimized information about available products. The luxury brand managers should consider

the interaction that happens on the platform. Interaction can be expressed as Instagram users who contribute to brand-related social media platforms.

Brand managers should further focus on the existence of all the social media marketing dimensions (*sharing, customization, trendiness, and interaction*) as it motivates customers to engage on their Instagram platform. The previously mentioned dimension leads to online customer engagement, i.e., consumption, contribution, and Creation through the Instagram channel. Customers will consume the posts related to the luxury brand's Instagram platform, where consumption includes viewing and reading brand-related posts. It will also improve the customers' contribution to the brand through the platform, where contribution involves interactions with peers and the brand itself. The dimensions of the social media marketing activities cause customers to create content on their Instagram pages. Creation is to actively publish, produce and co-develop brand-related content on social media, which is considered the highest level of customer engagement. The previously mentioned managerial implications will enhance the purchase intentions of the customers of the luxury brands. Furthermore, it will allow the customers to accept the price premium of the luxury products. Thus, luxury brands companies should incorporate social media to offer maximum interaction, share accurate information about the brand, offer customized product recommendations, and suggest trendy products to motivate customers to engage through their Instagram platform. Finally, luxury brands' marketers can judge the performance of their Instagram platform against competitors by appraising the social media marketing activities performed by them and their competitors. Such valuable insights will encourage managers of luxury brands to craft innovative and customer-centric social media strategies to achieve anticipated objectives. In fact, it stresses the luxury brands firms to understand customers' motives to engage and how to interact in this process to increase customers' purchasing behavior and accept the increased price level.

5.4. Limitations and Future Research

As no research is error-free, the present research includes limitations that offer further study opportunities. These limitations may provide fruitful avenues for future research. One of the limitations of this study holds those commonly associated with online questionnaires, including unsystematic sampling procedures and low response rates. However, the researcher

made significant efforts for the present research to have a higher response rate for the sample. A broader data collection could be applied to gather more cross-sectional views.

Future research may use a qualitative interview with open-end questions to comprehend more in-depth the customer's behavior and motivations towards the luxury brand market. In-depth research may be a better way to listen to customer stories and emotions about their usage of social media platforms. Interviews can go deeper into relatively unexplored areas about how they perceive social media marketing activities and the motive behind their engagement with the brands through the social media domain. The underlying idea is to better tackle customers' purchase intentions and why they accept premiums prices to acquire luxury brands.

Moreover, the use of only the Instagram platform is one of the study's limitations. It would be relevant for further research to consider more than one social media platform, e.g., Facebook/Twitter/Pinterest. Studying the perceived social media marketing activities applied by the luxury brands allows understanding how customers engage differently in these platforms.

Although the researcher studied the social media marketing activities scale as a second-order construct for Sharing, Trendiness, Customization, and Interaction, future research may consider analyzing social media marketing activities as a first order construct for each component. Other studies may further consider additional scale dimensions. For example, further research can include social media marketing activities components adding Perceived Risk to the ones considered in the study (Seo & Park, 2018). Additionally, in studying the luxury brand market, other studies can incorporate Entertainment, Interaction, Trendiness, Customization, and Electronic-word-of-mouth (Kim & Ko, 2012; Godey et al., 2016). Although the researcher studied online customer engagement as a second-order construct, future research may also consider analyzing each one of the dimensions of the online customer engagement (Consumption, contribution, and Creation).

Another limitation of this study is its generalizability beyond the luxury sector. While the results are likely to be helpful in the luxury brand market, they may not be directly applicable to other industries. Therefore, it is suggested that the validity of the perceived social media marketing activities scale (*Sharing, Trendiness, Customization, and Interaction)* needs to be confirmed in various industry contexts apart from the luxury brands industry.

Finally, future research may consider a moderator factor, for example customer-based brand equity, to address the relationship between social media marketing activities and customer-based brand equity is the customer's intangible and subjective assessment of a brand (Kim et al., 2012). Customer-based brand equity is a learning process in which consumers' perception of the brand influences their attitudes and behavior. Customer-based brand equity construct can be tested through the dimensions of brand loyalty, brand awareness, brand association, and perceived quality (Aaker et al., 1996).

5.5. Summary

The final section presented the general conclusions of the research. The empirical results were put into perspective considering managerial implications regarding the social media marketing activities and online customer engagement. The objective was to provide a clear overview of the departing questions and objectives and the answers obtained the study. The main empirical research conclusions were draw based on the findings and discussion previously developed in chapter 4. After considering the implications of the present study, the limitations of the study were also underlined. Therefore, future opportunities for research were considered in order to improve the study of social media marketing activities.

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APPENDIX I – QUESTIONNAIRE | ENGLISH

Questionnaire invitation:

Dear sir/madam:

This questionnaire is part of a Ph.D. thesis. The study aims to identify the social media marketing activities that the luxury brand applies to its Instagram page. These social media activities will be seen from the Egyptian customers' perception and how they may affect online customer engagement, and influence customers' purchase intention and acceptance to the price premium. Your opinion will be essential and helpful to the study because it would help enhance its validity and reliability.

Please be assured that the survey data will be used only for academic research and not for any other purpose. This form does not collect any personal data, and all the information gathered is anonymous. The survey is of 8 pages; it will take only a few minutes. Please answer each question as thoroughly and accurately as possible. There is no compensation for responding, nor is there any known risk. In order to ensure that all information will remain confidential, please do not include your name. Thank you very much for your kindly cooperation.

1. Gender	Male
	Female

2. Marital status	Single
	Married
	Divorced/ separated
	Widowed

3. Age Please select your age group.	Below 25
	25-34
	35-44
	45-54
	Above 54

4. Top education level. Please select only one option.	High school and below.
	Institute diploma.
	University degree.
	Master Degree.
	PH. D degree.
	Other.

5. Occupation Please select only one option.	Student.
	Administration/clerical.
	Sales/marketing/human resource field.
	Banking field.
	Medical field.
	Professionals (e.g. College/school teacher, engineer).
	Self-employed.
	Other.

| 6. Residence area | Urban area |
| | Rural area |

7. Your average monthly household income. Please select from the list only one option.	From 19,000 L.E. to 24,000 L.E.
	From 25,000 L.E. to 30,000 L.E.
	From 31,000 L.E. to 36,000 L.E.
	From 37,000 L.E. to 42,000 L.E.
	From 43,000 L.E. to 48,000 L.E.
	49,000 L.E. and above.

8. Number of adults in your household (including you).	1 adult.
	2 adults.
	3 adults and more.

| 9. Have you ever purchased a luxury brand before? | Yes |
| | No |

10. If "**yes**" please select one brand from the list.	Louis Vuitton
	Burberry
	Yves Saint Laurent
	Gucci
	Other (please specify)

11. What is your all-time favourite luxury brand? Please select one brand	Louis Vuitton
	Burberry
	Yves saint Laurent
	Gucci
	Other (please specify)

| 12. Let's assume that the brand you have chosen in question 11 is "BRAND X". Do you follow "BRAND X" on the Instagram page? | Yes |
| | No |

| If the answer is **"yes"** please continue answering the survey. |
| If your answer is **"No"** please don't proceed. Thank you. |

| 13. Do you interact with BRAND X on the Instagram page? e.g., comment/like or reshare their posts/stories | Yes |
| | No |

The following set of statements relate to what you had experienced with the **BRAND X** Instagram official page. For each statement, please show the degree to which you believe **BRAND X** has the feature on Instagram described on a scale from 1 to 5. (1= strongly disagree and 5 = strongly agree. You may select any number in between, which best describes what you have experienced. The higher the number, the more you agree).

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1. "BRAND X" shares interesting posts of the products on its Instagram page.	1	2	3	4	5
2. "BRAND X" shares interesting videos on its Instagram page.	1	2	3	4	5
3. "BRAND X" shares informative hash-tags on its Instagram page.	1	2	3	4	5
4. "BRAND X" shares informative captions on its Instagram page.	1	2	3	4	5
5. "BRAND X" shares important links on its Instagram page.	1	2	3	4	5
6. "BRAND X" enables information sharing with others on its Instagram page.	1	2	3	4	5
7. Conversation or opinion exchange with others is	1	2	3	4	5

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
possible through "BRAND X" Instagram page.					
8. It is easy to provide my opinion through "BRAND X" Instagram page.	1	2	3	4	5
9. "BRAND X" has the latest information on its Instagram page.	1	2	3	4	5
10. The latest information on the "BRAND X" Instagram page enables me to identify BRAND X easily.	1	2	3	4	5
11. "BRAND X" has the most trending information on its Instagram page.	1	2	3	4	5
12. More trendy information about the "BRAND X" enables me to identify BRAND X easily.	1	2	3	4	5
13. "BRAND X" offers customized information search on its Instagram page.	1	2	3	4	5
14. "BRAND X" Instagram page provides customized service.	1	2	3	4	5
15. "BRAND X" Instagram page provide lively feed information I am interested in.	1	2	3	4	5

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
16. It is easy to use "BRAND X" Instagram page.	1	2	3	4	5
17. "BRAND X" Instagram page can be used anytime, anywhere.	1	2	3	4	5

	Strongly disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly agree (5)**
18. I read posts related to "BRAND X on Instagram.	1	2	3	4	5
19. I read fan page(s) related to "BRAND X" on Instagram.	1	2	3	4	5
20. I watch pictures/graphics related to the "BRAND X" on Instagram page.	1	2	3	4	5
21. I follow blogs related to the "BRAND X".	1	2	3	4	5
22. I follow "BRAND X" on Instagram.	1	2	3	4	5
23. I comment on *videos* related to the "BRAND X" on their Instagram page.	1	2	3	4	5
24. I comment on *posts* related to the "BRAND X on their Instagram PAGE.	1	2	3	4	5
25. I comment on pictures/graphics related to the "BRAND X" on their Instagram.	1	2	3	4	5

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
26. I share the "BRAND X" related posts on my Instagram page.	1	2	3	4	5
27. I "Like" pictures/graphics related to the "BRAND X" on Instagram.	1	2	3	4	5
	Strongly disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly agree (5)**
28. I "Like" posts related to the "BRAND X" on its Instagram page.	1	2	3	4	5
29. I initiate posts on my Instagram page related to the "BRAND X".	1	2	3	4	5
30. I post pictures/graphics related to the "BRAND X" on my Instagram page.	1	2	3	4	5
31. I post videos that show the "BRAND X" on my Instagram page.	1	2	3	4	5
32. I write posts related to the "BRAND X" on my Instagram page.	1	2	3	4	5
33. I write reviews related to the "BRAND X" on my Instagram page.	1	2	3	4	5
34. I am willing to pay a higher price for the "BRAND X" than for other brands.	1	2	3	4	5
35. The price of the "BRAND X" would have to increase	1	2	3	4	5

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
quite a bit before I would switch to another brand.					
36. I am willing to pay a lot more for the "BRAND X" than for other brands.	**1**	**2**	**3**	**4**	**5**
	Strongly disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly agree (5)**
37. Interacting with the "BRAND X" Instagram page help me make decisions better before purchasing their products.	**1**	**2**	**3**	**4**	**5**
38. Interacting with the "BRAND X" Instagram page increases my interest in buying their product.	**1**	**2**	**3**	**4**	**5**
39. I will definitely buy products as marketed on the "BRAND X" Instagram page.	**1**	**2**	**3**	**4**	**5**
40. I have high intention to become a "BRAND X" customer.	**1**	**2**	**3**	**4**	**5**