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## **The Role of Influencer Brand-Fit on the Effectiveness of Virtual Influencers**

Maria Inês Pedro

Master in Marketing

Supervisor:

Prof. João Guerreiro, Assistant Professor, ISCTE-IUL Business School, Department of Marketing, Operation and General Management.

October, 2023

Department of Marketing, Strategy and Operations

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## **Abstract**

As social media evolved, brands passed from only utilizing celebrities to endorse their brands, to include influencers in their marketing strategy. Through the years and with developments in technology, a phenomenon called “Virtual Influencers” have arisen because of computer generated imagery (CGI). Virtual Influencers are computer generated influencers that can mimic human behavior and appearance that lately, have been utilized, especially by luxury brands, to promote brands online. Studies in this field are still scarce as this is a recent strategy utilized and only few brands utilize virtual influencers for their own benefit. However, previous studies have focused on their impact on purchase intention, but it remains to be seen, whether virtual influencers characteristics can influence their effectiveness on consumer engagement with brand promotion.

For this study, 282 social media users responded to a questionnaire, which the author analysed using the SmartPLS 4.0 tool. The results demonstrate that congruence and sincerity have a positive and significant impact on consumer engagement, with attractiveness being a moderator between congruence and consumer engagement. The study also showed that the consumer engagement will be influenced by both consumer’s attitudes towards the ad and the brand.

This research offers valuable insights about virtual influencers characteristics and their potential to impact consumer engagement in the realm of brand promotion. Possibly having significant implications for brand image and consumer behavior. The study enriches the existing body of research in this area and concludes by providing recommendations for future investigations in this domain.

**Keywords:** Virtual Influencers; social media; congruence; influencer marketing; consumer engagement.

**JEL Classification System:** Marketing (M31); Advertising (M37)

## Resumo

Com a evolução das redes sociais e tecnologias, as marcas deixaram de utilizar apenas celebridades para promover as suas marcas e passaram a incluir influenciadores virtuais na sua estratégia de marketing. Os influenciadores virtuais são influenciadores gerados por imagens de computador que podem imitar o comportamento e a aparência humana e que, ultimamente, têm sido utilizados, especialmente por marcas de luxo, para as promover online. Os estudos neste domínio ainda são escassos, uma vez que se trata de uma estratégia recente e apenas algumas marcas utilizam os influenciadores virtuais para seu próprio benefício. No entanto, estudos anteriores centraram-se no seu impacto na intenção de compra, mas resta saber se as características dos influenciadores virtuais podem ou não influenciar a sua eficácia no envolvimento do consumidor na promoção da marca.

Para este estudo, 282 utilizadores de redes sociais responderam a um questionário, que o autor analisou utilizando a ferramenta SmartPLS 4.0. Os resultados demonstram que a congruência e a sinceridade têm um impacto positivo e significativo no envolvimento do consumidor. O estudo também mostrou que o envolvimento do consumidor será influenciado pelas atitudes do consumidor em relação ao anúncio e à marca.

Esta investigação oferece informações valiosas sobre as características dos influenciadores virtuais e o seu potencial de impacto no engajamento do consumidor no domínio da promoção da marca. Possivelmente com implicações significativas para a imagem da marca e o comportamento do consumidor. O estudo enriquece o corpo de investigação existente nesta área e conclui com recomendações para futuras investigações neste domínio.

**Palavras-chave:** Influenciadores virtuais; Redes Sociais; Congruência; Marketing De Influência; Envolvimento Do Consumidor.

**JEL Sistema de Classificação:** Marketing (M31); Publicidade (M37)

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## **Glossary of Acronyms**

ATTA – Attitude Towards the Ad

ATTB – Attitude Towards the Brand

CE – Consumer Engagement

CGI – Computer Generated Imagery

CONG - Congruity

CR – Composite Reliability

eWON – Electronic Word-of-Mouth

PLS-SEM - Partial Least Squares Structural Equation Modelling

ROI – Return of Investment

SIN - Sincerity

SMI – Social Media Influencer

VI – Virtual Influencer

# 1 Introduction

Many contemporary brands now acknowledge the considerable potential of influencer marketing, deeming it a strategic and highly effective means of engaging with their intended audience in recent years (Veirman et al., 2017). Also, it has been validated by Statista (2023) that this marketing strategy yields a superior return on investment (ROI) compared to conventional marketing strategies. As endorsers transfer their reputation, traits, and status to the products/brands they support, they have become a commonly used strategy for brands to market themselves (Ren et al., 2023). They were initially only known for being celebs, however, with the increasing use of social media, influencers also started to appear. In recent years, owing to advancements in influencer marketing and technological developments, a novel phenomenon has surfaced, commonly referred to as "Virtual Influencers" or "CGI Influencers. They are produced utilizing computer-generated graphics, and a pre-existing database makes it easier for them to offer the necessary content. As a result, they can convey human qualities on their posts and through the interactions they have with their audience online (Moustakas et al., 2020). Giving the example of Lil Miquela, which is the most followed and known Virtual Influencer on Instagram with 2.7 million of followers. Despite being a computer-generated influencer, she has the visuals of a real human, and her posts are mainly created to appear human-like posts. Despite the recent increase in interest regarding this category of influencers, few comprehensive studies have been conducted, and limited knowledge is available concerning the audience's perception of virtual influencers as endorsers. Furthermore, it remains unclear whether the characteristics of these virtual influencers hold significance in determining their effectiveness in brand promotion. According to previous studies (Kamins, 1990; Lim et al., 2017; Misra and Beatty, 1990), the stronger the fit between an influencer and a brand, the more favorable the impact, particularly on purchase intention. Subsequently it is important to comprehend how some "personal" characteristics of the Virtual Influencer will influence consumer engagement when brand promoting. The goal of this dissertation is to advance our understanding of whether influencer brand fit will be a key factor in virtual influencers' success in generating consumer engagement for the brands they are supporting.

## 1.1 Relevance of the topic

Influencer marketing is widely acknowledged as a vital strategy in the marketing industry (Lee, Sudarshan, Sussman, Bright, & Eastin, 2021), because it offers a means of connecting with intended audiences. However, a notable gap in knowledge pertains to the utilization of virtual influencers for brand promotion. Previous research on this topic is still very scarce, primarily because the emergence of virtual influencers, as exemplified by the creation of the first Virtual Influencer, Lil Miquela, in 2016, is a relatively recent phenomenon. Recent research has been focusing more on the comparison of

Virtual Influencers and Human Influencers on shaping brand attitude (Ozdemir et al., 2023) or their attractiveness effect on purchase intention Kim and Park (2023) and when discussed, it has primarily taken place in the high-end brand industry. To further explore the impact of these virtual influencers on companies and consumers, we decided that we needed to learn more about how this new type of influencer marketing and some of their key personal characteristics would influence the outcome of their effectiveness as endorsers. As brand match-up has shown to be effective for endorsers (Kamins, 1990), this could result in a positive outcome for consumer engagement and brand image. This research proves to be relevant because it will help understand the role played by Virtual Influencers on the consumer engagement of the promoted brand. This study will further help high end brands understand if the use of VI's will lead to positive consequences in their marketing strategy, increasing their visibility and brand image.

## **1.2 Research problem**

Numerous research has studied the impact of brand match-up and how it has a positive influence for both the endorser and the brand. However, those studies have focused on celebrities or expertise type of endorsers and never on Virtual Influencers (Belanche et al., 2021; Breves et al., 2019; Ren et al., 2023; Suprawan & Pojanavatee, 2022). As they are mainly formed by a database that gathers all information to create content, that does not exclude the fact they have their own personalities online. Even though previous research has stated that the utilization of virtual influencers for marketing purposes can reduce the possibility of human errors (Moustakas et al., 2020), the brand cannot control what they publish online on their own social medias. Those behaviors can impact how consumers view the promoted brand and associate her behaviors with the brand. As for that, we aim to understand if Virtual Influencers "personal" characteristics will influence their effectiveness as endorsers.

## **1.3 Research purpose**

The purpose of this study is to understand how characteristics like congruence, sincerity and attractiveness (as a mediator) are capable of influencing consumer engagement and influence consumer attitudes towards the ad and promoted brand. Virtual Influencers are a new ascending phenomenon in the marketing world that is establishing itself to revolutionize the way brands promote themselves towards creativity and innovation (Conti et al., 2022). Given the limited existing literature on this subject, our research has identified a predominant emphasis on investigating customer attitudes within the domain of virtual influencers, with comparatively little consideration of the potential benefits accruing to firms through their marketing campaigns. Furthermore, another developed theme about Virtual Influencer's is the comparison of their and human influencer's effectiveness, however, it is pertinent to note that there exist conflicting research findings concerning

the comparative effectiveness of human and virtual influencers. On one hand, empirical evidence suggests that consumers exhibit heightened engagement with content generated by virtual influencers, manifesting in increased interactions such as likes and comments (Arsenyan and Mirowska, 2021). Nevertheless, despite this elevated level of engagement, it is imperative to acknowledge that consumers tend to react more cautiously and with heightened apprehension toward virtual influencers, as observed in recent studies (Sands et al., 2022; Thomas and Fowler, 2021). Furthermore, after understanding that consumers would generate a good number of interactions towards the content generated by the VI, we decided to investigate whether those Virtual Influencers would have a positive impact on generating engagement to the brands they are promoting if they were seen as a good fit. As we previously stated, very little is known about the effects of virtual influencers on brand campaigns, we chose to concentrate our research on the qualities that virtual influencers should have to be perceived as a good fit and produce positive results, with a focus on consumer engagement as a variable, to the brand they are promoting. This study can serve as a theoretical foundation for enlightening brands about the potential efficacy of virtual influencers as a viable marketing strategy capable of generating heightened excitement and drawing the attention of their target audiences. To be able to stand out from the competition in a competitive market. This study differentiates itself from the prevailing literature by its distinct focus. While many brands utilize influencers as a revenue-enhancing strategy, our objective is to assess the effectiveness of Virtual Influencers in elevating consumer engagement levels. This distinction is warranted by the ongoing acceptance of this novel form of influencer marketing within the audience. Hence, the primary objective of this study is to augment comprehension of Virtual Influencer effectiveness by introducing novel variables to this dynamic and evolving industry.

#### **1.4 Research Question**

What role does influencer-brand fit play in the effectiveness of virtual influencers in enhancing consumer engagement and positively influencing consumer attitudes toward the advertised brand?

#### **1.5 Structure**

This research is composed by 6 main topics: Introduction, Literature Review, Conceptual Model and Hypothesis, Methodology, Data Analysis and Results and Conclusion.

The introduction section elucidates about the research topic, the relevance of it, defines the research problem and mentions its purpose.

The second chapter is the literature review, where themes like human brands, influencers and influencer marketing, influencer marketing effectiveness, influencer brand-fit, incongruence between influencer personality and brand image and virtual influencers are explored.

The Conceptual Model and Hypothesis section pertains to the formulation of hypotheses and the conceptual framework of the research model.

Chapter four, Methodology, offers a comprehensive examination of the research approach, constructs, survey development, data collection procedures, sample characteristics, measurement methods, and utilized scales.

Next chapter is where the author presents the results and discuss it by examining the validity of the hypothesis.

To finish, the last chapter is where the author presents the conclusions about the study. The theoretical implications and managerial contributions will be mentioned as well as the limitations and recommendations for future research.

## 2 Literature Review

To analyse virtual influencers as a brand fit and the effect they would have on brand campaigns, previous studies are used for theoretical support. Research on topics such as human brands, influencers, influencer marketing, incongruence between influencer personality and brand image contribute to the explanation of how a virtual influencer personality can have an impact on a brand they promote. Hypotheses will be developed as a result of the theories gathered.

### 2.1 Human Brands

According to the American Marketing Association, a brand is a combination of all external characteristics capable of distinguishing it (AMA, 2023). Kotler and Keller (2016) go further and name all those characteristics by being any name, term, symbol, design or other distinctive feature that makes it easier to recognize the products or services of a specific vendor to which is meant to distinguish it from the competitors and to create a brand identity/personality to bring awareness. To reinforce that idea, Khamis et al. (2016) says that branding is supposed to *“give a personality to a product, service and company”*, making it more appealing and relatable to consumers. Back in the days, the term “brand” was closely associated with services, products and organizations, however, “human brands” was already an existing term also put into practice but not that known for all.

Human brands have been present in our society for many years, in different areas and contexts of people’s life’s. Therefore, because of the prevalent use of cable television, Internet, and social media, the concept of human brands has grown in popularity. Thomson (2006) was the first author to acknowledge the human brand theory and he defines it by being *“any well-known persona who is the subject of marketing communications efforts”* (Thomson 2006 p. 104, as cited in Khamis et al, 2016). To help in adding an explanation, Hines (2004) outlines human brands as them recognizing and communicating who they are and show what they do best to their audience, transforming that into a planned marketing process (Hines, 2004 p.60, as cited in Kucharska et al., 2020). The same way that a consumer may recognize a company by its logo, name, and features, they can also recognize human brands by its traits. Audience anticipates human brands to show characteristics related to authenticity, consistency and even expertise since they expect them to display similar emotions, cognition and behavior like they were a real friend (Malik et al., 2022). This can possibly be justified by human brands being expected to be closely related to consumers and, like people, capable of forming genuine bonds (Kucharska et al., 2020). Research also reveals that consumers identify with the human-brand as their ideal selves, which causes them to attach to the brand because it goes in congruence with their perceived image. As mentioned in research of Malik et. al (2022) many of the human brands are represented by celebrities, idols, athletes and even politicians (Kucharska et al., 2020). In addition, Kim

and Kim (2022) also include CEO's, musicians and actors in this type of personas. Consequently, due to the growth of social media and by making use of the social media platforms' enhanced involvement, influencers are becoming well-known human brands (Kim and Kim, 2022). As Malik et al. (2022) affirmed on later research, competence, autonomy and relatedness are the three principal of many aspects that allows consumers to attach to a human-brand and influencers are the type of human-brands that can fulfill all those needs if aligned with the follower personality. Thus, we may draw a simple conclusion that what sets human brands apart from normal product or service brands is the focus on a particular person rather than a product as the core of the brand.

## **2.2 Influencers and Influencer Marketing**

As previously mentioned, the growth of social media was rapid and therefore opened doors for the creation of many new concepts. Online Influencers begin to appear because people started utilizing social media to share experiences, comments, ratings, commerce, groups and it was even transformed in the workplace for many (Kotler, 2019). Some studies describe online influencers as being a built-up "microcelebrity" (Khamis et al., 2016) who utilize Internet to build a reputation through social media and gain celebrity status and exhibit their interests and opinions to a specific niche. However, many recent studies conducted, bring together celebrities and influencers as a way of contrasting and comparison (Jun & Yi, 2020; Khamis et al., 2016; Ren et al., 2023), since numerous people cannot distinguish those two concepts. Even though influencers tend to be compared to celebrities, they have nothing alike. While celebrities are known for their careers (such as those in music, sports or modeling) and by their influence mostly through traditional channels, influencers are only known for their online presence. Because of that, their reputation is only measured by their content and personality. Consequently, it is critical to investigate influencer's components as a human brand, since they became so reputable and their power over consumers grew. We can confirm that influencers have a different way of communicating with their audience, certainly because they display an interactive two-way of communication with their followers (Jun, S., & Yi, J., 2020), by comments, likes and feedback on their posts. There is even the possibility for the followers to send a direct message to the influencer. Because of that, they can easily generate a perception of proximity and accessibility by this "intime" and regular interaction with their followers. As mentioned before, one of the big propelling of this trend has been social media platforms. Hence, these persons of influence frequently use the Internet to express their thoughts in a variety of ways like photos, videos and additional social interactions to promote their online persona. Each of them tends to be expertise in different areas including travel, beauty, gaming, fashion, fitness, etc. For instance, they may do so in an unpaid, unplanned manner, by being spontaneous and talking about their personal life. Nonetheless, they can also do it by sharing their

beliefs and opinions in the form of sponsored content paid by a firm. Which is when the influencer marketing strategy starts.

As influencers and their audience start to nurture their relationship through social media, by building credibility, they will most likely reach a wider audience (Gundová & Cvoligová, 2019) and start to foster a more positive impact on people and because of that they become a good option to be incorporated in brands marketing strategy. To establish a solid and trustworthy presence within online communities, it is essential for corporations to collaborate with online influencers. By collaborating with a company, brands will be incorporated into the influencer's feeds (Breves et al., 2019), as mentioned before by the paid content. However, this paid content has some strict rules applied in the EU, as influencers are required to apply hashtags like #ad, #advertisement, #promoted and #pub for the public to understand they are promoting a brand and being paid (Inflow, 2021).

Companies are most likely to benefit from these partnerships not only because they will be creating a reliable brand image but especially because companies are more likely to benefit from influencer marketing assets (followers, fame and engagement). Those assets and the proximity to social media users (Ren et al., 2023) are what makes Influencers so appealing to marketers.

In research from Leung et al. (2022) influencer marketing is described as a communication approach where a company chooses and pays internet influencers to interact with their followers on social media to promote the company's product. If we align the term with the authors definition, influencer marketing can be associated to an enhanced version of the electronic word-of-mouth (eWOM) strategy, accomplished in a more professional and corporate way. However, the efficiency with which influencer marketing advertising may achieve its goals is not a linear opinion among researchers.

### **2.2.1 Influencer Marketing Effectiveness**

Previous studies state that influencer marketing effectiveness is vigorously connected to how positively perceived they are as endorsers (Martínez-López et al., 2020; Munnukka et al., 2019), and Leung et al. (2022) names a few components like activity, originality and follower size, that will determine if the influencer marketing strategy will be effective or not.

In research from Leung et al., the author states that influencers activity exhibits an inverted U-shaped effect (2022). Meaning that if an influencer posts excessively, information overload, fatigue and the idea of devaluation might occur. On the other hand, if the influencer lacks on posting regularly and not be active, she will no longer be suitable and can fall into oblivion. However, there are no rules of affluence when posting, thus each follower must understand what best fits for their audience in order to perform in a positive way. The authors research also states that followers size tends to enhance the



performance and further on the effectiveness of an influencer marketing campaign, going in contradiction with previous mentioned studies from Newberry (2022), which states that small audiences tend to be more effective. Even though micro and macro influencers work towards the same goal, different percentages of engagement rates are shown. Forbes (2022) affirms that influencers with a range of 10,000 to 50,000 followers have a higher percentage of engagement (3.93% to 4.85%) in comparison with influencers that have more than one million followers (1.48%), because micro-influencers tend to have a smaller yet more cohesive community. Certainly, working with influencer marketing is not a linear strategy and each firm should have their own type of measurement when choosing influencers. To finish, originality seems to play an important role in influencer marketing effectiveness since it can increase engagement rates (Leung et al., 2022). As previous studies state that, advertising recognition results in a negative cognitive and attitudinal (Amazeen & Wojdyski, 2019; de Veirman & Hudders, 2019; Eisend et al., 2020) consequence towards paid media advertisements since followers will be more judgmental and distrustful towards it. However, Sundermann & Munnukka (2022) study affirms that if influencers do paid media content on their area of expertise, showing those brands and products will be the main reason for consumers to follow them.

Despite all these contradictions by researchers, the assets of influencers should be evaluated in a linear way with the objectives of the company. However, through this research, we can conclude that there are specific elements that influencers should ensure for their campaigns to be effective: original (Leung et al., 2022), credible (Breves et al., 2019), attractive (Ki et al., 2020), sincere (de Brito Silva et al., 2022) and congruent (Choi & Rifon, 2012).

Influencer marketing it is also regarded as one of the most popular and successful methods of online advertising due to its impressive growth in recent years, as it was confirmed in a recent study from the European Parliament (2022). The influencer marketing market sized, more than doubled since 2019, as it reached a total of 16.4 billion US dollars in the year of 2022 (Statista, 2023).

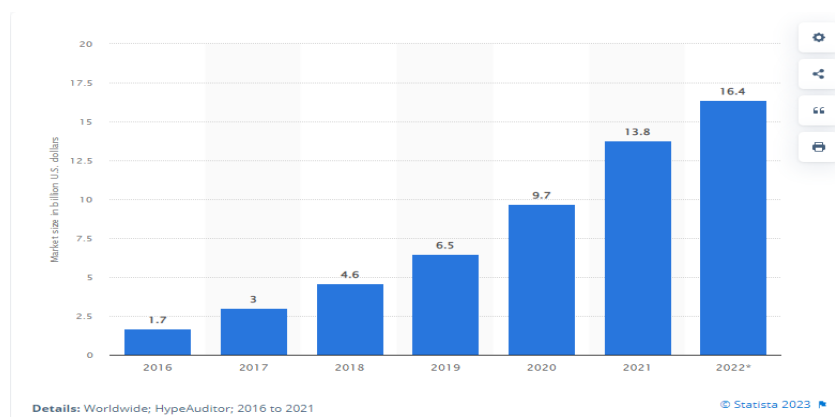


Figure 1 - Statista, 2023, Influencer Marketing market size from 2016 to 2022.

This marketing strategy provides a greater return of investment (ROI) than other marketing channels (Statista, 2023), empowering big brands to reach out to more individuals and small businesses to grow, by getting them more visibility and recognition. One of the reasons that makes influencer marketing so attractive and profitable is the recurrent engagement between followers and influencers. That repeated interactivity gives the audience a feeling of belonging and an idea of an established relationship, making them feel they are not just strangers and as a consequence of that, it will bring them closer to the brand they are promoting as well. It is difficult for brands to conquer this type of communication all alone because they will fail to give the same sense of belonging as influencers and so, conventional brands primarily interaction is mainly done based on one-way recognition (Jun, S., & Yi, J., 2020). However, even though influencer marketing has become a popular strategy, companies must identify suitable influencers that best fit their values and ethics for an influencer to reflect the brand's personality authentically and credibility.

### **2.2.2 Influencer Brand-fit**

Even though this new kind of advertising looks promising, companies can now be overwhelmed with the broad selection available of influencers in the market. There are many options available differing only on the expertise subject, number of followers and on their own personal characteristics (Breves et al., 2019). With this wide variety available it is crucial that brand managers find the best suited influencer to represent the brand in an effective way.

As Suprawan and Pojanavatee (2022) affirms, influencer brand-fit is determined by the extent to which influencers can successfully associate their character and content with companies or products identity. Nevertheless, this association is only beneficial dependent on the objectives of the brand, owing the fact that an endorser does not necessarily ensure a successful advertising result (Lee et al., 2021). Considering this type of collaborations occasional for many, the advertisements done by influencers regarding products/brands can have a critical character because they might not be as closely related to the content that influencers often produce (Belanche et al., 2021). If congruence/brand-fit is defined by being the notion of fulfilling expectations (Maille & Fleck, 2011), incongruence is the total opposite. To justify the idea, Dimofte, Forehand and Deshpandé (2003) refers to "ad-schema congruity" to express how an advertising aligns with what its intended audience anticipates seeing. On the contrary, incongruity normally involves a deviation from an expectation. Lane (2000) describes it as being an unexpected or surprising characteristic of a brand extension. Many researchers use the term "congruence", "fit" and "match-up".

In this case, it is crucial for influencers to be particularly cautious about accepting collaborations, as this can lead to negative outcomes (Belanche et al., 2021) for both the influencer and the brand. Followers can be very critical about these incoherent partnerships and judge both sides until something about it is done. The followers will have the tendency to show a more positive attitude towards the advertisement if they believe there is a brand-fit, believing it is reliable (Lee et al., 2021) and are more likely to engage with the posts. Nonetheless, incongruence can lead to hypocrisy and distrust (Choi & Rifon, 2012), leading to unpleasant opinions about the advertisement and the influencer credibility (Lee et al., 2021) and later the brand itself.

To exemplify, we gathered the examples done in the studies of Breves et al. (2019) and Belanche et al. (2021) when they talk about the case of Volvo and Chriselle Lim. In 2019, Volvo reached out to Chriselle Lim in order for them to form a paid partnership. Taking in account this influencer expertise areas are fashion, beauty and motherhood and so, she has never done anything related to the automotive world. For that reason, her followers were startled when she posted a message endorsing a freshly released Volvo car because she didn't fit the promoting brand. What Volvo had in mind was probably to reach out to Lim's 1 million Instagram followers as prospective new customers, however, the Volvo campaign received harsh criticism and backfired on both the influencer and the brand. At the end, Chriselle Lim ended up making an apology post for her followers to appease them while Volvo was accused of poor influencer strategy (Breves et al., 2019).

This is one of the most famous cases of an example referred to an "unsuccessful influencer case study" (Breves et al., 2019), because the general rule in advertising is to select endorsers who share the brands values. As Breves et al. (2019) study confirms, an incongruence between the influencers and the brand can cause an even worse outcome for the brand's image when compared to the influencers image.

### **2.3 Expectancy disconfirmation theory**

Expectancy disconfirmation is a theory made by Lewin (1983) that was developed by Oliver (1980) and it can explain the affirmations made before as its main study is focused on how expectations, perceived performance and non-confirmation of beliefs can affect satisfaction. Most people expect the product or service to meet their needs and desires even before facing it, leading to positive or negative outcomes. According to Oliver (1980), consumers are more likely to be satisfied if perceived performance meets or surpasses their expectations (positive disconfirmation). On the other hand, if actual performance is inferior compared to what customers anticipated (negative disconfirmation), the consumer will be dissatisfied. Those expectations felt by the customer are related to their needs and desires and can be very much connected to the impact on customer satisfaction from the purchase.

One good example of this is the new way adopted by luxury brands, of advertising. Artificial Intelligence Influencers are being used by these brands, offering consumers a new kind of experience. Nevertheless, as a recent adopted method of influencer marketing they can be seen by the audience as an unpleasant strategy since they are made from artificial intelligence (AI).

## **2.4 Virtual Influencers (Virtual Human Brands)**

A new phenomenon known as virtual influencers has emerged as a result of ongoing innovation in the influencer marketing sector. Cartoon characters were the first to popularize the phenomena of virtual characters in the mid-1990s (Conti et al., 2022). Since then, animation was utilized a lot as an advertising tool. Through the years, a lot more virtual characters were created, such as virtual idols, virtual youtubers and even virtual vocalists. In the year of 2016, the first Virtual Influencer was created with the name of “Lil Miquela”.

Virtual Influencers are defined by Batista da Silva Oliveira & Chimenti (2021) as being “virtual robots that can emulate human appearance and behavior” and Moustakas et al. (2020) go even further and affirms that they can display human traits through their posts and communication with their fans. According to studies, there is a thin line that distinguishes human and robot behavior, making it simpler for a robot to exercise power (Alboqami, 2023). In general, these VI are computer-generated characters that have been designed to appear like real-life human beings and just like digital human influencers, VIs can form relationships, provide support and interact with the public and because of that they can also be seen as “friends” or “colleagues” (Sands et al., 2022).

A few companies have adopted this method of influencer marketing since it showed to be more flexible and adaptable when compared to digital human influencers, and more exclusive, innovative and safe (Conti et al., 2022). Brands can reduce the possibility of "human errors" in their marketing strategy by utilizing virtual influencers, since they can control over their behavior and content (Moustakas et al., 2020). Like real influencers, virtual influencers are intended to be relatable, engaging, and influential. They may post content on social media networks just like human influencers, and they each have a distinct personality, sense of style, and interests. Virtual influencers can partner with brands, promote items, and even give their followers amusement and advice. VI's also show their “offline life” to the audience on Instagram, exhibiting their “day-to-day life” and manifesting their opinions. Consequently, brands can have the absolute control on the outcome of the projects from start to finish, however, they do not control the VI's personality and external events. Since this type of influencer is commanded by another person/firm, personality traits, ways of thinking and acting can be unexpected and can no longer fit with the brands values, influencing the brand's image negatively by their personality.

Illustrating the case of Lil Miquela, also recognized as Miquela Sousa or Lil Miquela, we encounter a noteworthy figure in the realm of influencer marketing. Lil Miquela, a virtual influencer created out of CGI (Computer Generated Imagery), commands a substantial online presence, amassing a follower base exceeding three million on Instagram. Her versatile identity encompasses roles as a musician and an expertise in the luxury sector, fostering collaborations with distinguished brands such as Prada, Calvin Klein, Givenchy, among others. Significantly, she leverages her widespread popularity as a platform for advocating various social causes, including but not limited to Black Lives Matter (BLM), breast cancer awareness, political activism, and support for LGBTQ+ rights (Moustakas et al., 2020). Despite her immense popularity, especially among the younger generations, it is important to note that Lil Miquela has been involved in controversies in the past due to her behaviour and actions.

In 2019, Lil Miquela and Bella Hadid both participated in a video/ad for Calvin Klein where they appeared kissing on it. Criticism started to appear in all kinds of forms on social media saying they are “queerbaiting” (Block & Lovegrove, 2021) and utilizing virtual humans to generate content. All this arousal made Calvin Klein apologize and remove the ad as fast as possible. The media did not spare the criticism and wrote articles about how the campaign was “a terrifying glimpse of the future” about influencer marketing and how it represented “digisexuality” (The Guardian, 2020). The Guardian (2020) also stated that the most disturbing aspect of that campaign was the fact that Calvin Klein was exploiting lesbianism with a fictional character. Even though Calvin Klein was fast to apologize, Lil Miquela did not and didn’t even bother to delete it from her social media.

Not another mistake was made between her and a brand, however, later that year, she found herself again in the middle of an event when affirmed being sexually assaulted on her Youtube (Block & Lovegrove, 2021). A wave of negative comments on social media did not take long to appear and named it as being hypocrite since she is a robot, and it is impossible to happen. Since criticism started to appear, the authors of Lil Miquela have completely abandoned the narrative.

Another episode reported on Block & Lovegrove (2021) study was the BLM advocacy of George Floyd in 2020, when she suggested taking money from police and prisons and investing in the community. Her post on Instagram did not had half of the engagement she was used to; however, it was loaded with comments and even “unfollowing” threatening.

When researchers claim that virtual influencers don't encounter "scandals or personal problems" (Oliver Zöllner quoted in CANDID, 2022), it's important to remember that while some may argue for their immaculate image, these digital personas are not immune to controversy. Such controversial behaviour has occasionally led to these virtual influencers being removed from the spotlight, resulting in disruptions to their partnerships with major brands. However, this research does not definitively

establish whether this shift is solely due to the dramatic elements associated with their persona, or whether other relatively minor factors also contribute to this phenomenon.

Drawing insights from this research, it can be deduced that placing trust in virtual influencers may present challenges for those who define trustworthiness in terms of shared and comprehended emotions (Li et al., 2023). However, when considering their objective nature, complete dependence on state-of-the-art technology, and the elevated level of automation they exhibit, it is plausible that their expertise equals or even surpasses that of human influencers (Lou et al., 2022). Because of that, we aim to understand if the Virtual Influencer being perceived as a brand-fit, it would generate positive outcomes for the promoted brand.

### **3 CONCEPTUAL MODEL AND HYPOTHESIS**

The goal of this chapter's exploration will be to identify the model that best fits the dissertation's objective, which examine how influencer brand-fit impacts the effectiveness of virtual human influencers as a marketing tool.

#### **3.1 VI-brand congruence**

To attain outstanding outcomes, there must be an alignment between the endorser and the product. Research on match-up hypothesis has shown that endorsers are more effective when there is a fit between the endorser and the brand (Kamins, 1990). The perceived fit between celebrity characteristics and brand attributes is the key factor in determining the degree of celebrity and brand congruence. Celebrity-brand congruence will be higher the more similar a celebrity's traits are to a brand's attributes (Misra and Beatty, 1990). So, they may work as an effective marketing plan if the two of them are a good fit for each other. An ideal match-up will result in positive attitude towards the endorsed brand. Lim et al. (2017) evaluates the match-up between the influencer on a purchase intention level and affirms that "a perfect match between social media influencers and the product will significantly strengthen the advertising results". In addition, according to Belanche, Flavian, and Ibanez-Sanchez (2020), Influencer-product fit enhances customers' intention to connect with influencers' posts as well as product information. Kamins and Group (1994) research also stated that the overall idea of the celebrity/product congruence has a substantial impact on advertisement and brand evaluations. However, since there are scarce studies on virtual influencers in relation with match-up hypothesis we will inspire on Lim et al. (2017) and Wei et al. (2022) study to understand if that can also happen with virtual influencers on an engagement level and on Choi and Rifon (2012) to add other two variables to test attitudes towards the ad and attitudes towards the brand. As a result, the developed hypotheses are as follows:

**H1:** A perceived fit between a virtual influencer and a brand will lead to:

**H1a:** a more favorable attitude towards the ad

**H1b:** a more favorable attitude towards the brand

**H1c:** a positive impact on consumer engagement

#### **3.2 Sincerity**

According to Marwick and Boyd (2011) "fans carefully evaluate the sincerity of celebrity's [social media] accounts" in order to determine whether the influencer is portraying an accurate, unedited persona (p. 149). Criticism is directed at content that is "staged, insincere, unethical, and exaggerated" (McRae

2017, p. 14). Taking that in consideration, portraying a sincere personality—one that is relatable, friendly, and down-to-earth—is indicated for a successful relationship management with followers and effective brand endorsements (Duffy, 2017). Lee and Eastin (2020) affirms that sincerity is a feature valued by consumers and marketers as being crucial in social media influencers (SMIs) so, we make this trait a particular interest for the current research because we aim to understand if sincerity is also capable of affecting Virtual Influencers effectiveness as endorsers. Because of that, the following hypothesis are developed:

**H2:** Virtual Influencers perceived sincerity will lead to:

**H2a:** a more favorable attitude towards the ad

**H2b:** a more favorable attitude towards the brand

**H2c:** a positive impact on consumer engagement

### **3.3 Attitudes towards the ad and the brand**

According to Choi and Rifon (2012), prior research has long explored attitudes towards the ad, attitudes towards the brand and purchase intention as indicators of advertising efficacy (Heath & Gaeth, 1994; Kalwani & Silk, 1982; MacKenzie & Lutz, 1989). Results show correlations between those variables, which implies that ad attitudes have an impact on brand attitudes, which in turn influence purchase intention. However, in the case of virtual influencers, we aim to understand if attitude towards the brand and attitude towards the ad has the same effect on consumer engagement. Thus, the following hypothesis are added to explain Virtual Influencer effectiveness with a though path model:

**H3a:** Attitude toward the ad promoted by a Virtual Influencer positively and directly relates to attitude toward the brand.

**H3b:** Attitude toward the brand positively and directly relates to consumer engagement.

### **3.4 Attractiveness**

To finish, and based on previous literature, certain findings from the attractiveness variable as a moderator investigation may be particularly pertinent to influencer marketing. Previous studies from Roobina Ohanian (1990), stated that attractive (versus unattractive) communicators are consistently liked more and have a positive impact on products with which they are associated. As a result, one benefit for attractive influencers connected to luxury fashion brands may be that they increase the appeal of the product by creating a connection with their attractiveness (Jin and Muqaddam, 2019). Our objective is to investigate whether similar trends occur with virtual influencers by analyzing



attractiveness as a moderator in this study, as the existing studies primarily concentrate on human influencers. Thus, the following hypotheses were formulated to assess this relationship:

**H4:** VI attractiveness will have a moderating role on how VI/brand congruence will impact consumer's engagement.

In summary, the goal of the current study is to expand the current understanding of virtual influencer effectiveness endorsement by concurrently evaluating (1) congruence between VI and the brand as a determinant role in the outcome of consumer engagement, (2) VI sincerity as a determinant role in the outcome of consumer engagement, (3) consumer's attitudes towards the ad and towards the brand will have a positive role in consumer engagement, and (4) attractiveness positively plays as a moderator when it comes to VI congruence and consumer engagement. A path model illustrating the assumed causal linkages among the variables is shown in Figure 2:

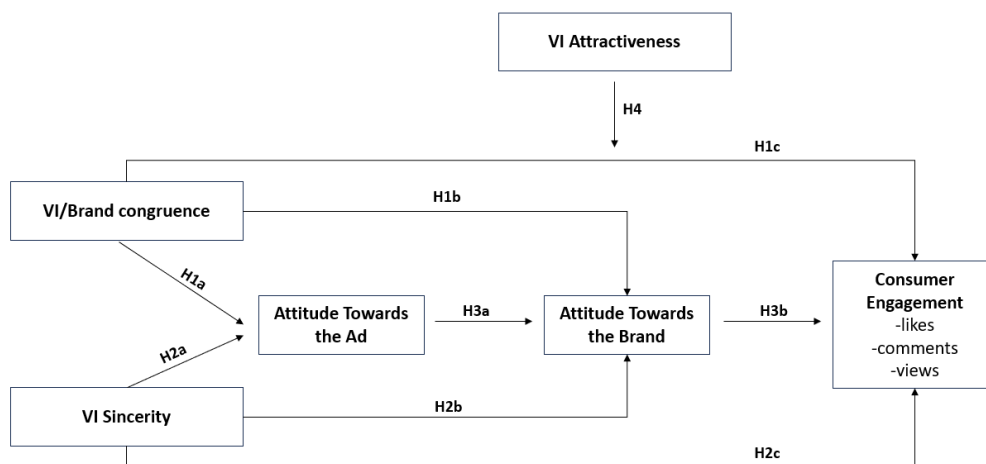


Figure 2 - Hypothesis Framework.

## **4 METHODOLOGY**

In this chapter, an overview of the data collection process will be outlined and detail the methodology employed for conducting the result analysis. As stated by Bruyne (1991), methodology encompasses the logical framework of scientific procedures from their inception and evolution. In addition to elucidating the research findings, it also illuminates the path followed to attain them.

### **4.1 Research Approach**

The objective of this section is to draw conclusions related to the research objective and examine the alignment or divergence with existing literature by conducting hypothesis testing. Therefore, a quantitative research methodology was employed, encompassing the systematic gathering, measurement, and analysis of sample data. A quantitative survey research method was selected as the appropriate approach in order to examine the impact of Virtual Influencers effectiveness on the dynamics of advertising, including how the role of influencer brand-fit effects the effectiveness of virtual human influencers when promoting a brand. It is important to understand if brand-fit, sincerity and attractiveness of virtual influencers towards brands had a big implication on the outcome of the audience engagement. So, in order to get the consumers' point of view about the subject and understand if, in fact, consumers are willing to engage more with the specified brand, a quantitative analysis was applied.

### **4.2 Scale Measurement**

The current research seeks to understand the role Virtual Influencers play in consumer engagement with the brand they promote through their perceived brand fit, sincerity and attractiveness on the effectiveness of their information. To explore the relevant variables in this study, a comprehensive literature review was conducted, encompassing a range of studies that address the following aspects. The following table provided illustrates each variable along with the authors and the number of items associated with their respective scales:

VARIABLE	AUTHOR'S SCALE	AUTHOR'S NAME	Nº OF ITEMS
<b>Brand/celebrity Congruence</b>	[brand X] and [celebrity Y] go well together; [brand X] is well matched with [celebrity Y]; In my opinion, [celebrity Y] is very appropriate as a celebrity endorser for [brand X].	<b>Korchia et al. (2009)</b>	3
<b>SINCERITY</b>	Seems kind and good hearted; Is sincere; Comes off as very genuine; Is down-to-earth.	<b>Lee and Eastin (2021)</b>	3
<b>Attitude towards the Ad</b>	I dislike the ad – I like the ad; I react favorably to the ad – I react unfavorably to the ad; I feel positive towards the ad – I react negatively to the ad; The ad is bad – The ad is good.	<b>Holbrook and Batra (1987)</b>	4
<b>Attitude towards the Brand</b>	Dislike more – Like more; More positive – More negative; More good – More bad; More favorable – More unfavorable.	<b>Holbrook and Batra (1987)</b>	4
<b>Consumer engagement</b>	I initiate posts related to [brand] on social network sites; I post pictures/graphics related to [brand]; I post photographs of my use of [brand] products on social media; I follow blogs related to [brand]; I share [brand] related posts; I read fanpages related to [brand] on social media sites; I initiate conversations online and offline about [brand]; I would write reviews about my positive experience with [brand] products; I comment on posts related to [brand].	<b>Obilo et al. (2021)</b>	9
<b>ATTRACTIVENESS</b>	Attractive; Classy; Beautiful; Elegant; Sexy.	<b>Ohanian (1990)</b>	5

Table 1- Constructs of the variables: author, Nº of items and scales

### **4.3 Pre-test**

Using the information gathered from the literature review, a self-administered questionnaire survey was developed to address both the aims of the study and to assess the relationships between the variables of the proposed research model.

The process of developing an instrument is a crucial concern for researchers as it directly influences the reliability and validity of the model constructs. Following the recommendation of Bell et al. (2018), this study included measures from the existing literature that had already been validated by other researchers. These measures were then adapted to fit the specific aims and objectives of the research.

In the process of developing and validating the research instrument, a pre-test of the questionnaire was conducted with 17 respondents to evaluate the items. The purpose of this pre-test was to assess the suitability of the items and to ensure that they were in line with our research objectives. As highlighted by Bhattacharjee (2012), it was imperative to scrutinise aspects such as the content and semantics of the questions, their wording format and sequencing to minimise potential biases that could significantly affect survey responses. This preliminary assessment at this stage was essential to establish the reliability and validity of our instrument. This practice is considered fundamental by researchers, as it ensures the suitability and effectiveness of the questionnaire for data collection.

Pre-testing involves a small sample of the intended study population and initial evaluations of the measurement equipment. During the initial phase, the questionnaire was developed with the aim of evaluating potential errors related to formatting, wording, and participants' comprehension of the study. Additionally, careful consideration was given to factors such as the variety of response options in multiple-choice questions, the sequence of questions, and the translation process.

It was important to confirm the validity of each latent variable by conducting a reliability test, assessing the Cronbach's alpha values and the Composite Reliability (CR). Reliability is the measure of internal consistency of the constructs in the study. If the CR exceeds the threshold of 0.7, it is generally indicative of a unidimensionality construct. In the pre-test, the CR results showed that all constructs are reliable since all of them have reliability higher than 0.7.

Based on this test, and after all the modifications, each scale was considerably appropriate and reliable to proceed with the real questionnaire to a larger audience.

### **4.4 Data collection**

An online survey was developed to collect the necessary data. According to Hyman (1967), surveys are one of the most commonly used quantitative techniques. This approach, including online surveys,

is proving to be particularly advantageous when collecting data from large pools of participants. It also proves to be a quick, simple and cost-effective approach for collecting data from large numbers of people in a standardised way (Bell et al. 2018; Bhattacharjee, 2012). This is precisely why it was employed in this specific research study.

The author posted the survey on social media platforms like Facebook, Instagram, WhatsApp, and Reddit, between 6<sup>th</sup> of August to 31<sup>st</sup> of August 2023. The snowball sampling approach was utilized because some respondents spread the survey among themselves.

The researcher took proactive steps to reduce the likelihood of respondents abandoning the questionnaire. This was accomplished by actively seeking participant input and comments during a pilot study that was carried out for pre-testing purposes. The insights gained from this preliminary stage played a crucial role in refining and improving the final research instrument.

To reach a larger audience, the survey was published in English. In addition, the aim was to reach an audience that uses social media, without excluding anyone based on gender or background. The only rule for answering this questionnaire is to be  $\geq 18$  years old and to use any kind of social media.

#### **4.5 Questionnaire development**

The questionnaire was conducted using Qualtrics. The survey starts with a brief introduction that explains the purpose of the study and how the data will be used. Participants are also made aware of the confidentiality of their responses and are thanked for taking part in this research.

The following section of the survey shows two images of Lil Miquela, the virtual influencer of choice for the study. The first image is used to introduce the virtual influencer to respondents, while the second shows her using her social media platform to promote a high-end clothing line. The second image is a screenshot of one of her Instagram posts, specifically chosen by the researcher to show respondents how much engagement she can get. After the initial blocks of information about the survey and the VI, the first block of questions consisted of four questions about the previous pictures they had seen. Based on the theme of sincerity and the pictures and description they had been given, they were asked: if she seemed good hearted, if she was sincere, is she comes off as very genuine and if she was down-to-earth. Participants were asked to agree or disagree with the four statements provided on a 7-point Likert type scale from 1 (strongly agree) to 7 (strongly disagree). Still on the same block of questions, but focused on the concept of “attractiveness”, the respondents were asked if they thought she was attractive, classy, beautiful, elegant and/or sexy.

The second block debuted a Calvin Klein advertisement in which Bella Hadid and Lil Miquela both appeared. Three questions about the brand fit of the virtual influencer were posed to the respondents

following the viewing of the advertisement. They were questioned on whether they thought Lil Miquela and Calvin Klein go well together, whether they were a good match, and whether they thought Lil Miquela was the right choice to represent Calvin Klein.

The third block is related to how respondents perceived the ad and the brand after watching the advertisement. A semantic differential scale was used so participants could demonstrate their perception concerning the contradictory statements.

The engagement respondents would offer the brand based on the commercial they saw was the subject of the fourth questioning block. They were given nine items to answer on a 7-point Linkert scale, allowing them to express their thoughts in the range of 1 (strongly agree) to 7 (strongly disagree).

The fifth and last set of questions pertains to the respondents' demographics, including their age, gender, nationality and level of education. Adding also an open question regarding their favorite social media platform. They are showed in Table 2:

VARIABLES	CATEGORIES
<b>Respondents' information</b>	
Age	6 categories: 18 – 25 years, to > 60 years old
Gender	3 categories: male, female or other
Location	Open question
Education	4 categories: high school or other to master's degree or higher
<b>Respondents' information regarding social media</b>	
<b>Q16</b> Favorite social media platform	Open question

*Table 2- Formulation of the demographic questions*

The scales from prior research, whose references may be found in figure 3, served as the basis for the questions that were generated for the questionnaire.

#### 4.6 Sample

The data collected was imported from Qualtrics into Excel and analysed in SMARTPLS 4. A total of 383 responses were recorded and, after review, 282 responses were considered valid for our analysis. About 101 people abandoned the questionnaire halfway through, or only opened it and never got around to answering any of the questions, resulting in a 26.38% abandonment rate. In the end we had a response rate of 73.62%.

In the overall respondent sample, the distribution of gender is as follows: 186 (66%) persons identified as female, 94 (33.3%) as male, and 2 (0.7%) selected "other" as their gender identity. Regarding the age distribution of the respondents, we observed the following: 154 (54.6%) persons fall

within the 18 to 25 age group, 34 (12.1%) are between 26 and 30 years old, 33 (11.7%) belong to the 31 to 40 age bracket, 38 (13.5%) persons fall within the 41 to 50 age range, 20 (7.1%) are aged 51 to 60, and 3 (1.1%) persons are over 60 years old. In terms of education, the majority of respondents (38.3%) hold a bachelor's degree, while 27.3% possess a master's degree or higher. Additionally, 22.0% have a high school education or lower, and 12.4% of respondents have completed a postgraduate program. A visual representation of the demographic information is presented below in table 3 for a better understanding.

Respondents = 282	Demographic	Frequency	Percentage [%]
Gender	Female	186	66
	Male	94	33.3
	Other	2	0.7
Age	18 - 25	154	54.6
	26 - 30	34	12.1
	31 - 40	33	11.7
	41 - 50	38	13.5
	51 - 60	20	7.1
	>60	3	1.1
Education	High School or Lower	62	22
	Bachelor's Degree	108	38.3
	Postgraduation	35	12.4
	Master's Degree or Higher	77	27.3

*Table 3- Demographic information of the respondents*

The final demographic factor examined pertains to the geographical location of each respondent. The country with the highest percentage of respondents, correspond to Portugal (86.5%), followed by the United Kingdom (3.9%), Brazil (1.1%), Hong Kong and Ukraine (0.7%) and other (1.4%). All other countries: Angola, Austria, China, France, Germany, Italy, Kenya, Luxembourg, Peru, Poland, Slovenia, Slovakia, Spain, Thailand, Vietnam and Zimbabwe had a percentage of 0.4%.

The final question referred to respondent's favorite social media where we can understand that the predominant social media relies on Instagram with a percentage of 63.1. Facebook and TikTok both scored 8.2%, and Twitter 5.3%. Youtube showed a percentage of 3.2, LinkedIn 2.8% and Reddit scored 1.8%. Whatsapp and Pinterest had a percentage of 0.7. To finish, Discord, Snapchat and Telegram had a score of 0.4%. At the end, there were 14 persons who answered saying that they don't have a favorite social media, scoring a 5% in the total of the sum.

## 5 Results

The following analysis results from the use of Partial Least Squares Path Modelling (PLS-SEM) through the utilization of SmartPLS 4 software to evaluate the model. Structural equation modeling (SEM) proves to be a highly valuable technique when examining complex theoretical relationships between multiple variables (Hair & Alamer, 2022). During the analysis, two specific tests will be conducted within this framework: the PLS algorithm and bootstrapping.

### 5.1 Measurement Model

To evaluate PLS-SEM results, the researcher must first consider the measurement model (also named as outer model). Next, the structural model (also named as inner model) must be evaluated by the researcher if the measurement model meets all the relevant requirements (Hair et al., 2017). This study will employ a comprehensive set of tests (internal consistency reliability, composite reliability (CR), convergent validity, discriminant validity, multicollinearity, and model fit) to thoroughly evaluate and validate it.

Before the statistical analysis, the author identified an issue with the ATTA and ATTB scales, wherein certain variables exhibited reverse scale. This issue has been rectified, resulting in the inclusion of 'INV' in the names of these two variables.

The Cronbach alpha was assessed, and according to Hair et al. (2013), a construct is reliable if the alpha is greater than 0.70. All variables demonstrated values exceeding 0.70, with the highest variable (ATTB4\_INV) registering at 0.940 and the lowest variable (CE7) at 0.774. None of the indicators were deleted as they were found to be valid and above the proposed value. Regarding Composite Reliability (CR), all indicators surpass the minimum threshold of 0.7, with none falling below this standard. As for the Average Variance Extracted (AVE), if it reaches a value equal to or greater than 0.50, it means that the construct explains, on average, more than half of the variance of its indicators. Concerning that, it is possible to validate that every indicator satisfies these requirements. These results show that the models are internally reliable (Table 1). The next step in this series of tests was discriminant validity. According to Hair et al. (2010), discriminant validity ensures that a construct measure represents phenomena of interest that are not adequately captured by other measures in a structural equation model. Within the discriminant validity we intended to analyse the HTMT and the Fornell - Larcker criterion. The challenge of discriminant validity arises when the HTMT score is significantly elevated. As suggested by Henseler et al. (2014), a threshold of 0.90 has been suggested for structural models with conceptually closely related constructs. In such circumstances, an HTMT value greater than 0.90



would indicate a lack of discriminant validity. In the Fornell-Larcker criteria, the top of each row should be higher than the bottom in order for discriminant validity to exist. It can be observed that both tests' ratios conform to the prescribed recommendations (Table 2). To assess the presence of multicollinearity across all indicators, this study employs the Variance Inflation Factors (VIF). In a more conservative model, Hair et al. (2017) recommends that the VIF value should not exceed 10 to be considered acceptable. The VIFs range from 1.00 to 6.50, not showing a great concern for potential multicollinearity (Hair et al., 2021). To finish, the Standardized Root Mean Square Residual (SRMR) has been suggested by Henseler et al. (2016) as a PLS-SEM goodness-of-fit metric. An objective evaluation of the model's fit quality is provided by the SRMR index, which measures the average magnitude of differences between observed and expected correlations. The calculated SRMR index for our model is 0.046, which is less than the predetermined cutoff of 0.08. (Hair et al., 2016). As a result, the structural model achieves a high level of quality assurance, allowing for the application of path coefficients in later investigations.

Constructs	Items	Outer Loadings	Cronbach Alpha	CR	AVE
Attitude Towards the Ad	ATTA_1_INV	0.936	0.935	0.954	0.838
	ATTA_2_INV	0.918			
	ATTA_3_INV	0.902			
	ATTA_4_INV	0.905			
Attitude Towards the Brand	ATTB_1_INV	0.911	0.945	0.961	0.860
	ATTB_2_INV	0.937			
	ATTB_3_INV	0.921			
	ATTB_4_INV	0.940			
Attractiveness	ATTRAC_1	0.840	0.900	0.926	0.714
	ATTRAC_2	0.806			
	ATTRAC_3	0.886			
	ATTRAC_4	0.850			
	ATTRAC_5	0.841			
Consumer Engagement	CE_1	0.834	0.962	0.967	0.767
	CE_2	0.897			
	CE_3	0.893			
	CE_4	0.882			
	CE_5	0.914			
	CE_6	0.888			

	CE_7	0.774			
	CE_8	0.886			
	CE_9	0.903			
Congruity	CONG_1	0.932	0.924	0.952	0.867
	CONG_2	0.936			
	CONG_3	0.926			
Sincerity	SIN_1	0.741	0.844	0.896	0.684
	SIN_2	0.867			
	SIN_3	0.873			
	SIN_4	0.820			

Table 4- Reliability and Validity test for the complete data

	ATTA	ATTB	ATTRAC	CE	CONG	CIN
<b>ATTA</b>	<b>0.915</b>					
<b>ATTB</b>	0.801 (0.852)	<b>0.927</b>				
<b>ATTRAC</b>	0.371 (0.404)	0.441 (0.479)	<b>0.845</b>			
<b>CE</b>	0.398 (0.416)	0.447 (0.465)	0.375 (0.395)	<b>0.876</b>		
<b>CONG</b>	0.580 (0.623)	0.571 (0.611)	0.514 (0.560)	0.481 (0.505)	<b>0.931</b>	
<b>SIN</b>	0.443 (0.498)	0.461 (0.515)	0.510 (0.589)	0.504 (0.558)	0.501 (0.567)	<b>0.827</b>

Table 5- Fornell - Larcker criterion analysis and HTMT ratios

Note: HTMT ratios are displayed in the parentheses. The diagonal elements (in bold) are the square roots of the variance between the constructs and their measures (AVE).

## 5.2 Structural Model

Following a comprehensive assessment of our variable measurement model, we transition to the subsequent phase. This phase, known as the structural model (or inner model), is dedicated to the rigorous examination of the interrelationships among the variables.

This structural equation model involves an examination of the path coefficients and p values, to understand the strength of the relationship between constructs. To estimate these relationships, a bootstrapping technique was employed.

H1a evaluates whether a perceived fit between a virtual influencer and a brand will lead to a more favorable attitude towards the ad. The results revealed that a perceived fit between a virtual influencer

and a brand has a significant and positive impact on the attitude towards the ad ( $B = 0.478$ ,  $t = 6.900$ ,  $p = 0.000$ ). Hence, H1a was supported.

H1b evaluates if a perceived fit between a virtual influencer and a brand will lead to a more favorable attitude towards the brand. The results revealed that a perceived fit between a virtual influencer and a brand has a significant and positive impact on attitude towards the brand ( $B = 0.127$ ,  $t = 2.193$ ,  $p = 0.028$ ). Hence, H1b was supported.

H1c evaluates whether a perceived fit between a virtual influencer and a brand will lead to a positive impact on consumer engagement. The results revealed that a perceived fit between a virtual influencer and a brand has a significant and positive impact on consumer engagement ( $B = 0.223$ ,  $t = 3.447$ ,  $p = 0.001$ ). Hence, H1c was supported.

H2a evaluates if a Virtual Influencers perceived sincerity will lead to a more favorable attitude towards the ad. The results revealed that virtual influencer perceived sincerity has a significant and positive impact on attitude towards the ad ( $B = 0.204$ ,  $t = 3.158$ ,  $p = 0.002$ ). Hence, H2a was supported.

H2b evaluates if a Virtual Influencers perceived sincerity will lead to a more favorable attitude towards the brand. The results revealed that virtual influencer perceived sincerity has a significant and positive impact on attitude towards the brand ( $B = 0.093$ ,  $t = 2.353$ ,  $p = 0.019$ ). Hence, H2b was supported.

H2c evaluates if a Virtual Influencers perceived sincerity will lead to a positive impact on consumer engagement. The results revealed that virtual influencer perceived sincerity has a significant and positive impact on consumer engagement ( $B = 0.293$ ,  $t = 4.978$ ,  $p = 0.000$ ). Hence, H2c was supported.

H3a evaluates if attitude toward the ad positively and directly relates to attitude toward the brand. The results revealed that attitude towards the ad has a significant and positive impact on the attitude towards the brand ( $B = 0.686$ ,  $t = 13.515$ ,  $p = 0.000$ ). Hence, H3a was supported.

H3b evaluates if attitude toward the brand positively and directly relates to consumer engagement. The results revealed that attitude towards the brand has a significant and positive impact on consumer engagement ( $B = 0.164$ ,  $t = 2.461$ ,  $p = 0.014$ ). Hence, H3b was supported.

H4 evaluates if VI attractiveness will have a moderating role on how VI/brand congruence will impact consumer's engagement. The results revealed that VI attractiveness as a moderating role on VI/brand congruence has a significant and positive impact on consumer engagement ( $B = 0.102$ ,  $t = 3.171$ ,  $p = 0.002$ ). Hence, H4 was supported. The results are presented in Table 6:

Hypothesis	Beta	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Results
ATTA -> ATTB	0.686	0.051	13.515	0.000	Supported
ATTB -> CE	0.164	0.067	2.461	0.014	Supported
CONG -> ATTA	0.478	0.069	6.900	0.000	Supported
CONG -> ATTB	0.127	0.058	2.193	0.028	Supported
CONG -> CE	0.223	0.065	3.447	0.001	Supported
SIN -> ATTA	0.204	0.064	3.158	0.002	Supported
SIN -> ATTB	0.093	0.040	2.353	0.019	Supported
SIN -> CE	0.293	0.059	4.978	0.000	Supported
ATTR x SIN -> CE	0.071	0.036	1.968	0.049	Supported

Table 6- Direct relationships

Note: B= Beta Coefficient. Relationships are significant at  $p < 0.05$ . ATTA: Attitude Towards the Ad, ATTB: Attitude Towards the brand, CE: Consumer Engagement, ATTR: Attractiveness, CONG: Congruity, SIN: Sincerity.

The R-squared ( $R^2$ ) statistic serves as an indicator of the variance explained within each endogenous construct. Following Chin's (1998) recommendations,  $R^2$  values for endogenous latent variables are categorized as substantial (0.67), moderate (0.33), and weak (0.19).

As illustrated in Figure 3 below, the findings indicate that attitudes towards the ad (0.367) and consumer engagement (0.352) fall within the category of moderate variance explained, while attitudes towards the brand (0.665) are categorized as substantial.

This analysis signifies that the Attitudes Towards the Ad (ATTA) construct is influenced to the extent of 0.367 by congruity (CONG) and sincerity (SIN). Similarly, Attitudes Towards the Brand (ATTB) are influenced by Attitudes Towards the Ad (ATTA) at a magnitude of 0.665. Moreover, Consumer Engagement (CE) is jointly influenced by Attitudes Towards the Ad (ATTA) and Attitudes Towards the Brand (ATTB) with an explanatory power of 0.352.

In practical terms, this implies that 36.7% of the variance in Attitudes Towards the Ad can be elucidated by congruity and sincerity, while 66.5% of the variance in Attitudes Towards the Brand can be accounted for by Attitudes Towards the Ad. Furthermore, 35.2% of the variance in Consumer Engagement can be expounded by both Attitudes Towards the Ad and Attitudes Towards the Brand.

In summary, the model's estimations can be viewed in Figure 3:

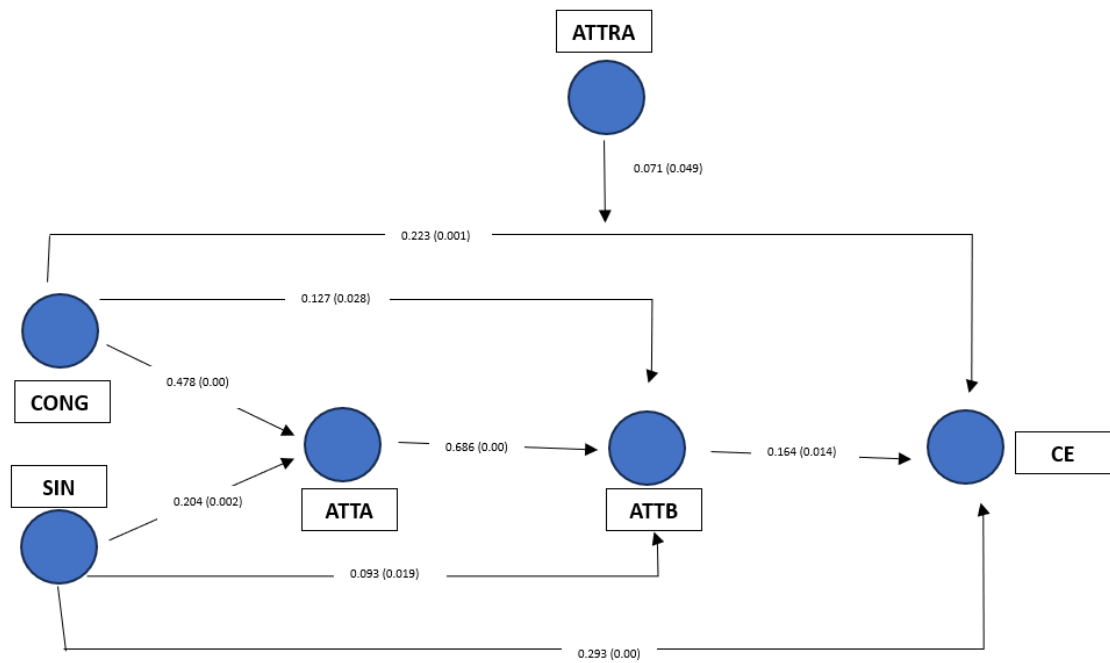


Figure 3 - Model Estimations

## 6 Discussion

The principal objective of this study is to investigate how the personal characteristics of Virtual Influencers impact consumer attitudes and behaviors toward the brands they endorse. Drawing upon an extensive review of prior research on celebrity endorsers, this study seeks to ascertain whether the attributes of Sincerity, Congruity, and Attractiveness exhibited by Virtual Influencers exert influence over consumers' Attitudes Towards the Ad, Attitude Towards the Brand, and, consequently, their level of Consumer Engagement.

The methodology employed in this study has undergone validation through a survey administered to and analyzed from a sample comprising 282 social media users. The findings are as follows:

The congruity between Virtual Influencer and the brand is anticipated to exert a positive and significant impact on consumer attitudes toward the advertisement in which the influencer is involved. Consequently, this alignment is expected to positively influence consumers' attitude towards the brand, ultimately leading to an elevated degree of consumer engagement. As it was said above, H1a, H1b and H1c are all supported.

In the process of selecting an influencer for brand endorsement, it is of paramount importance to meticulously assess both the suitability of the influencer and the appropriateness of the content to effectively convey the brand's message to the intended target audience (Kamins and Group, 1994; Misra and Beatty, 1990). This selection process is underpinned by the consumer inclination to align with brands that resonate with their own identity, as such brands often become extensions of their personal character (Cătălin & Andreea, 2014). Consequently, endorsers effectively represent a synthesis of both brand and consumer identity, underscoring the significance of considering endorsers' personalities as a critical element in the formulation of marketing strategies. These strategies, as evidenced by prior studies, wield considerable influence in shaping consumer behavior and their responses to influencer-led advertisements (Tafheem et al., 2021; Paul & Bhakar, 2017). Overall, this study's findings align with earlier research on the subject of endorsers, affirming that Virtual Influencers are poised to exert a comparable impact within marketing strategies the same way traditional celebrities or digital influencers do.

The level of sincerity exhibited by a Virtual Influencer is anticipated to exert a positive and statistically significant influence on consumer attitudes, both towards the advertisement and the associated brand. These favorable attitudes are, in turn, expected to contribute positively to enhanced consumer engagement. As it was said above, H2a, H2b and H2c are all supported.

Initially, the concept of Virtual Influencers in this study as computer-generated entities led the author to believe that they would not necessarily need to demonstrate sincerity as they are not human but rather digital characters. However, a thorough analysis of the survey results revealed that the perceived sincerity of virtual influencers actually has a positive impact on consumer behaviour towards both the ad and the associated brand. This, in turn, contributes to increased consumer engagement with the brand. The significance of this characteristic lies in its ability to foster successful relationship management with followers and facilitate effective brand advocacy (Duffy, 2017). This notion is supported by Lee and Eastin's (2020) research on social media influencers (SMIs), which corroborates our findings and extends the same principle to virtual influencers (VIs). Consequently, if a Virtual Influencer (VI) is perceived as possessing qualities of sincerity, authenticity, being down-to-earth, and kindness, it is expected to exert a more substantial influence on both the advertisement itself and the brand being promoted. This, in turn, is anticipated to significantly shape consumer engagement with the respective brand.

Attitude toward the ad positively and directly relates to attitude towards the brand. So, we can confirm that H3a is supported.

By analysing Figure 1., we can see that our structural model has revealed that this relationship exerts the most significant impact among all variables under consideration. This phenomenon can be elucidated by the fact that the formation of positive attitudes toward the advertisement engenders cognitive associations between the ad's content and the brand itself. Consumers often assimilate the favorable attributes or messages conveyed in the advertisement with the brand, thereby cultivating a more favorable attitude toward the brand. It is noteworthy that consumers inherently seek consistency and coherence in their attitudes and beliefs. When an advertisement aligns harmoniously with the brand, it fosters a sense of unity and reinforces an overall positive perception of the brand. It is essential to underscore that the findings of this study are in accordance with prior research conducted by eminent scholars (Heath & Gaeth, 1994; Kalwani & Silk, 1982; MacKenzie & Lutz, 1989), thereby affirming the robustness of our results within the broader context of established research. This implies that Virtual Influencers (VIs) do not diverge significantly from more widely employed influencer marketing strategies when it comes to shaping consumer perceptions of a brand when participating in an ad.

Attitude towards the brand positively and directly relates to consumer engagement. Confirming that H3b was supported.

Traditionally, attitudes toward the advertisement and attitudes toward the brand have been commonly associated with purchase intentions as an outcome. However, within the context of this

study, Virtual Influencers (VIs) are perceived as characters designed to evoke heightened brand arousal and generate a more substantial impact on consumer engagement and brand differentiation. Consequently, we sought to determine whether attitudes toward the ad and attitudes toward the brand would similarly influence consumer engagement. Our model estimation has demonstrated a positive influence, indicating that consumers are indeed positively inclined, particularly with regard to sharing and commenting on posts related to the brand.

VI's attractiveness has a moderating role on how VI/brand congruence impact consumer engagement.

Once again, the concept of attractiveness has been extensively explored by other researchers, particularly as it pertains to its direct influence on purchase intention. However, findings in the case of Virtual Influencers (VIs) have revealed a lack of direct impact on purchase intention (Kim & Park, 2023). Nonetheless, our study sought to investigate attractiveness as a moderator, delving into whether a heightened perception of attractiveness would amplify its influence on congruence with the brand and subsequently, its impact on consumer engagement. As depicted in Figure 1, our analysis has demonstrated that attractiveness indeed functions as a significant moderator in how consumers perceive the congruence between these VIs and the brand. This finding aligns with previous research (Jin and Muqaddam, 2019), which posits that attractive influencers, particularly those connected to luxury fashion brands, possess the ability to enhance the appeal of the product by establishing a connection with their own attractiveness. Consequently, if consumers perceive a VI as possessing traits such as attractiveness, sexiness, classiness, beauty, or elegance, it can significantly influence the extent to which she is perceived as a suitable match for the brand. This, in turn, exerts a pronounced impact on consumer engagement, manifesting in increased engagement behaviors such as commenting, sharing, and liking the brand's posts."



## 7 Conclusions

### 7.1 Theoretical contributions

The goal of this study is to understand the effectiveness influencer-brand fit play in the effectiveness of virtual influencers in enhancing consumer engagement toward the advertised brand.

A decade ago, influencer marketing was predominantly the domain of a select group of dedicated bloggers and renowned figures (Kucharska et al., 2020). Subsequently, the landscape of influencer marketing has evolved, witnessing the emergence and diversification of various categories of social media influencers comparison (Jun & Yi, 2020; Khamis et al., 2016; Ren et al., 2023). In more recent times, the emergence of virtual influencers has become a noteworthy phenomenon attributed to the continual advancements and innovation in the field. As the topic is considerably new, there is a lack of previous research on virtual influencers. Although previous research indicates a recent interest in these types of influencers (Conti et al., 2022), an in-depth investigation is needed. Our research enhances the literature by providing the following revelations regarding virtual influencers:

Sincerity, Congruity, and Attractiveness, attributes typically associated with human endorsers, have been extended to the world of Virtual Influencers (VIs). The research confirms that these attributes significantly influence the flow of the consumer engagement that is impacted by the way they react to the ad and the brand.

The study dispels the initial notion that Virtual Influencers (VIs) need not demonstrate sincerity due to their non-human reality. It reveals that perceived sincerity of VIs positively influences consumer behavior toward both the advertisement and the associated brand, contributing to a positive image of both the brand she is promoting and for herself.

Another pertinent contribution pertains to the mediating role of Virtual Influencer's attractiveness. Hence, this study broadens the literature by evaluating the indirect relationships between VI/brand congruence and consumer engagement through VI attractiveness. Prior research has predominantly directed its attention towards the examination of purchase intent influenced by the attractiveness of virtual influencers (VIs), having a negative response on that Kim and Park (2023). This can explain to some extent that VI's can be more effective when generating arousal around a brand, bringing attention and generating e-WOM (electronic word-of-mouth) than to create purchase intention. Explaining why Lil Miquela has such a big audience on its social media and a lot of attention when promoting a brand.

## **7.2 Managerial Implications**

For high end brands seeking to enhance their marketing strategies, the inclusion of Virtual Influencers should not be underestimated. In order to achieve more effective marketing outcomes, the research and findings presented in this article can serve as valuable points of reference for marketers and brands:

The findings of this study have led to the conclusion that the audience is receptive to embracing this innovative influencer marketing strategy. This study underscores the potential significance of Virtual Influencers in driving consumer engagement during brand promotion. Consequently, it underscores the importance of selecting an influencer whose attributes align cohesively with the brand's identity. As a brand, ensuring alignment between the two, and the selection of an influencer who consistently demonstrates sincerity and authenticity, is of paramount importance to benefit from this promotion. I would suggest companies to firstly do deep research on each Virtual Influencer to understand if there are any scandals associated with them and their expertise. This is an easier way to stay away from conflicts and associate themselves with the right person.

The research also concluded that attractiveness played a positive role when moderating the relationship between congruence and consumer engagement, meaning companies, in addition to choosing a good fitting to the brand, should also choose a VI that present herself in a good-looking way and have an attractive Instagram feed.

If the objective of the brand is to generate virality, evoke greater attention and e-WOM in younger audiences, Virtual Influencers are the right innovative strategy to implement. As they are mainly online, always giving opinions and recommendations and they are also used to video games, they will be more attracted to this kind of influencing. Our research showed a bigger audience of younger generations responding positively to the questionnaire, so this can also justify that argument. For instance, as the respondents of the survey on this study choose Instagram mainly as their favorite social media, and since this study had such positive outcome on Virtual Influencers, we can assume that the audience of this strategy is mainly present on this social media. Meaning, brand should focus on social media's this type of audience is more present on (e.g.: Instagram), to generate a greater outcome.

## **7.3 Limitations and further research**

This study makes a valuable contribution to the expanding body of research on Virtual Influencers. Nonetheless, like many other investigations, it is accompanied by certain limitations. Primarily, these limitations pertain to constraints in the sampling method. The survey had a significant abandonment rate of 26.38%, which led to fewer completed responses than had been anticipated. We aimed to

achieve a broad and diverse respondent base for the survey; nevertheless, it proved challenging to maintain a balance between respondents from the home country (Portugal) and those from abroad while ensuring that significant discrepancies did not emerge in response rates. For future research, authors may consider narrowing their target audience to focus on the Asian population. This choice is informed by the recognition that individuals within this demographic are more familiar with this form of promotion and may therefore possess more relevant and well-developed insights on the subject matter. Another limitation of this study is its reliance on the author's choice of explanation and images portraying Lil Miquela. The utilization of a single advertising campaign and a solitary Instagram promotion as visual aids may also be considered a constraint, as it limits participants' exposure to the full range of Lil Miquela's capabilities. While respondents were exposed to her Calvin Klein commercial, they may not have been aware of her capacity to engage in real-time promotions for catwalks, produce vlogs on YouTube or even her political opinions. Future researchers may find it advantageous to concentrate their investigations on participants who possess comprehensive familiarity with such influencers, comprehending their operational methods and functions, to extract more authentic and insightful opinions. Given that this study has provided a contextual introduction to Lil Miquela and her association with luxury brands, it is imperative for future research to expand its scope and assess Virtual Influencers potential effectiveness in diverse sectors. Such investigations are essential to discern whether their impact remains consistent across different audience profiles. This analysis will enable brands to make informed decisions regarding the suitability of adopting this influencer marketing strategy beyond the luxury brand niche. To finish, we focused on Virtual Influencer's personal characteristics as a mediator effect on the brand, however, future research could focus on comparing two brands; one that utilizes VI's as their marketing strategy and other that does not to understand if this type of influencing generates a differential outcome to the brand or not.

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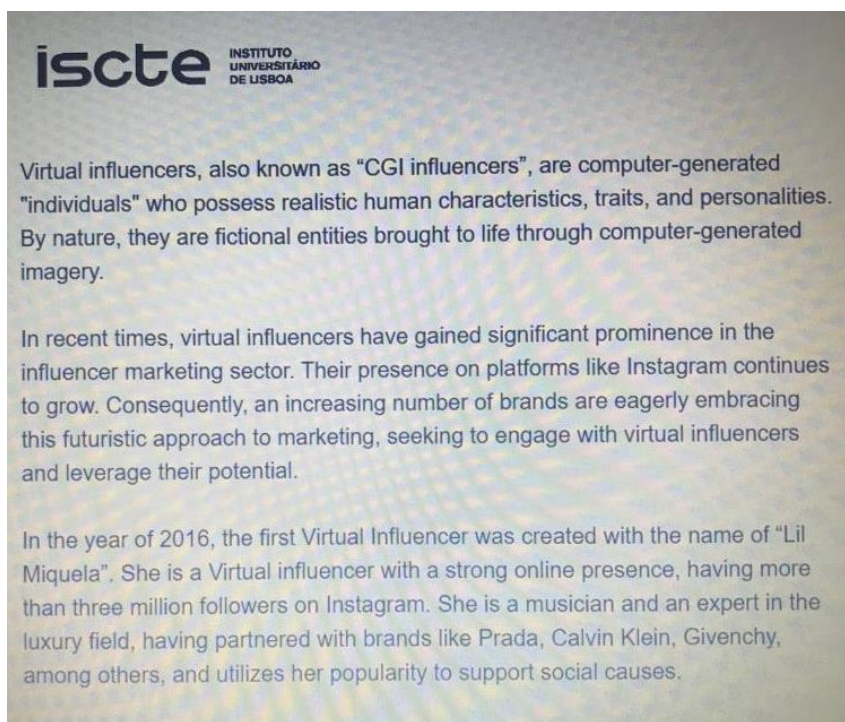
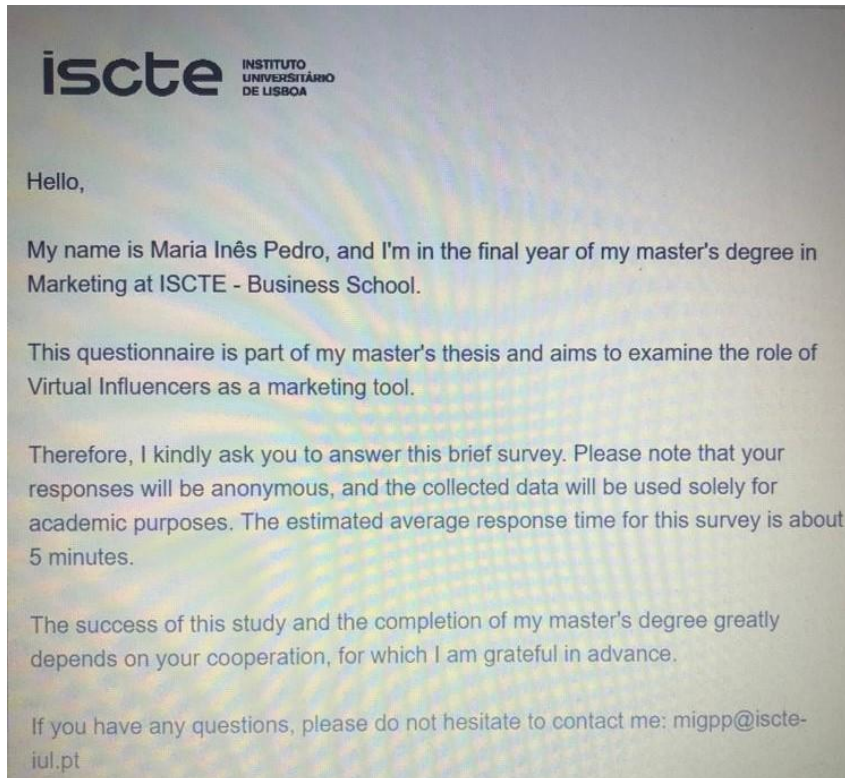
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## 9 Annexes

### Annex A – Questionnaire





Please pay attention to the two pictures that will be shown next.

Here is a picture of Lil Miquela:



Here is a picture of Lil Miquela promoting a high fashion brand (Givenchy):



Please rate the degree to which you agree with each statement, where 1 corresponds to "strongly disagree" and 7 corresponds to "strongly agree". Take into account the images and description of Lil Miquela previously provided.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Lil Miquela seems kind and good hearted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lil Miquela is sincere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lil Miquela comes off as very genuine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lil Miquela is down to earth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the degree to which you agree with each statement, where 1 corresponds to "strongly disagree" and 7 corresponds to "strongly agree". Take into account the images of Lil Miquela previously provided.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree or Agree	Somewhat Agree	Agree	Strongly Agree
Lil Miquela is attractive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lil Miquela is classy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lil Miquela is beautiful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lil Miquela is elegant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lil Miquela is sexy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



You are about to watch an ad in which Lil Miquela (a virtual influencer) and Bella Hadid (a celebrity endorser) both participated in to promote Calvin Klein.

Please watch carefully and until the end.

This video has sound so I would recommend listening with earphones.



Please rate the degree to which you agree with each statement after reviewing the video that Lil Miquela and Bella Hadid did for Calvin Klein:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Disagree or Agree	Somewhat Agree	Agree	Strongly Agree
Lil Miquela and Calvin Klein go well together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lil Miquela is well matched with Calvin Klein	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my opinion, Lil Miquela is very appropriate as an endorser for Calvin Klein	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the ad after watching it:

I like the ad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I dislike the ad
I react favorably to the ad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I react unfavorably to the ad
I feel positive towards the ad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I feel negative towards the ad
The ad is good	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	The ad is bad

Please rate the brand after watching the ad:

Like more	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Dislike more
More positive	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	More negative
Very good	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Very bad
More favorable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	More unfavorable

After watching to the ad Lil Miquela and Bella Hadid did for Calvin Klein, I feel like:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Initiating posts related to Calvin Klein on social network sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posting pictures/graphics related to Calvin Klein	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posting photographs of my use of Calvin Klein products on social media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Following Calvin Klein on social media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sharing Calvin Klein related posts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading fanpages related to Calvin Klein on social media sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Initiating conversations online and offline about Calvin Klein	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing reviews about my positive experience with Calvin Klein	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commenting on posts related to Calvin Klein	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

After finishing the survey, please fill in these questions about you:

How old are you?

18-25

26-30

31-40

41-50

51-60

>60

What is your gender?

Female

Male

Other

Where are you from?



What is your level of education?

High School or lower

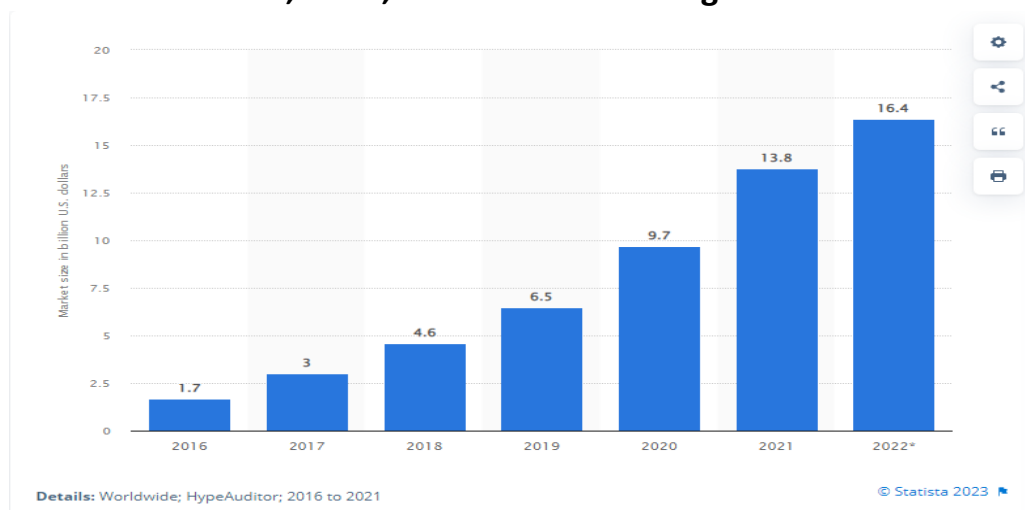
Bachelor's degree

Postgraduation

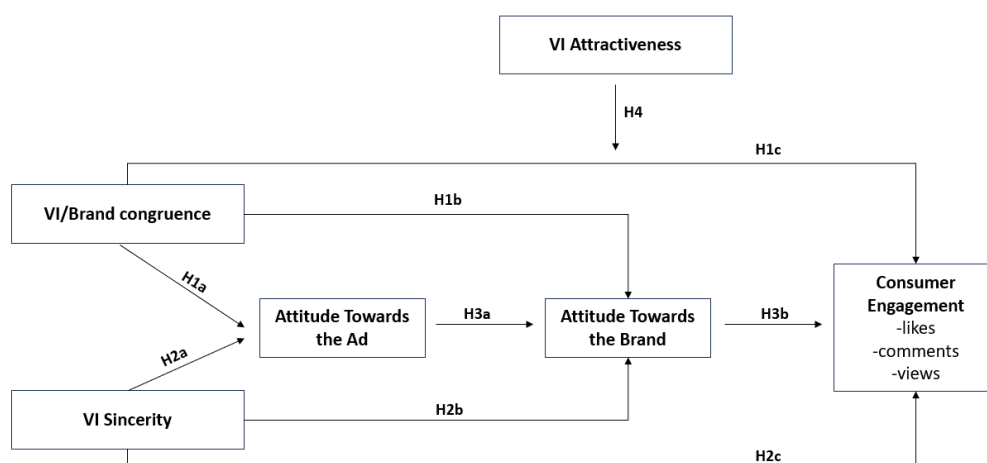
Master's degree or higher

What is your favorite social media platform?

## Annex B – Statista, 2023, Influencer Marketing market size from 2016 to 2022.



## Annex C – Hypothesis Framework



## Annexes D – Model Estimations

