

# ERASMUS UNIVERSITY ROTTERDAM

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## **‘Our world has never been more connected than it is today’**

The effects of social live streaming through Instagram on customer engagement. An experiment of Instagram Story, Instagram Live and TV Commercial.

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## ABSTRACT

Nowadays, live streaming is changing the way companies, brands or marketers interact with their audiences. Viewers can react, express their opinions and ask questions during a live stream. This gives marketers the possibility to respond directly, in real-time, on their audience. Live streaming offers businesses and brands completely new ways of engaging with existing and potential customers. Previous research turned out that live streaming content has an engagement rate of 25%, compared with the on-demand video rate of 17%. Since the use of this new way of marketing is increasingly important, this research will focus on the impact of live streaming through Instagram on customer engagement. Recent studies have looked at Instagram as a marketing tool, however the Instagram Live function can offer new possibilities for brands and marketers. The goal of this study is to understand how new media channels, Instagram Story and Instagram Live, function as a marketing tool and to what extent they influence customer engagement. In order to answer the research questions, a quantitative survey was designed and 245 respondents were analyzed from this online experiment.

The results show that all videos – TV Commercial, Instagram Story and Instagram Live – amplify customer engagement. Consequently, the TV Commercial is likely to have the most powerful influence on customer engagement. On the other hand, this paper concludes Instagram Live is a useful tool to communicate and ask questions. For this reason, an Instagram Live video contains more interaction. Therefore, the results of this study provide valuable insights for those interested in increasing customer engagement on Instagram which marketers can implement in their marketing strategy. Likewise, this study suggests that new media channels are particularly beneficial in terms of education and information, whereas a TV Commercial is useful for entertainment purposes. Companies or marketers can, for example, use live videos for new product launches. In addition, live videos are necessary to create a personal experience and exceed customer expectations. These findings could be interesting to consider in future research. In addition, based on this study it seems that Instagram Story is created more often by respondents than Instagram Live. Surprisingly, Instagram Live is likely to strengthen the effect on customer engagement more compared to Instagram Story. This might be compelling for future research as well, because it seems that Instagram Story is used and watched more often.

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## CHAPTER 1

### INTRODUCTION

In today's digital media landscape the only thing that remains constant is change itself. Social media transformed, and is transforming, marketing. Digital marketing, especially social media, is always changing. It evolved enormously over a year and it is likely that this pattern will repeat itself, yet again, in a year's time. Social media offers the ability to attract and interact more effectively with customers (Appel, Grewal, Hadi, & Stephen, 2019). The marketing landscape is changing, with the focus shifting from traditional marketing methods towards digital marketing. Companies need to continue growing and therefore create social media content that drives customer engagement. Social media is all about producing relevant and valuable content (Quesenberry, 2018a). Social media is nowadays part of our daily tasks (Statista, 2019). Among the Dutch population of more than 17 million people, 65% percent claimed to be active social media users. WhatsApp, Facebook and Instagram rank among the Netherlands' most popular social media platforms (Best, 2019). Instagram, for example, reported having one billion monthly active users and 500 million daily active users worldwide as of January 25, 2019 (Systrom & Aslam, 2020). In the Netherlands there are five million Instagram users and three million daily Instagram users (Statista, 2019).

Consequently, companies are facing lots of challenges to find their appropriate digital marketing strategy. 81% of businesses use video as a marketing tool and six out of nine consumers rather watch online videos than television (Hayes, 2019), (O'Neil- Hart, 2016). Some argue that 82% of all internet traffic will be video by 2022, as 78% of people already watch online videos every week and 55% view online videos every day (Cisco VNI, 2019). Moreover, 72% of the customers would rather learn about a product or service by watching a video than any other communication channel (Hayes, 2019), (Collins & Conley, 2019). Besides video on-demand, live streaming videos are rapidly growing. Live streaming, through platforms like Twitch, YouTube Live, Instagram Live, Facebook Live and others, is quickly emerging as a new marketing channel for companies (Cai & Wohn, 2019). Live streaming has a big impact as content is more up-to-date, flexible and informative accessible. No other platform or marketing strategy allows such a high level of interaction as live streaming offers. Live streaming not only offers a real-time interaction experience, but also provides opportunities to communicate and socialize among the audience. Therefore, live streaming has the highest rate of engagement of all content types (Hu, Zhang, & Wang, 2017), (Zhu, Yang, & Dai, 2017). Live streaming content has an engagement rate of 25%, compared with the on-demand video rate of 17%. Viewers spend eight times longer watching live videos than other videos (Applian, 2019), (Yanev & Patel, 2019). According to Keinänen (2017), Svart (2018), Gilbert (2019), Todd and Melancon (2018) video marketing is increasingly important for businesses and live streaming is undoubtedly a great communication tool. Especially younger generations are using more online communication tools, whereas 63% of people aged between 18 and 34 watch live streaming content regularly.

Instagram created its own live video function in 2017. Instagram already had their popular Instagram Stories section, yet Instagram Live had the feature that allows users to engage and interact with followers in real time with streaming content (Newberry, 2019), (Biteable, 2019). Instagram videos get over two times more engagement than Instagram photos. 68% of the consumers come to Instagram to interact and Instagram reports an 80% increase in time spent watching video on the app (Systrom & Aslam, 2020), (Newberry, 2019). Viewers tend to interact more with brands in real-time, asking questions about a brand's latest product during a live launch or promotion (Blair, 2017). According to Facebook, online video viewers show increased engagement and longer viewing times while watching live streaming versus traditional video (ComScore, 2017), (DMI, 2018), (Blair, 2017). Previous research pointed out live streaming has a positive impact on audience interaction and engagement.

Live streaming video as a mean of storytelling and advertising is no longer an option, it is a necessity. Thus, organizations should try and keep up with the changes to stay ahead from other competitors. It is clear that companies can increase customer engagement with a good live streaming marketing strategy (Brouwer, 2015), (Keinänen, 2017), (Svart, 2018), (Sun, Shao, Li, Guo, & Nie, 2019), (Gilbert, 2019), (Todd & Melancon, 2018). Research have paid insufficient attention to understanding the massive participation behavior and motivation exhibited by live video streaming audiences.

### 1.1 Academic and Managerial Relevance

This thesis is relevant for managers because it investigates in the importance of live streaming through Instagram as a marketing tool. Instagram live streaming gives the opportunity to attract viewers and helps interact more effectively with the target audience. Digital strategies are increasingly important, as the new technologies are driving rapid innovation in marketing and there is a large number of active users on social media nowadays. At the same time, customers are expecting more and more personalized interactions and content. Therefore, it is not surprising that marketers have embraced social media as an unthinkable marketing channel. Almost 50 percent of all internet users look for product or service videos before making a purchase decision. Hence, it is increasingly important for marketers to deliver more video content (Appel, Grewal, Hadi, & Stephen, 2019), (Quesenberry, 2018b), (Wilson, 2020). However, recorded video is costly and more complicated to produce, whereas live streaming video decreases costs and at the same time increases customer engagement (Gilbert, 2019). The results of traditional marketing (TV) are difficult to measure. It is hard to know how successful the campaign was. Whereas, the most important reason to choose for live streaming video is to easily reach the right target group and to communicate with them. Traditional video methods, compared to live streaming, have higher costs, lower efficiency and are not individualized. Companies' messages through social media are advantages over the traditional communication channels (Enginkaya & Yilmaz, 2014). To be successful, companies must make digital investments wisely and look for new opportunities to exceed

competition. Users of new media, such as live streaming, struggle to engage and motivate viewers to make purchases. Conversely, in traditional marketing this is easier because most companies are already familiar with this marketing tool and consumer confidence ranks higher. Once brands or companies understand the powerful direct connection live streaming provides between the streamer and audience, it can take their businesses to a whole new level (Brouwer, 2015), (Qin & Wang, 2019), (Olenski, 2015a). So, social media platforms like Instagram require further research. From a managerial perspective, this study provides insights into how companies can apply the live streaming technology to attract and retain customers and stimulate customer engagement. Live streaming is one of the fastest growing marketing tools because this helps to reach a broader audience with a relatively low investment.

Keinänen (2017), Svart (2018), Wongkitrungrueng and Assarut (2018), Todd and Melancon (2018) already investigated in the importance of live streaming content. Keinänen (2017) did research about live streaming in marketing communications and corporate branding. This research highlighted that live streaming fits well in the marketing context, as this can be used for brand or product releases. Live streaming content is useful to show how products work, organize webinars or interviews and customer support. Moreover, this research found out that companies use live streaming content for reaching a wide network which includes new and existing customers and engagement with their audiences. Svart (2018) investigated in live streaming as a marketing strategy and confirmed with Keinänen (2017) as companies utilize live streaming for communication purposes as well as to reach both new and existing customers. Wongkitrungrueng and Assarut (2018) investigated in the role of live streaming in building consumer trust and engagement. They draw attention to live streaming shopping, which had a direct impact on customer engagement. The main reason for customers to watch live streaming is that they feel more connected, which amplifies customer engagement. They used product value and consumer trust as variables and they concluded no direct effect of utilitarian and hedonic values on customer engagement. These researchers concluded that live streaming content is more useful in attracting and engaging with audiences, compared to traditional marketing and videos on for example YouTube. However, Keinänen (2017) and Svart (2018) investigated in the company's perspective, whereas customer perspective is also an interesting area. The study of Wongkitrungrueng and Assarut (2018) was limited to fashion products and other products could have another impact on customer engagement. They also collected data through using Facebook Live. Consequently, it is useful to include other platforms as well, like Instagram, for further research (Wongkitrungrueng & Assarut, 2018).

Cai and Wohn (2019) draw attention to shopping with live streams, also known as live streaming commerce, which is comparatively new. They describe characteristics of live streaming and consumer motivation to participate in live streaming. Cai and Wohn (2019) found enjoyment of interaction as consumers' motivation to watch live streaming. Moreover, need for community was not associated as motivation for watching live streaming. However, Todd and Melancon (2018) found that connection and need for community were important motivations. Live streaming content is especially



important in developing an engaged and active online or social media community. Todd and Melancon (2018) refer to the idea of learning more in a live stream video or improving skills or knowledge is an important driver for consumer motivation to watch these kinds of videos. Educational and ‘how-to-use’ content might be well-suited, which is also mentioned in the research of Keinänen (2017) and Svart (2018). Svart (2018) highlighted in his research the importance of finding new innovative ways for using live streaming content, like educational purposes. Keinänen (2017) emphasized the relevance of ‘how-to’ in live streaming content.

Just as traditional video marketing had been widely studied from the customer’s perspective, it would be advantageous to do the same exploration with regard to video streaming as well. Live streaming is a fairly new way of doing marketing communications, and thus, requires further research. Both, Svart (2018) and Keinänen (2017) did qualitative research, thus quantitative research on live streaming could be compelling as well. Further research about live streaming could explore more in the demographic and frequency of watching live streaming. Furthermore, consumer motivation – informative, entertainment, educational purposes, interaction and product demonstration – requires replication and further research as this stimulates watching live streaming content. Lastly, despite growing popularity, research in live streaming on Instagram has been limited (Cai J. , Wohn, Mittal, & Sureshbabu, 2018), (Cai & Wohn, 2019). With the growing use of digital media as marketing tools, popular marketing perspectives have shifted from traditional push marketing to pull marketing, in which marketing is seen as an interactive process that, if managed properly, has the ability to co-create value. Since live streaming is a relatively new tool, additional research is needed to fully understand the effectiveness of this marketing tool, for instance exploring the impact of live streaming on customer engagement.

## 1.2 Problem Statement and Research Questions

The goal of this study is to understand how live streaming functions as a marketing tool and to what extend it can influence customer engagement. The idea of this thesis was born from the author’s own interest, personal ambition and enthusiasm for digital marketing. It is without question or debate that live streaming is a relevant issue in today’s world of digital marketing. Therefore, the main question of this research is: *‘How can social live streaming through Instagram stimulate customer engagement?’*

This will be studied according to different sub research questions.

- RQ1: What is the difference on customer engagement between traditional marketing (TV) and social media marketing (Instagram)?
- RQ2: To what extent do the new way of marketing, stories and live streaming on Instagram, differ on customer engagement?
- RQ3: To what extent do consumer motivation moderate the relationship between live streaming/story on Instagram and customer engagement?

### 1.3 Thesis structure

The structure of this paper is organized as follows. In the next chapter the relevant literature is discussed, hypotheses are formulated and this results in a conceptual model. Secondly, in Chapter 3 there is an explanation of the methodology of this study. Moreover, the regression models and the data collection analysis are explained. Chapter 3 also provides descriptive statistics of the sample. This is followed by the results of the quantitative research in Chapter 4. This chapter also present several statistical tests that indicate to what extent the results can be explained to support or reject the hypotheses. Finally, Chapter 5 involves a conclusion of this thesis, along with limitations and recommendations for future research.

## CHAPTER 2

### LITERATURE REVIEW

Social media has fundamentally changed the way of communication. Using the internet, social media or mobile apps, has become part of billions of people's daily lives. The traditional marketing television, radio and print advertising had a one-way interaction with the customers where messages only could be sent. Communication between businesses and customers is now a two-way interaction, enabling customers to engage with their favorite brands in completely new ways. Social media gives the opportunity to include virtual interactions with customers that a brand possibly will never meet face-to-face (Biocca & Harms, 2014). Engagement on social media is a measurement of how effectively a company is creating interactions with their customers through a specific channel (O'Brien & Toms, 2010) (O'Brien, 2018). Engaging customers in social media strategies is becoming a critical element of almost any organization's marketing strategy. Nowadays, social media is expanding with new media tools, where not only pictures are shared with question-answer conversations, but real-time interaction can take place. This enables businesses to interact and engage even more with their audience. Live streaming is some of these tools of new media and has exploded in popularity over the last few years for one main reason, the real-time interaction (Park, Houston, & Janakiraman, 2018). This section is written to provide a comprehensive understanding of relevant concepts such as traditional marketing, social media marketing, new media channels, live streaming, Instagram Story and Instagram Live, customer engagement and consumer motivations. Furthermore, prior literature on these topics will be discussed and hypotheses will be formulated and translated into a conceptual model.

#### 2.1 Traditional and digital marketing

Traditional marketing is the process of marketing used in traditional ways without the help of digital technologies like web or social media. Traditional marketing is a conventional method of marketing that helps businesses to reach a semi-targeted audience with various offline advertising, for example TV or radio, and promotional actions, for example print advertising, newspapers, billboards or magazines. Today, traditional marketing is still effective for many businesses. Consequently, it is not the only way to target the right audience. Technology has changed and organizations are able to connect with their audience online (Sherman, 2019). Digital marketing can facilitate richer and faster interactions between businesses and consumers, compared to traditional marketing. The rise of digital marketing, especially social media, appears to be fundamentally changing the traditional marketing landscape. Traditional marketing, for example television, is focused on a broad audience, whoever sees the advertising is targeted. Besides, there is no clear measurement of who or what have seen the TV commercial. This is the main reason why there is an advantage of digital marketing over traditional marketing, as this has an advantage in communication, sharing and interacting. Advertising with digital marketing (social media) makes it easier to connect with the right audience based on demographic,

geographic or psychological characteristics (Coursaris, Osch, & Balogh, 2013), (Hochsteiner & Maximilian, 2017), (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011).

Traditional marketing (TV advertising) is difficult to measure and therefore the influence on customer engagement is more complex. The impact is highly dependent on type of content, style, communication and composition (Gountasa, Gountasb, Ciorciaric, & Sharma, 2019). Research showed that traditional media have a positive impact on cognitive load (easy to understand), motivation (persuasiveness), attention (how long people look at the content) and on brand recognition (Dinner, Heerde, & Neslin, 2013). However, there is a lack of interaction, which might influence customer engagement negatively. Consumers are now interacting with brands in a constant way, and digital media provides essential platforms for interaction (True Impact, 2015). Another research study, by Global Web Index, found that TV advertising is the most important marketing channel for discovering new brands. They pointed out that TV advertising leads to a greater increase in brand equity and brand engagement. Moreover, Xu, Frankwick and Ramirez (2016) found that consumers feel emotionally involved in TV commercials and of all consumer purchases, 85% are made from an emotional bond. As a result, TV advertising has a greater impact on purchase intention (Xu, Frankwick, & Ramirez, 2016). The main reason for customer engagement during a TV commercial is the emotional involvement and the entertainment purpose of the video. Despite the fact that digital marketing is strongly growing, traditional marketing still influences customer engagement (GlobalWebIndex, 2018), (ScreenForce, 2017), (ScreenForce, 2018).

H1a: Traditional marketing has a powerful influence on customer engagement.

## 2.2 Social media marketing

People spend increasingly more time online and social media is one main reason of this growth (Stephan, 2016). The future of marketing will largely be carried out in digital settings, particularly social media and mobile (Stephan, 2016). According to Laroche, Habibi, and Richard (2013) the main goal of social media is to help people create connections and enable them to interact and maintain relationships, as consumers want to be able to participate (Laroche, Habibi, & Richard, 2013), (Hochsteiner & Maximilian, 2017).

Facebook is worldwide the most popular social networking website, with an estimated 2,5 billion users as of December 2019 (Clement, 2020). Instagram is another popular online social networking platform. In June 2018, Instagram had reached one billion monthly active users. Instagram is one of the fastest growing social media platforms, not only for individual users but also for brands. Instagram is therefore the most favorite platform to engage with customers (Clement, 2019). For many years, sites like Facebook, Twitter and LinkedIn were the most preferred social networking platforms. However, Instagram has taken the market in recent years (Ting, Run, & Liew, 2016). Instagram allows users to take photos and videos, use embedded filters to enhance pictures and share content with an

audience of friends or a wider audience of all Instagram users (Chen, 2018). Instagram is a free, mobile, social networking application used for photo and video sharing. Instagram facilitate the maintaining of relationships with friends and families, as well as the making of new friends and forming of communities based on interests and purposes (Ting, Run, & Liew, 2016), (Bergstrom & Backman, 2013). This application utilizes mobile technology to provide visual connection between brands and consumers. Instagram was founded in 2010 by Kevin Systrom and Mike Krieger (Blystone, 2019). In April 2012, Facebook bought all shares of Instagram with the intention of operating the company under independent management (Derksen, 2012), (Chen, 2018). Instagram attracts the younger generation and it is also found that young customers spend more time on Instagram than other sites (Salomon, 2013). Therefore, Instagram is increasingly popular.

Thereby, Ting, Run and Liew (2016) mention that organizations with high levels of presence on Instagram are likely to have more customers following them and their products, which influence a positive brand attitude and engage users (Ting, Run, & Liew, 2016). Ashley and Tuten (2015) emphasize the use of frequent updates and incentives for participation as important for increasing engagement on social media (Ashley & Tuten, 2015), (Ellison, Steinfield, & Lampe, 2007). Hence, interaction is an important part of customer engagement on social media platforms like Instagram. After posting a photo or video with a description, customers will likely have inquiries about the brand or company that may not have been answered in the post. Traditional marketing doesn't allow direct interaction with customers, whereas social media marketing offers a higher level of engagement and interaction (Sherman, 2019), (Zolkepli, Hasno, & Mukhi, 2015), (Huang, 2016), (Castellá, Abad, Alonso, & Silla, 2000).

### 2.3 New media marketing

Since the proposed study will take into account new media, it is important to describe the difference between social media and new media. Social media is focused on sharing, connecting, and collaboration. Social media marketing is mainly aimed at posting and sharing different types of content to achieve marketing goals. New media marketing, on the other hand, allow consumers to interact, which is a very effective tool for information exchange between people (Ziyadin, Doszhan, Borodin, Omarova, & Ilyas, 2019). New media is used to describe content available on-demand, providing information and entertainment using the internet (Dictionary Cambridge, 2020). There are two important elements in new media. First, the information is accessible, which implies that there is information online available. Second, a relationship between individuals and organizations can be built through communication and interactivity (Szabo, 2013). Both new media and social media enable an easier way to communicate with the audience. The main difference of new media versus social media is the nature of communication. The two-way interaction with new media, compared to social media, can now take place in real-time. The interactive nature of new media channels provides marketers tools

to become part of consumers' conversations and have the ability to directly engage with audiences (Bernhardt, Mays, & Hall, 2012), (Kaplan & Haenlein, 2010). In traditional online communication through social media, customers can only learn about products through pictures, text and reviews. By contrast, new media marketers show products in real-time videos, thus giving customers more detailed product information. Live streaming is an example of new media and provides a possibility to communicate with, both existing and potential future customers, in a digital environment. This creates a two-way connection where viewers are able to respond directly and can actively participate (Wongkitrungrueng & Assarut, 2018), (Sun, Shao, Li, Guo, & Nie, 2019), (Svart, 2018).

### 2.3.1 New media: live streaming

A popular tool of new media is live streaming. Live streaming is a term that is used to describe the process of broadcasting real time or live video footage to an audience over the internet (Cambridge Dictionary, 2019). Unlike previous streaming services, such as television (traditional marketing) and YouTube (social media marketing), live streaming offers real-time human interaction between the streamer and viewers, facilitating their ability to interact with each other. Previous research of Keinänen (2017) highlighted the use of live streaming as a new communication channel for companies to reach a wider audience. Nonetheless, live streaming is dependent on a certain time and therefore it might be difficult to reach a specific audience. The reasons and expected outcomes for companies to use live streaming mentioned by Keinänen (2017) include growing coverage by reaching networks, engaging with audiences, creating good content and customer experiences, creating brand awareness and differentiating the company (Keinänen, 2017). Svart (2018) concluded that live streaming is a great marketing tool to make a difference how companies could interact with their customers (Svart, 2018). The value of live streaming video is clear. It strengthens the connection with the target audience as well as it increases the likelihood of that audience sharing and interacting on social media (Blair, 2017). Live streaming allows companies to interact with their customers, reach a wider audience or use richer content which is not always informative (Olenski, 2015b), (Arnett, Netzorg, Chaintreau, & Wu, 2019), (Zhang, 2017).

### 2.3.2 New media: Instagram Story and Instagram Live

Instagram is a social media platform; however, the features Instagram Story and Instagram Live fall under the category new media. As both features, compared to traditional marketing, transmit a message that requires the reader, viewer or listener to respond directly to the organization. Instagram started posting and sharing photos and later videos became increasingly popular. In 2016, Instagram launched the Instagram Story feature, which allows users to share photos and videos in a slideshow for only twenty-four hours (Fonseca, 2019). Compared to traditional posts, stories can contain multiple pictures or short videos. Instagram Story is co-creative and a form of two-way communication. In addition to

Instagram Story, a half year later came Instagram Live. Instagram Live is a feature that works within Instagram Stories and allows users to broadcast live videos to other users on the platform. Instagram Live allows users to stream videos to followers and engage with them in real time (SproutSocial, 2019).

Previous research has shown that Instagram Stories tend to generate more engagement than Instagram posts because they lead to conversation, as well as they trigger customers to watch actively (Birke, 2017). Instagram Live opens even more potential for conversation, as this allows viewers to ask questions. Another feature that makes Instagram Live particularly engaging, is its long form. Regular Instagram Stories can only be 60 seconds in length, while Instagram Live can extend to a full hour. Furthermore, when Instagram Live is used this is bumped to first place in the Instagram stories, with a push notification above in the Instagram feed. Instagram Live allows organizations to add more interaction, and therefore customers will be more engaged in Instagram Live than Instagram Stories (Law, 2019).

H1b: Instagram Story has a powerful influence on customer engagement.

H1c: Instagram Live has a powerful influence on customer engagement.

## 2.4 Customer engagement

Based on previous research, customer engagement is a communication connection between a business and customer through various channels. This connection can be a reaction, interaction, effect or overall customer experience, which takes place either online or offline. Customer engagement is the degree to which a customer feels involved with the organization (Bowden, 2009), (Brodie, Hollebeek, Juric, & Illic, 2011).

According to Brodie and Hollebeek (2011) customer engagement refers to the interactivity level of consumers with brand-related activities. They identified involvement and participation to be required prior to the expression of a relevant customer's engagement level. They described customer engagement as a reflection of customers' interactive and co-creative experience with a firm or brand. Besides interactivity, involvement and participation, Brodie and Hollebeek (2011) described the last important part of influencing customer engagement, which is the dynamic, iterative process within the relationship that cocreates value (Brodie, Hollebeek, Juric, & Illic, 2011).

According to Vivek, Beatty and Morgan (2012), customer engagement involves the connection that individuals form with organizations, based on their experiences with the offerings and activities of the organization. They suggest that customer engagement needs to focus on individuals who interact with the brand, without necessarily purchasing it or planning on purchasing it. Vivek, Beatty and Morgan (2012) agreed with Sedley (2010), who called customer engagement as a repeated interaction (Sedley, 2010). They define customer engagement as the intensity of an individual's participation in and connection with an organization's offerings. Where customer engagement is composed of cognitive, emotional, behavioral and social elements. Finally, Vivek, Beatty and Morgan (2012)



described participation and involvement as indicators of customer engagement, while value, trust, affective commitment, word of mouth, loyalty, and brand community are potential consequences of customer engagement (Vivek, Beatty, & Morgan, 2012).

This is in line with the research of Doorn, et al. (2010), who draw attention to customer engagement that goes beyond purchasing. They stated that customer engagement results in motivational drivers such as word-of-mouth activity, recommendations, helping other customers, blogging or writing reviews. For Doorn et al. (2010) is customer engagement not only customer-based, but also firm-based and context-based. Customer-based factors are attitudes, goals, resources and perceptions, while characteristics of the brand and the firm together with the different aspects of contextual environment can have just as much impact on customer engagement. Doorn et al (2010) described the behavioral manifestations with a brand or firm focus, beyond purchase, resulting from motivational drivers of the consumer. Therefore, Doorn et al. (2010) discusses customer engagement as a co-creation between the firm and the customer. Experiences may motivate customers to set up a brand community to engage with the firm, resulting in positive word-of-mouth communication. Moreover, consumer resources such as time, effort and money might affect the level of customer engagement (Doorn, et al., 2010).

Dessart et al. (2015) found three main aspects of customer engagement: affective engagement, cognitive engagement and behavioral engagement. The affective dimension is about feelings with two important emotions, enthusiasm and enjoyment. While the cognitive engagement consists of attention and absorption. Attention is about focus during watching content, absorption goes a step further and is the ability to interact. Behavioral engagement consists of sharing, learning and endorsing. Learning is a key aspect of online community participation and social media channels are particularly suited to this goal, as they allow users to post their questions freely and receive feedback from other knowledgeable members or the brand itself (Dessart, Veloutsou, & Morgan-Thomas, 2015). Sharing as an important part of customer engagement is in line with the research of Brodie and Hollebeek (2011), sharing is strongly present on social media and a way for online brand community members to exchange experience, ideas or just interesting content. Vivek, Beatty and Morgan (2012) described that engagement relies heavily on the exchange of experiences, content and information. The last part of the behavioral engagement is endorsing, this is the act of the consumer, showing support and referring to the brand. On social media this is mostly expressed in comments, likes and shares.

Calder and Malthouse (2009) focused with their research on media engagement. They refer to online engagement as part of the utilitarian experience, which provides information and helps customers making important decisions, or the intrinsically enjoyable experience, enabling customers to escape from the pressures of daily life. They concluded four important parts of online customer engagement: information, personal identity, social interaction and entertainment (Calder, Malthouse, & Schaedel, 2009). This is in line with Brodie and Hollebeek (2011), who has proven that entertaining and informative content significantly increases the level of engagement. Calder and Malthouse (2009) found that online engagement, compared to traditional media, is more participatory and interactive. Moreover,



digital marketing is more social in nature and therefore can be used for sharing and communicating, which amplifies customer engagement. They indicate that the integration and social interaction in online media have a positive impact on engagement (Calder, Malthouse, & Schaedel, 2009). According to previous research of Brouwer (2015) and Qin and Wang (2019), brands should use live streaming as an experience to create more customer engagement (Brouwer, 2015), (Qin & Wang, 2019).

H2a: Compared to a traditional marketing approach (TV), Instagram Story has more powerful influence on customer engagement.

H2b: Compared to a traditional marketing approach (TV), Instagram Live has more powerful influence on customer engagement.

H2c: Compared to Instagram Story, Instagram Live has more powerful influence on customer engagement.

## 2.5 Consumer motivation

Motivation has been defined as an emotion or desire operating on the will and causing it to act. Motivation is the need for doing something and the reason someone behaves in a certain way or the willingness to do something (CambridgeDictionary, 2020). Consumer motivation drives people to identify and buy products or services that fulfil conscious and unconscious needs or desires. Consumer motivation is influenced by consumer behavior and their (unmet) needs (Pincus, 2006), (Zhivanova, 2018).

Different scientist investigated in consumer motivation. First, the popular theory of Abraham Maslow (1954) that described the hierarchy of needs. This pyramid explains the natural hierarchy of needs that humans have. Starting with physiological needs (hunger, thirst, safety) and evolving to psychological needs for belongingness, love and self-actualization. Whereas Maslow's hierarchy is an universal theory of human motivation, a lot of mini theories were proposed for individual differences in motivation (Maslow, 1954), (Kunc, 1992). First, the need for achievement, founded by McClelland (1961), motivates consumers, which explains the ability to reach personal goals. Cohen et al. (1955) described the need for cognition, the need to think, as consumer motivation. While Atkinson (1958) used the need for affiliation, the need to fit in a group, having a connection with others and the desire to be in good relationships with surrounding people. Moreover, the need for power, as a result of learning or experience and taking responsibilities to control over others (Atkison, 1958), (McClelland, 1961), (Cohen & Hansel, 1955), (Verplanken, Hazenberg, & Palen wen, 1992).

Schkade (2004) found that consumers' have three main motives for using the internet as a marketing medium, namely, information, entertainment, and social aspects (Stafford, Stafford, & Schkade, 2004). Shoa (2009) confirmed with these three motivators, but also added self-actualization and self-expression, which in turn match Maslow's hierarchy of needs. The sixth motivator Shao (2009) added is community development. Shao (2009) combined the motivation to consumption which include

information and entertainment, participation in social interaction and community development, and production of self-expression and self-actualization. Self-expression is the expression of personality, feelings or opinions. Self-expression allows people to distinguish themselves from others, to reflect their own beliefs and needs and in order to express how they feel. Self-actualization refers to the need for personal growth and development (Heinonen, 2011), (Shao, 2009). This is the highest level of Maslow's hierarchy of needs (Maslow, 1954).

Previous research identified entertainment and information seeking as important motivators for consuming streaming services. An important aspect of streaming is to provide an entertaining media experience (Park, Houston, & Janakiraman, 2018). Even though passing time and learning have been important motivations for consumers, they have not been as dominant as the relaxation and entertainment motives. In order to explore the underlying motivation of consumption related social media usage, Enginkaya and Yilmaz (2014) summarizes these characteristics as participation, openness, conversation, community and connectedness. These characteristics provide important drivers for companies seeking engagement with their customers (Enginkaya & Yilmaz, 2014). Which implies customer motivation is an underlying driver for customer engagement.

Doorn et al. (2010) described engagement as customers behavior towards a brand or firm, resulting from motivational drivers. Brodie and Hollebeek (2011) found that the level of engagement depends on an individual customer's motivational, which are cognitive, emotional and behavioral investments in brand interactions. Shao (2009) also found that a higher consumer motivation positive relate to engagement.

H3a: The positive influence of traditional marketing (TV) on customer engagement is moderated by consumer motivation.

H3b: The positive influence of Instagram Story on customer engagement is moderated by consumer motivation.

H3c: The positive influence of Instagram Live on customer engagement is moderated by consumer motivation.

Previous research of Foster (2016), Hilvert-Bruce, Neill, Sjöblom and Hamari (2018) and Cai and Wohn (2019) explored live streaming shopping attitudes and found three main reasons consumers preferred to shop through live streams rather than traditional online shopping. Firstly, interaction, the ability to communicate with each other. Interaction on social media is measured by likes, comments or shares. The real-time interaction, the ability to communicate, has a positive effect on customers' intention to continue watching a live stream. Secondly, product demonstration, the ability to see how products work. Product demonstration is measured by usefulness and the likelihood to watch the video, which refers to entertainment reasons. Thirdly, product information, the ability to ask more information and questions. Product information through live streaming could be either verbal (spoken or written words) or

nonverbal (pictures) (Foster, 2016), (Hilvert-Bruce, Neill, Sjöblom, & Hamari, 2018), (Cai & Wohn, 2019), (Filippi & Barattin, 2014).

Also, it is noted that in the online environment people like to express themselves and share ideas. Furthermore, customers create and join communities of people to meet the needs of belonging, be socially connected or simply enjoy communicating with other people (Pincus, 2006), (Ziyadin, Doszhan, Borodin, Omarova, & Ilyas, 2019). An huge advantage of live streaming is product reviews, this allows potential buyers to ask questions or request opinions of the user. Companies provide highly personalized services, which can meaningfully influence customer engagement (Wongkitrungrueng & Assarut, 2018), (Sun, Shao, Li, Guo, & Nie, 2019), (Delgado, 2018). Therefore, consumer motivation will be higher with the ability to interact and communicate between customer and companies.

H4a: The moderation effect of consumer motivation on customer engagement is higher for Instagram Story, compared to traditional media.

H4b: The moderation effect of consumer motivation on customer engagement is higher for Instagram Live, compared to traditional media.

H4c: The moderation effect of consumer motivation on customer engagement is higher for Instagram Live, compared to Instagram Story.

## 2.6 Conceptual framework

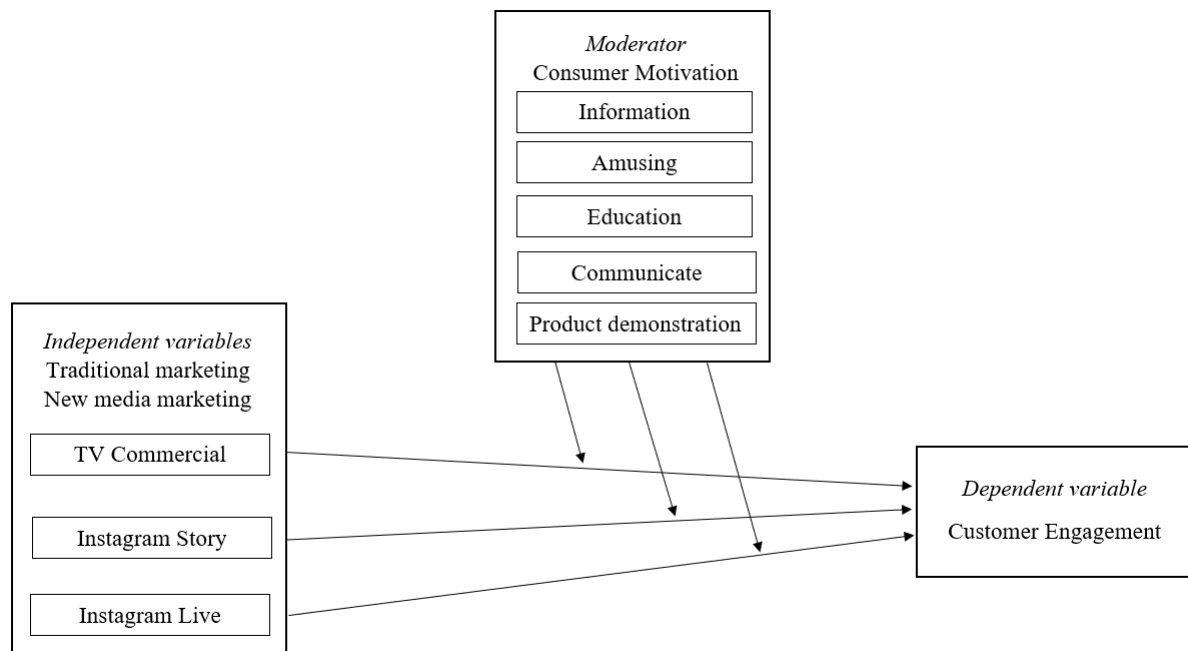


Figure 1- Conceptual Model

## CHAPTER 3

### METHODOLOGY

The goal of this research was to determine if a change in the independent variable, Instagram Live, Instagram Story or a TV Commercial would cause a different extent of change in the dependent variable customer engagement. To carry out this research, four hypotheses were formulated based on past research, an online questionnaire was distributed to respondents and the responses were quantitatively analyzed. The survey was designed by using Qualtrics Survey Software and the results were analyzed with the statistical analysis software SPSS. This chapter will explain the research design, the sample selection, the description and measurement of the variables, the analytical technique and the data collection process.

#### 3.1 Research design

In the virtue of explanatory and quantitative research, it was chosen to answer the main question *‘How can social live streaming through Instagram stimulate customer engagement?’*. The data was gathered through an online survey, using three different randomized videos in a between-subject experimental design. The Instagram Story group and Instagram Live group were the experimental groups, whereas the TV Commercial was the control group. Typically, an experiment is constructed to be able to explain some kind of causation. Between-subject studies have shorter sessions than a within-subject design, because different participants were randomly assigned to different conditions. Shorter sessions are less tiring or boring for participants, this is especially useful when using videos in a survey and some people may lose patience when watching it (Budiu, 2018). Therefore, the choice was made for a between-subject design. This had ensured that respondents were not influenced in their responses, because they only saw one of the three videos and this gave a higher validity in responses. Moreover, the spillover effect was taken into account. The between-subject design assigned individuals to different treatment conditions (including spillover) with known probabilities. Interestingly in an experiment, spillovers are randomly determined by the treatment, a respondent is in a spillover condition no longer directly under the control of the experimenter. Respondents were randomly assigned to one of three conditions with a complex probability, which has also increased the validity of the research (Coppock, 2019), (Charness, 2012).

The first part of the survey consisted of descriptive statistics. The first section of the survey was composed of questions concerning demographic information about the respondents. At first a filter question (gender and country) was used, to make sure that only Dutch women filled in the survey. Afterwards, the respondents were asked questions regarding their age and educational level. The second part of the survey still consisted of general questions. This was related to the use of traditional and/or social media channels and their social media involvement and intensity. It also considered usage behavior – the hours active on social media. Furthermore, there were questions about the participant’s Instagram habits, such as the frequency of visits and live stream familiarity. The third part focused on

the independent variables, watching TV, Instagram Story and Instagram Live. Questions were asked about familiarity with the media channels and the hours active on it. Moreover, questions about the incentive and motivation for watching the videos were asked. Before watching the video, there were several questions to be answered about cosmetics usage, purchase behavior and importance thereof. Those questions were followed by a short introduction of the three different videos. Afterwards, one of the three videos were played, as shown in Appendix I. The video was randomly given to respondents to avoid selection biases, through a randomization function in Qualtrics. Lastly, after seeing the video, respondents had to answer the same questions about customer engagement and this was measured by using statements on a five-point Likert scale (one strongly disagree to five strongly agree). These statements are shown in Appendix III. The consistency of the questionnaire items in the survey needs to be stable, which means that answers of individuals remain relatively the same at two different times. The questions and answers of the survey are added in Appendix II, so that the survey can be carried out again over time (Golafshani, 2003).

### 3.2 Sample

This research is focused on Dutch female Instagram users. Instagram had 5,588,000 users in the Netherlands in March 2019, which accounted for 32,5% of its entire population. The majority of Instagram users in the Netherlands are women, 55,6%, and the largest user group with 1,590,000 people are aged between 25 and 34 years (Instagram, 2019), (Best, 2020). Respondents were not randomly chosen, but carefully based on criteria to prevent the sampling bias. The representativeness of the sample increases its reliability of the research. Since the videos in the survey were about cosmetics, this research was focused on (1) women (2) from the Netherlands who (3) use Instagram. In addition to these selection criteria of the sample, age was also taken into account. Generation Y is between 25- 40 years old, this group of people have grown up with the internet and are active users of Instagram. Generation Z is between 10-25 years old. Generation Z is addicted to their mobile phone, they have expressed the need to find a place in society with their own personalities (Ubels, 2017), (Bolton & Parasuraman, 2013), (Williams & Dupont, 2015). Generation Y and Z are both moving away from Facebook and replace this platform with YouTube and Instagram. Since the age range 10- 40 years is a broad target group, this research is looking for differences within this age group.

In total there were 320 respondents who started the survey; however, 32 respondents did not complete the survey and 36 respondents had missing values. From the 252 respondents who were left, 7 respondents were males and 3 respondents were from outside the Netherlands. The research sample shows 97,2% females (n=245), 98,8% from these females came from the Netherlands (N=242). This means there were 242 Dutch women from the Netherlands left. Secondly, the sample shows a tendency towards young people, since 80,2% of the respondents had their age between 16 and 25 years old, whereas 9,9% between 26 and 40 years and the remaining 9,9% were older than 41. Lastly, most of the respondents (42,1%) had an HBO Bachelor as educational background. The remaining educational

background of the respondents (N=143) was almost equally distributed among MBO (13,6%), WO Bachelor (9,9%) and WO Master (28,5%). Furthermore 5,0% filled in High/ Secondary school as their highest degree, only 0,4% of the respondents owned a PhD, as well as 0,4% of the respondents filled in 'Other' and no respondents did not own any degree. Further details can be found in Appendix IV. Furthermore, most respondents (N=97) are frequently (15-21 hours) using Instagram and none of the respondents filled in to never (0 hours) use Instagram. In addition, 78.5% (N=179) entered that they scroll frequently (15- 21 times) or very frequently (22 times or more) through their timeline. Which means that there were many active Instagram users in the survey.

When N=242 was taken, without men and people living outside Europe, the average speed to complete the survey was 9 minutes, the minimum duration was 3 minutes and the maximum was 90 minutes. There were two outliers of 498 minutes (8 hours) and 1394 minutes (23 hours). These respondents did complete the survey but were not taken into account when calculating the average speed. As shown in Table 3.1, the sample was not equally distributed among the different videos.

Table 3.1- Descriptive statistics research sample for the video shown, gender and country

		<i>Gender</i>		<i>Country</i>		<i>Total</i>
		<b>Female</b>	<b>Male</b>	<b>Netherlands</b>	<b>Outside the Netherlands</b>	<b>N</b>
<b><i>Video Shown</i></b>	TV Commercial	82	4	81	1	81
	Instagram Story	75	2	73	2	73
	Instagram Live	88	1	88	0	88
<b>Total</b>	<b>N</b>	<b>245</b>	<b>7</b>	<b>242</b>	<b>3</b>	<b>242</b>

### 3.3 Measurement of variables

The combination of literature review and quantitative research increased the validity of this research. Internal validity describes whether the results make sense to the readers and whether they are valid independently. An important part of internal validity was the operationalization of important concepts, which were then measured by indicators and statements (Saunders, Lewis, & Thornill, 2009). Therefore, variables are clearly explained in the following section, based on previous research.

#### 3.3.1 Dependent variable: Customer Engagement

Previous research has shown likes, comments and the number of followers as customer engagement on Instagram. It is hard to measure likes, comments and followers in a survey based on a video. Therefore, different statements were used related to customer engagement. Based on previous research there was chosen for a combination of O'Brien and Toms (2010), Calder, Malhouse and Schaedel (2009), Dessart, Veloutsou and Morgan-Thomas (2016). There were 19 individual statements used, as shown in Appendix III, to measure the dependent variable 'Customer Engagement' after seeing the video (TV Commercial, Instagram Story and Instagram Live). The dependent variable was measured through various statements on a five-point Likert scale, ranging from one (strongly disagree) to five (strongly

agree). The participants had to evaluate to what extent they agreed with the statements. Likert scales can be assumed as an interval variable, if they follow a normal distribution or if they have multiple questions with Likert scales that are used to measure an attitudinal variable. The average of these statements of customer engagement can be considered as an interval variable and the underlying scale is continuous.

Before running a regression analysis, several assumptions were tested. Testing these assumptions increased the validity and reliability of the study. The first assumption was Pearson's correlation matrix, to look at the correlation of all individually statements. These statements strongly correlate with each other, as shown in Appendix VII, and therefore a Factor Analysis was used. The variables that were highly correlated with each other were merged into one factor so that there was no longer multicollinearity. In order to perform a Factor Analysis, the variables must be measured on a ratio or interval scale. Since these items are measured with a Likert scale, this requirement is met. The Factor Analysis was carried out for 15 out of 19 statements, as four statements did not have a significance difference between the video shown (Appendix IX).

### Principal Component Analysis

In the following section, Principal Component Analysis was conducted. This was done by reducing the statements from the survey questionnaire, as there were multiple statements used to measure customer engagement. Before the actual Principal Component Analysis was conducted, the KMO and Bartlett's Test (Table 3.2) have been tested to determine if the Factor Analysis was significant. This is only the case when the involved variables are sufficiently correlated to each other. Since the KMO Measure of Sampling Adequacy, as shown in Table 3.2, had a value of 0.925 ( $>.50$ ), as well as the Bartlett's Test of Sphericity showed a value of 0.000 ( $<0.05$ ), the Factor Analysis could be performed, since it had a satisfying degree of correlation.

Table 3.2- KMO and Bartlett's Test

<b>Kaiser- Meyer- Olkin Measure of Sampling Adequacy</b>		0,925
<b>Bartlett's Test of Sphericity</b>	Approx. Chi-Square	2170,909
	Df	105
	Sig.	0,000

According to the Rotation Component Matrix, 15 items were categorized into two factors. These two factors explain 59,7% of the variance. To check the reliability of these factors, Cronbach's Alpha is used to check if the underlying items were consistent with each other. As shown in Table 3.3, the first factor has a Cronbach's Alpha of  $>0,9$ , which is excellent. The second factor has a Cronbach's Alpha between 0,6 and 0,7 which is questionable. However, both factors are reliable as they are above 0,5.



Table 3.3- Reliability, Cronbach's Alpha

	Rotated Component	Cronbach's Alpha
Factor 1 'Customer Engagement in general'		
Content interesting	0,739	0,933
Subject interesting	0,797	
Fun	0,848	
Worthwhile	0,783	
Improved my mood	0,777	
Interactive	0,553	
Involved	0,674	
Positive review	0,694	
Recommend	0,674	
Considering using	0,770	
Considering buying	0,728	
Satisfied	0,800	
Factor 2 'Product Information'		
Explained 'how-to-use'	0,771	0,693
Explained more than I knew	0,829	
Information that helps making decisions	0,664	

The second assumption was the normal distribution of the residues. Here it was important that the residues follow approximately a normal distribution. This was checked by making an Histogram and using the Q-Plot of the residues. Moreover, Kurtosis-Skewness showed that both dependent variables were normal distributed. These tested assumptions are provided in Appendix X.

### 3.3.2 Independent variables: TV Commercial, Instagram Story and Instagram Live

Ellison, Steinfield and Lampe (2007) composed four different components of social media involvement and intensity. There components are following behavior, online activity, posing behavior and attitude. As following behavior is not relevant for the TV Commercial, this is replaced by familiarity with, based on the research of Huang (2016) and Castellá, Abad, Alonso and Silla (2000). Questions were measured with a five-point Likert scale ranging from one to five. The answer options include never (0 hours), very rarely (1- 7 hours), rarely (8- 14 hours), frequently (15- 21 hours) and very frequently (22 hours or more). In addition, the video that was shown in the survey was also part of the independent variable: one for the TV Commercial, two for an Instagram Story and three for an Instagram Live video. Since this independent variable was a categorical measurement with three categories, dummy variables have been created to include this variable in the regression analysis that was used to examine the data. Appendix V provides descriptive statistics about the independent variables.

Before running a regression analysis, the third assumption was tested. This was multicollinearity, whether there was a high degree of correlation between the independent variables. Perfectly correlated variables may not be used in a linear regression model, if one value is known, the other is known as well. Pearson's correlation matrix for above mentioned questions can be found in Appendix VIII . Almost all the correlations differ significantly from zero, but none were greater than



0,6. Only a few questions correlate with a strength between 0,4 and 0,5. Consequently, multicollinearity seems to be no problem.

In addition, the fourth assumption is the linear relationship between the independent variables and the dependent variable. As shown in Appendix X, the observed values roughly follow the line of the expected values in the Normal P-plot. In the Scatterplot is shown that none of the values fall outside of the negative three to three. There is a linear relationship between the independent and dependent variables.

### 3.3.3 Control variable: Make-up Experience

To increase the validity, questions about cosmetics usage were asked, as the videos that have been used in the survey were about make-up. In order to increase the validity, to measure the influence of the control variables on customer engagement, it was important to know if the respondents use cosmetics. In addition, their attitude towards cosmetics was asked by the difference in purchase frequency and the importance of cosmetics. This is an important part of customer engagement described in the theory of Bowden (2009) and Doorn et al. (2010). The first question ‘Do you use make-up?’ is answered by yes or no. The second question ‘How often do you purchase make-up?’ is measured by a seven-point Likert scale, ranged from never, less than 5 times a year, 6- 11 times a year, monthly, weekly, daily to more times a day. Lastly the question ‘Can you rate how important make-up is for you?’ is scored on a scale of zero to five.

Besides the control variables age and education, make-up experience (Q31) was also used as control variable in the linear regression model. Before running a regression analysis, the multicollinearity was tested, whether there was a high degree of correlation between the control variables. According to Table 3.4 there is no multicollinearity and therefore also for the control variables this seems to be no problem.

Table 3.4- Pearson’s correlation matrix for control variables (Questions 4, 5, 31)

Variables	Q4	Q5	Q31
Q4- What is your age?	1		
Q5- What is your highest reached educational level?	-0,048	1	
Q31- Can you indicate how important make-up is to you? Ranking 0-5	-0,047	-0,087	1

### 3.3.4 Moderator variable: Consumer Motivation

Based on previous research of Shao (2009), Cai and Wohn (2019) and Schkade (2004) the following consumer motivations are used in the survey: informative, entertainment, educational purposes, the ability to communicate and ask questions and it shows how products work. The multiple answer options are used for the questions ‘What is your main reason to watch TV/ Instagram Story/ Instagram Live?’. Besides the incentive to watch a certain video, the motivation is measured. In the different

questionnaires, each participant was asked to indicate to what extent they are motivated to watch a TV Commercial, Instagram Story and Instagram Live, on a scale of zero to five.

Descriptive statistics for the moderator variable consumer motivation are provided in Appendix VI. The main reason for watching TV is because this is informative (65,3%) and amusing (92,5%). Watching Instagram Story is for most respondents (98,1%) amusing, as this was for Instagram Live less. 52,5% of the respondents filled in amusing as reason for watching Instagram Live. Remarkable for Instagram Live is that the ability to communicate and ask questions (N=74) and it shows how products work (N=75) has been selected more often compared to Instagram Story. The motivation for watching an Instagram Story was the highest (3,11), followed by a TV Commercial (2,65) and finally Instagram Live (2,46). However, they didn't differ much from each other.

### 3.4 Analytical technique

The survey used three different videos about eye shadow (honest beauty) to compare the effect of live streaming through Instagram, Instagram Story and seeing a TV Commercial. All videos were taken from YouTube, with the correct source reference. Section 12(5) of the Copyright Act (in the Netherlands) states that there is an exception for the use of content if it is used without a profit motive, if this is part of a school work plan or curriculum, or if it belongs to a scientific objective (Maxius, 2020).

First, an ANOVA is used for this study to measure to what extent there is a difference in video shown (TV Commercial, Instagram Story and Instagram Live) on customer engagement. The ANOVA shows whether there are significant differences between the different groups (categorical) on the dependent variable (continuous). Moreover, the linear regression model is used to explain the relationship between the different types of videos and customer engagement. The regression model is given by:

$$1. \text{ Customer Engagement} = \beta_0 + \beta_1 * \text{Age} + \beta_2 * \text{Education} + \beta_3 * \text{Make-up Experience} + \beta_4 * \text{Video Shown} + \epsilon_i.$$

Furthermore, the model for the interaction between the independent variables and consumer motivation, is formulated as follows:

$$2. \text{ Customer Engagement} = \beta_0 + \beta_1 * \text{Age} + \beta_2 * \text{Instagram Story} + \beta_3 * \text{Instagram Live} + \beta_4 * \text{Consumer Motivation} + \beta_5 * (\text{Instagram Story} \times \text{Consumer Motivation}) + \beta_6 * (\text{Instagram Live} \times \text{Consumer Motivation}) + \epsilon_i.$$

Where,

<i>Instagram Story</i>	is a dummy variable that indicates the Instagram Story is shown (baseline TV)
<i>Instagram Live</i>	is a dummy variable that indicates the Instagram Live is shown (baseline TV)

### 3.5 Data collection

Designing the survey questions to be clear, easy to interpret by the respondents and nonleading minimized the possibility for any observer error. This also facilitated analyzing the results later on in SPSS. Therefore, in this study a pre-test is carried out among 15 different random people found on Facebook to gain more insight about the expected results, making the study more valid and reliable. The survey was designed by using Qualtrics Survey Software and results were analyzed with the statistical analysis software SPSS. The survey was conducted over 11 days in April 2020 (April 1<sup>st</sup> – 11<sup>th</sup> 2020) and was sent through social media channels like Instagram, WhatsApp, LinkedIn and in specific Facebook groups, with an extra reminder on April 6<sup>th</sup> 2020.

Respondents are mentioned about the video files in the survey as soon as possible (introduction), so participants were prepared to use their headphones or speakers. This was also mentioned in the invitation to take part in the survey, so participants won't begin the questionnaire in an inappropriate environment, such as an open-space office or the subway, and then have to abort at the video (SoSci, 2019). Breaking off the video or survey has a negative effect on the reliability or validity.

All three videos had the same subject, make-up, with the same actress in the video, Jessica Alba, to avoid response biases. Moreover, a piece was cut from the original video, so the videos lasted about two minutes. This also avoided response biases, otherwise it would take too long as well as the respondents were prepared to watch the movie in full. To avoid that respondents may lose attention and could inaccurately or falsely answer questions. That a piece of the original video was used, was clearly stated in the introduction. In addition, the survey lasted no longer than ten minutes, to make sure respondents kept their concentration. The questionnaire can be found in Appendix II.

## CHAPTER 4

### ANALYSIS AND RESULTS

In this chapter, each hypothesis will be tested individually. This will be done mainly due to analyzing the linear regression analysis. The SPSS outputs will be provided in the following chapter, as well as more detailed in the Appendix. Based on these results, it will be determined whether the hypothesis can be supported or rejected.

#### 4.1 ANOVA

Before running a regression analysis, ANOVA shows if there is a significant difference in which video is shown on customer engagement in general (Factor 1) and product information (Factor 2). A between-subject 2x1 one-way ANOVA is used, because of one independent group variable (video shown). Yet, there are three different conditions, namely TV Commercial, Instagram Story and Instagram Live. According to Table 4.1, in both cases there is a significant difference in video shown on customer engagement.

Table 4.1- One-way ANOVA: the effect of the different videos on the factors 'customer engagement in general' and 'product information'

Factor variable		Sum of Squares	df	Mean Square	F	Sig.
1- Customer engagement in general	Between Groups	11,702	2	5,851	10,211	0,000*
	Within Groups	136,946	239	0,573		
2- Product information	Between Groups	7,988	2	3,994	6,161	0,002*
	Within Groups	154,931	239	0,648		
	Total	162,919	241			

Notes. \* $p < \alpha 0,05$ .

Furthermore, a Post-Hoc ANOVA analysis was performed to analyze between which videos there was a significant difference. To choose which Post-Hoc was used (Turkey, Bonferroni, Scheffe, LSD), the Homogeneity of Variance test was performed. The results are shown in Table 4.2. First of all, respondents are never significantly more positive about Instagram Story compared to Instagram Live. Secondly, it seems that the TV Commercial has more influence on customer engagement than the Instagram Story and Instagram Live. However, for the statements related to Factor 2 'Product Information'<sup>1</sup> Instagram Live has a more powerful influence on customer engagement, compared to the TV Commercial. Furthermore, Instagram Live is experienced as more interactive than Instagram Story. Moreover, Instagram Live provides more useful information that helps making decisions compared to Instagram Story. Whereas, Instagram Story, compared to the TV Commercial, explains more about the product than respondents already knew. All videos have a positive impact on at least one statement of customer engagement. Therefore hypothesis one can be confirmed, there is a powerful influence on customer engagement.

<sup>1</sup> This video clearly explained me how to use the product; This video provides information that helps me making decisions about using or buying make-up; This video explains more about this product than I already knew.

Table 4.2- Results Post-Hoc ANOVA, the difference in videos on customer engagement statements

Variables	Group scores					
	TV Story	TV Live	Story TV	Story Live	Live TV	Live Story
This video clearly explained me how to use the product			0,106 (164)		0,422* (0,156)	0,136 (0,161)
This video provides information that helps me making decisions about using or buying make-up.			0,262 (1,70)		0,496* (0,167)	0,234* (0,167)
I would describe the content of the video as interesting.	0,340* (0,162)	0,356* (0,155)		0,016 (0,159)		
This video explains more about this product than I already knew.			0,405* (0,165)	0,021 (0,162)	0,384* (0,158)	
Watching the video was fun.	0,716* (0,165)	0,492* (0,157)				0,224 (0,162)
The subject of the video, make-up, was interesting.	0,518* (0,169)	0,327* (0,161)				0,191 (0,166)
Watching the video was worthwhile	0,482* (0,155)	0,386* (0,148)				0,096 (0,152)
Watching this video improved my mood/ makes me happier.	0,636* (0,161)	0,542* (0,153)				0,094 (0,158)
I could write a positive review on this video.	0,545* (0,157)	0,332** (0,150)				0,041 (0,151)
I experienced the video as interactive	0,350** (0,164)				0,024 (0,156)	0,374** (0,160)
I was involved in watching this video, I focused completely on watching it	0,769* (0,171)	0,584* (0,163)				0,185 (0,168)
I would recommend this video or share it with my friends/family	0,411* (0,154)	0,370* (0,147)				0,041 (0,151)
After seeing this video, I'm considering using this product	0,505* (0,177)	0,209 (0,169)				0,297 (0,174)
After seeing this video, I'm considering buying this product	0,628* (0,164)	0,244 (0,156)				0,384** (0,161)
In general, I am satisfied about this video.	0,602* (0,160)	0,135 (0,153)				0,287 (0,157)

Notes. Standard errors are in parentheses; The dependent variable is measured by one (strongly disagree) to five (strongly agree); \* $p < \alpha 0,05$ , \*\* $p < \alpha 0,1$ .

## 4.2 Linear Regression

After creating three dummy variables, the linear regression was performed to compare the difference for TV Commercial, Instagram Story and Instagram Live. Table 4.3 shows the linear regression effect on the dependent variable Factor 1 and Table 4.4 shows the effect on Factor 2.

According to Table 4.3 the TV Commercial has a significant positive effect on customer engagement with an effect size of  $\beta 0,528$ . Moreover, Instagram Live also shows a significant positive effect on customer engagement with an effect size of  $\beta 0,246$ .

In order to compare the differences in effect size, the following regression is made on the basis of Table 4.3:

$$3. \text{ Customer Engagement in general} = \beta_{2,147} - \beta_{0,242} * \text{Age} + \beta_{0,131} * \text{Education} + \beta_{0,283} * \text{Make-up Experience} + \beta_{0,328} * \text{TV Commercial} + \beta_{0,156} * \text{Instagram Live}$$

Table 4.3- Linear Regression results for the relationship between the independent variables and the dependent variable Factor 1 'Customer Engagement in general'.

Independent variables	Unstandardized Coefficients B	Standardized Coefficients Beta	t-Statistics
Constant	2,147* (0,293)		7,326
TV Commercial	0,528* (0,116)	0,328*	4,543
Instagram Live	0,246* (0,115)	0,156*	2,142
Age	-0,152* (0,038)	-0,242*	-4,012
Education	0,083* (0,039)	0,131*	2,146
Make-up experience	0,186* (0,040)	0,283*	4,677
F			12,058*
R			0,467
R Square			0,218
Adjusted R Square			0,200

Notes. Standard errors are in parentheses; The dependent variable is measured by one (strongly disagree) to five (strongly agree); \*p < α 0,05.

Table 4.3 shows that the TV Commercial has the most powerful influence on dependent variable Factor 1 'Customer Engagement in general', followed by Instagram Live. Therefore, hypotheses 2A and 2B cannot be confirmed, as the TV Commercial amplifies customer engagement more compared to Instagram Story and Instagram Live. However, hypothesis 2C can be confirmed, compared to Instagram Story, Instagram Live has more powerful influence on customer engagement.

According to Table 4.4 Instagram Story has a significant positive effect on customer engagement with an effect size of β<sub>0,305</sub>. Instagram Live also shows a significant positive effect on customer engagement with an effect size of β<sub>0,440</sub>.

In order to compare the differences in effect size, the following regression is made on the basis of Table 4.4:

$$4. \text{ Product information} = \beta_{2,931} - \beta_{0,165} * \text{Age} - \beta_{0,056} * \text{Education} + \beta_{0,149} * \text{Make-up Experience} + \beta_{0,168} * \text{Instagram Story} + \beta_{0,258} * \text{Instagram Live}$$

Table 4.4- Linear Regression results for the relationship between the independent variables and the dependent variable Factor 2 'Product Information'.

	Unstandardized Coefficients	Standardized Coefficients	Statistics
Independent variables	B	Beta	t
Constant	2,931* (0,333)		8,794
Instagram Story	0,305* (0,134)	0,168*	2,279
Instagram Live	0,440* (0,126)	0,258*	3,493
Age	-0,111* (0,044)	-0,165*	-2,558
Education	-0,038 (0,045)	-0,056	-0,860
Make-up experience	0,106* (0,046)	0,149*	2,316
F			5,480*
R			0,336
R Square			0,113
Adjusted R Square			0,092

Notes. Standard errors are in parentheses; The dependent variable is measured by one (strongly disagree) to five (strongly agree); \*p <  $\alpha$  0,05.

Table 4.4 shows Instagram Live has the most powerful influence on the dependent variable Factor 2 'Product Information', followed by Instagram Story. Therefore, hypotheses 2A and 2B can be confirmed in this case. Moreover, hypothesis 2C can again be confirmed, compared to Instagram Story, Instagram Live has more powerful influence on customer engagement.

To conclude, age has a negative effect and make-up experience has a positive effect on customer engagement. It seems that the older a person is, the less involved respondents feel in watching the video. Furthermore, the more important make-up is for someone, the higher customer engagement will be after seeing the video. In addition, it is likely that the TV Commercial strengthen the effect on Factor 1 'Customer Engagement in general' more, compared to Instagram Live and Instagram Story. On the other hand, Instagram Live and Instagram Story intensify the influence on Factor 2 'Product Information'. Instagram Live and Instagram Story seem relevant to explain more about products or provide extra information. Furthermore, in both cases it is more likely that an Instagram Live, compared to Instagram Story, enhances the effect on customer engagement. Lastly, all regression models show a relatively low R-square value. However, this is not a problem in this research as this merely indicates a high variability in the data and thus precision of the regression coefficients should be taken with caution.

### 4.3 Moderator

After running the linear regression analysis it will be determined whether consumer motivation has an impact on the effect between the difference for watching a TV Commercial, Instagram Story or Instagram Live and the dependent variable customer engagement. Table 4.5 shows the moderation effect of consumer motivation between the TV Commercial and customer engagement, Table 4.6 shows the same effect for Instagram Live and Table 4.7 shows this effect for Instagram Story.

Table 4.5- Linear Regression results for the relationship between the independent variable 'TV Commercial' and the dependent variables Factor 1 'Customer Engagement in general' and Factor 2 'Product Information', moderated by consumer motivation.

Independent variables	Factor 1 'Customer Engagement in general'		Factor 2 'Product Information'	
	Coefficients	Statistics	Coefficients	Statistics
	B	t	B	t
Constant	3,196* (0,167)	19,138	3,546* (0178)	19,885
TV Commercial	0,435* (0,100)	4,328	-0,356* (0107)	-3,317
Motivation watching TV	0,053 (0,050)	1,070	0,121* (0,053)	2,274
TV Commercial x Motivation watching TV	-0,060 (0,092)	-0,647	-0,034 (0,098)	-0,342
Age	-0,148* (0,036)	-4,135	-0,125* (0,038)	-3,283
F		9,063*		6,440*
R		0,364		0,313
R Square		0,133 <sup>a</sup> 0,131 <sup>b</sup>		0,098 <sup>a</sup> 0,098 <sup>b</sup>

Notes. Standard errors are in parentheses; The dependent variable is measured by one (strongly disagree) to five (strongly agree); \*p < α 0,05; a) Predictors: (Constant), Age, TV Commercial, Motivation, Interaction TV \* Motivation; b) Predictors: (Constant), Age, TV Commercial, Motivation.

According to Table 4.5 the following regressions are made:

$$5. \text{ Customer Engagement} = \beta_{3,196} - \beta_{0,148*} \text{ Age} + \beta_{0,435*} \text{ TV Commercial} + \beta_{0,053*} \text{ Motivation} - \beta_{0,060*} (\text{TV Commercial} \times \text{Motivation})$$

$$6. \text{ Product information} = \beta_{3,546} - \beta_{0,125*} \text{ Age} - \beta_{0,356*} \text{ TV Commercial} + \beta_{0,121*} \text{ Motivation} - \beta_{0,034*} (\text{TV Commercial} \times \text{Motivation})$$

For the TV Commercial there is a moderator effect between the video shown and the dependent variable Factor 1 'Customer Engagement in general'. The R square shows a change of 2% when an interaction variable is added to the model. This can be interpreted as the 0.06 decrease in the effect of the TV Commercial on customer engagement due to an increase in motivation. The influence on the dependent variable Factor 2 'Product Information' shows no moderation effect. These effects are shown in Figures 2 and 3 (page 35).



Table 4.6- Linear Regression results for the relationship between the independent variable 'Instagram Story' and the dependent variables Factor 1 'Customer Engagement in general' and Factor 2 'Product Information', moderated by consumer motivation.

Independent variables	Factor 1 'Customer Engagement in general'		Factor 2 'Product Information'	
	Coefficients	Statistics	Coefficients	Statistics
	B	t	B	t
Constant	3,075* (0,233)	13,182	3,100* (0,256)	12,112
Instagram Story	-0,348* (0,110)	-3,178	0,027 (0,120)	0,225
Motivation watching Instagram Story	0,062 (0,050)	1,245	0,035 (0,055)	0,646
Instagram Story x Motivation watching Story	0,024 (0,089)	0,271	0,118 (0,097)	1,208
Age	-0,051 (0,055)	-0,923	-0,046 (0,060)	-0,761
F		3,806*		1,301
R		0,258		0,154
R Square		0,066 <sup>a</sup> 0,066 <sup>b</sup>		0,024 <sup>a</sup> 0,017 <sup>b</sup>

Notes. Standard errors are in parentheses; The dependent variable is measured by one (strongly disagree) to five (strongly agree); \*p < α 0,05; a) Predictors: (Constant), Age, Instagram Story, Motivation, Interaction Story \* Motivation; b) Predictors: (Constant), Age, Instagram Story, Motivation.

According to Table 4.6 the following regressions are made:

7.  $Customer\ Engagement = \beta_3,075 - \beta_0,051 * Age - \beta_0,348 * Instagram\ Story + \beta_0,062 * Motivation + \beta_0,024 * (Instagram\ Story \times Motivation)$
8.  $Product\ information = \beta_3,100 - \beta_0,046 * Age + \beta_0,027 * Instagram\ Story + \beta_0,035 * Motivation + \beta_0,118 * (Instagram\ Story \times Motivation)$

For Instagram Story there is a moderator effect between the video shown and the dependent variable Factor 2 'Product Information'. The R square shows a change of 7%, when an interaction variable is added to the model. This can be interpreted as the 0.118 increase in the effect of the Instagram Story on customer engagement due to an increase in motivation. The influence on the dependent variable Factor 1 'Customer Engagement in general' shows no moderation effect. These effects are shown in Figures 4 and 5 (page 35).

Table 4.7- Linear Regression results for the relationship between the independent variable 'Instagram Live' and the dependent variables Factor 1 'Customer Engagement in general' and Factor 2 'Product Information', moderated by consumer motivation.

Independent variables	Factor 1 'Customer Engagement in general'		Factor 2 'Product Information'	
	Coefficients	Statistics	Coefficients	Statistics
	B	t	B	t
Constant	3,068* (0,264)	11,619	3,249* (0,285)	11,390
Instagram Live	-0,057 (0,109)	-0,529	0,356* (0,117)	3,036
Motivation watching Instagram Live	0,049 (0,047)	1,034	0,060 (0,051)	1,171
Instagram Live x Motivation watching Live	0,084 (0,081)	1,026	-0,077 (0,088)	-0,877
Age	-0,069 (0,064)	-1,087	-0,112 (0,069)	-1,622
F		1,701		3,277*
R		0,183		0,250
R Square		0,034 <sup>a</sup> 0,028 <sup>b</sup>		0,063 <sup>a</sup> 0,059 <sup>b</sup>

Notes. Standard errors are in parentheses; The dependent variable is measured by one (strongly disagree) to five (strongly agree); \*p < α 0,05; a) Predictors: (Constant), Age, Instagram Live, Motivation, Interaction Live \* Motivation; b) Predictors: (Constant), Age, Instagram Live, Motivation.

According to Table 4.7 the following regressions are made:

$$9. \text{ Customer Engagement} = \beta 3,068 - \beta 0,069 * \text{Age} - \beta 0,057 * \text{Instagram Live} + \beta 0,049 * \text{Motivation} + \beta 0,084 * (\text{Instagram Live} \times \text{Motivation})$$

$$10. \text{ Product information} = \beta 3,249 - \beta 0,112 * \text{Age} + \beta 0,356 * \text{Instagram Live} + \beta 0,060 * \text{Motivation} - \beta 0,077 * (\text{Instagram Live} \times \text{Motivation})$$

For Instagram Live there is a moderator effect between the video shown and both dependent variables. The R square shows a change of 6%, when an interaction variable is added to the first model with the dependent variable Factor 1 'Customer Engagement in general'. This can be interpreted as the 0.084 increase in the effect of the Instagram Live on customer engagement due to an increase in motivation. In the second model with dependent variable Factor 2 'Product Information', the R square shows a change of 4%, when an interaction variable is added. This can be interpreted as the 0.077 decrease in the effect of the Instagram Live on customer engagement due to an increase in motivation. These effects are shown in Figures 6 and 7 (next page).

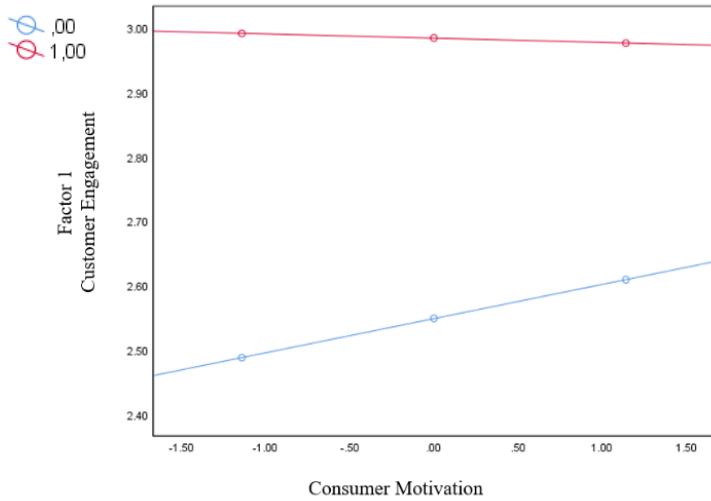


Figure 2- Main effect and Interaction effect of TV Commercial on Factor 1 'Customer Engagement', moderated by consumer motivation

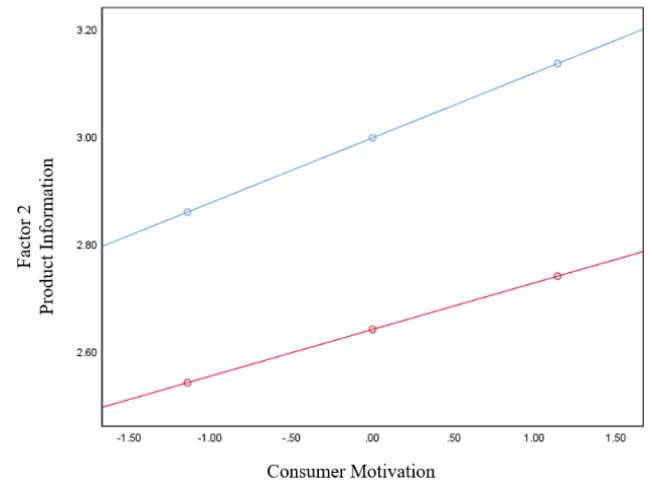


Figure 3- Only main effect of TV Commercial on Factor 2 'Product Information', moderated by consumer motivation

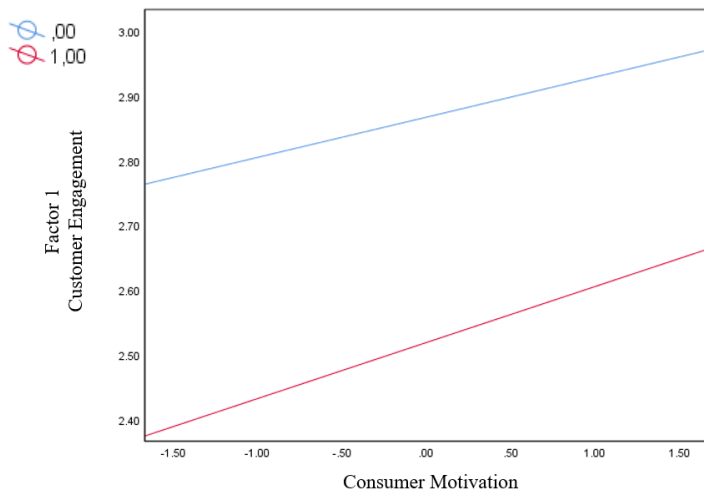


Figure 4- Only main effect of Instagram Story on Factor 1 'Customer Engagement', moderated by consumer motivation

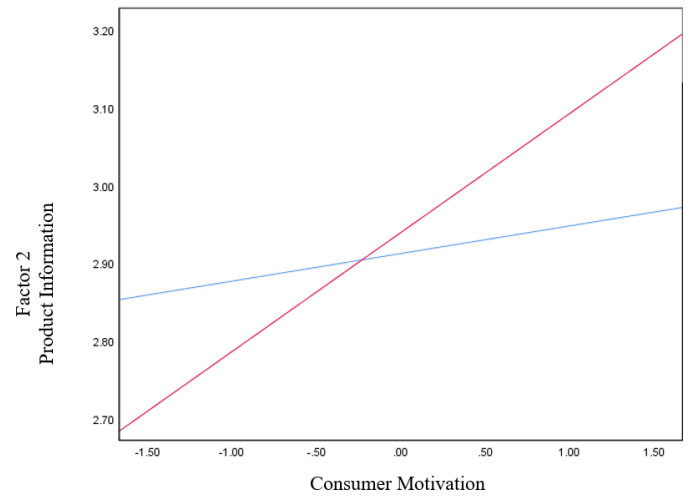


Figure 5- Main effect and Interaction effect of Instagram Story on Factor 2 'Product Information', moderated by consumer motivation

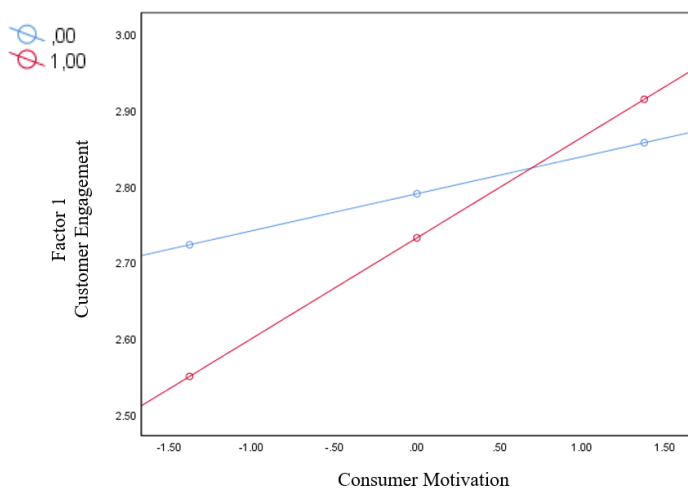


Figure 6- Main effect and Interaction effect of Instagram Live on Factor 1 'Customer Engagement', moderated by consumer motivation

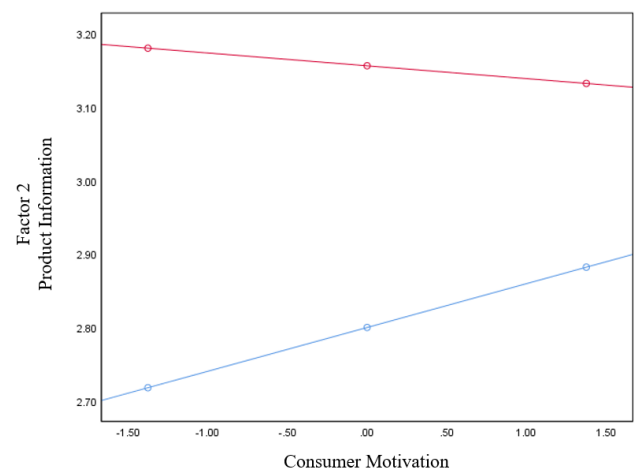


Figure 7- Main effect and Interaction effect of Instagram Live on Factor 2 'Product Information', moderated by consumer motivation

To conclude, the TV Commercial shows a 0.06 decrease in the effect of video shown on the dependent variable Factor 1 ‘Customer Engagement in general’, moderated by consumer motivation. Whereas, Instagram Live shows a 0.084 increase in the effect of video shown on the dependent variable Factor 1 ‘Customer Engagement in general’, moderated by consumer motivation. Instagram Story has no moderation effect on the first dependent variable. Therefore, hypothesis 4B can be confirmed, as the moderation effect of consumer motivation on customer engagement is higher for Instagram Live, compared to traditional media.

Secondly, Instagram Story shows a 0.118 increase in the effect of video shown on the dependent variable Factor 2 ‘Product Information’, moderated by consumer motivation. However, Instagram Live shows a 0.077 decrease in the effect of video shown on the dependent variable Factor 2 ‘Product Information’, moderated by consumer motivation. The TV Commercial has no moderation effect on the second dependent variable. Therefore, hypothesis 4C cannot be confirmed, as the moderation effect of consumer motivation on customer engagement is not higher for Instagram Live, compared to Instagram Story.

Table 4.8 on the next page summarizes the results of all hypotheses.

## 4.4 Hypotheses

Table 4.8- Supported or Rejected Hypotheses 1, 2, 3, 4

#	Hypotheses	Supported or Rejected	
		Factor 1 'Customer Engagement in general'	Factor 2 'Product Information'
H1a	Traditional marketing has a powerful influence on customer engagement.	According to Table 4.2 Supported/ <del>Rejected</del>	
H1b	Instagram Story has a powerful influence on customer engagement.	According to Table 4.2 Supported/ <del>Rejected</del>	
H1c	Instagram Live has a powerful influence on customer engagement.	According to Table 4.2 Supported/ <del>Rejected</del>	
H2a	Compared to a traditional marketing approach (TV), Instagram Story has more powerful influence on customer engagement.	According to Table 4.3 Supported/ <del>Rejected</del>	According to Table 4.4 Supported/ <del>Rejected</del>
H2b	Compared to a traditional marketing approach (TV), Instagram Live has more powerful influence on customer engagement.	According to Table 4.3 Supported/ <del>Rejected</del>	According to Table 4.4 Supported/ <del>Rejected</del>
H2c	Compared to Instagram Story, Instagram Live has more powerful influence on customer engagement.	According to Table 4.3 Supported/ <del>Rejected</del>	According to Table 4.4 Supported/ <del>Rejected</del>
H3a	The positive influence of traditional marketing (TV) on customer engagement is moderated by consumer motivation.	According to Table 4.5 and Figure 2 Supported/ <del>Rejected</del>	According to Table 4.5 and Figure 3 Supported/ <del>Rejected</del>
H3b	The positive influence of Instagram Story on customer engagement is moderated by consumer motivation.	According to Table 4.6 and Figure 4 Supported/ <del>Rejected</del>	According to Table 4.6 and Figure 5 Supported/ <del>Rejected</del>
H3c	The positive influence of Instagram Live on customer engagement is moderated by consumer motivation.	According to Table 4.7 and Figure 6 Supported/ <del>Rejected</del>	According to Table 4.7 and Figure 7 Supported/ <del>Rejected</del>
H4a	The moderation effect of consumer motivation on customer engagement is higher for Instagram Story, compared to traditional media.	<i>Since there is no moderation effect for an equal dependent variable (H3a and H3b), this hypothesis cannot be tested.</i>	
H4b	The moderation effect of consumer motivation on customer engagement is higher for Instagram Live, compared to traditional media.	According to Table 4.5 and Table 4.7 Supported/ <del>Rejected</del>	<i>Since there is no moderation effect for this dependent variable (H3a), this hypothesis cannot be tested.</i>
H4c	The moderation effect of consumer motivation on customer engagement is higher for Instagram Live, compared to Instagram Story.	<i>Since there is no moderation effect for this dependent variable (H3b), this hypothesis cannot be tested.</i>	According to Table 4.6 and Table 4.7 Supported/ <del>Rejected</del>

## CHAPTER 5

### GENERAL DISCUSSION

Consumers are more connected and empowered than ever before due to the growth of social media channels and therefore companies strive to gain high customer engagement. The goal of this study was to understand how live streaming functions as a marketing tool and to what extent it can influence customer engagement. This paper presents some interesting findings about the effect of different video tools on customer engagement. Consequently, it was tested whether Instagram Stories and Instagram Live have a higher impact on customer engagement compared to traditional media (TV). In this chapter the main question of this research *'How can social live streaming through Instagram stimulate customer engagement?'* will be answered.

Based on previous literature it was expected that all three marketing tools, TV Commercial, Instagram Story and Instagram Live would amplify customer engagement. In line with H1, in this experiment all three marketing tools positively effect customer engagement. New media channels provides marketers tools to become part of consumers' conversations, as the two-way connection causes consumers to be able to respond directly and therefore can actively participate. Furthermore, it was expected that Instagram Live was most likely to have the biggest impact on customer engagement. This is due to the real-time interaction function offered by a live stream. This experiment showed some unexpected findings, as the TV Commercial seems to have the most powerful (significant) impact on customer engagement. Overall, respondents experienced more engagement in the TV Commercial compared to Instagram Story and Instagram Live. These results are in contrast with H2A and H2B and for this reason previous literature cannot be confirmed. In addition, based on this study it seems that Instagram Story is created more often by respondents themselves than Instagram Live. Likewise, most respondents watch Instagram stories very frequently (22 hours or more), whereas Instagram Live is watched very rarely (1-7 hours). Surprisingly, Instagram Live has significantly more impact on the effect of providing (product) information compared to Instagram Story, while Instagram Story is used and watched more often. In support of H2C, the higher the quality and usefulness to receive information about products, the higher the customer engagement is likely to be in the video.

This study investigated further in customer engagement on Instagram and in particular Instagram Story and Instagram Live. Instagram is a photo and video sharing application and has an entertaining side due to a lot of features. It was expected that respondents would value Instagram as fun and amusing. Yet, in this experiment it seems that customers will be more likely to seek informative content on Instagram. Previous research of Birke (2017) already showed that Instagram Stories tend to generate more engagement than Instagram posts because they lead to conversations, as well as they trigger customers to watch more actively. This study presents that Instagram Story and Instagram Live are more likely to have a higher engagement with regard to providing more information, explanation how products work and these channels help making decisions about using or buying the product. Thus,

customers will be more engaged to videos that provides them with information, rather than just entertains them. So, H2 shows some contradictory results. More specifically, this study suggests that new media channels are particularly beneficial in terms of education and information, whereas TV Commercial has more emotional and entertainment reasons.

Previous research highlighted the online environment as a good way to communicate and share ideas or connect, which results in a higher level of interaction (Wongkitrungrueng & Assarut, 2018), (Delgado, 2018), (Sun, Shao, Li, Guo, & Nie, 2019). Consumer motivation is likely to be higher for marketing channels with the ability to interact and communicate between customer and companies. This study revealed for all three videos a moderator effect between the video shown and customer engagement. In line with H3C, for Instagram Live it seems that consumer motivation has an impact on customer engagement. For Instagram Story this is only the case for the dependent variable product information, whereas for the TV Commercial this only applies to customer engagement in general. Based on the differences in this moderator effect, H3 and H4 cannot be supported with certainty.

To answer the main question, it is likely that all three videos amplify customer engagement. Instagram is important for increasing customer engagement and this is mainly due to the interactive character. However, according to this experiment, the TV Commercial has the most powerful influence on customer engagement. A possible reason for this is the fun and amusing character of the video. For both Instagram Story and Instagram Live it is easy to communicate and interact with the right audience and offer more product information. This research highlighted Instagram Live as the most useful tool, because Instagram Live offers many possibilities through the real-time interaction. It seems that the explanation of how products work in Instagram Live, as well as it provides information that helps making buying or using decisions, positively influences customer engagement.

## 5.1 Academic and Managerial Implications

This paper presents some interesting findings about the effect of Instagram Live, Instagram Story and the TV Commercial on customer engagement. From a theoretical perspective, this research highlighted the importance of interactivity and participation intensity in marketing videos. In addition, this research examines the key role of age, education, social media use, make-up experience and consumer motivation in watching a TV Commercial, Instagram Story or Instagram Live. Whereas extant research focusing on traditional marketing or social media marketing, this research provides insights into the differences of using traditional media and new media marketing. In addition, this study provides clear confirmation why both channels are still relevant to use in a marketing strategy. Based on the findings of this research, academic and managerial implications can be provided.

As Wongkitrungrueng and Assarut (2018) already concluded that live streaming shopping amplifies customer engagement, this study can confirm that Instagram Live is also likely to have a positive impact on customer engagement. Especially for Instagram Live and this is in particular related

to show how products work and the ability for viewers to ask questions. Some researchers described the advantage of live streaming as this allows companies to use richer content which is not always informative, but can actually be more entertainment (Zhang, 2017), (Arnett, Netzorg, Chaintreau, & Wu, 2019). This is in line with Brodie and Hollebeek (2011) and Park, Houston and Janakiraman (2018), who have proven that entertaining and informative content significantly increases the level of engagement. Prior research of Cha and Chan-Olmsted (2012) highlighted that the internet does, unlike television, satisfy entertainment and social interaction needs. Based on this research it is likely to conclude that live streaming is not as relaxing as watching television. Even though passing time and learning have been important motivations for consumers, they have not been as dominant as the relaxation and entertainment motives. Based on this research it seems that Instagram Live can be used for educational reasons rather than entertainment purposes. Therefore, it is important for companies to realize that TV commercials are still important in a marketing strategy, as they have more relaxed and entertaining features. Instagram Live is valued less fun and amusing as the TV Commercial.

Shao (2009) noted that consumers are more likely to watch video content for specific goals, such as seeking information, entertainment and social interaction. Moreover, Xu, Frankwick and Ramirez (2016) found that consumers feel emotionally involved in TV commercials. It is likely that the main reason for customer engagement during a TV Commercial is the emotional involvement and the entertainment purpose of the video. Wongkitrungrueng and Assarut (2018) described that consumers felt more connected, which amplifies customer engagement. This research shows contradictory results, the TV Commercial is experienced as most worthwhile and fun video, compared to Instagram Story and Instagram Live. Overall, respondents were likely to be more involved and satisfied about the TV Commercial. Therefore, based on this research, it cannot be stated that consumers felt connected in an Instagram Live video. However, consumers did experience this video interactively.

Based on previous research there was chosen for five motivational drivers: informative, amusing, educative, it shows how products work and the ability to communicate and ask questions (Cai & Wohn, 2019), (Shao, 2009), (Schkade, Stafford, & Stafford, 2004). It is clear that the TV Commercial is experienced as amusing. Surprisingly, Instagram Story is also useful for entertainment purposes, while Instagram Live is less amusing. All three videos might be useful for providing information. Nevertheless, Instagram Live definitively provides a higher consumer motivation for watching this video because there is an opportunity to communicate or the video shows (potential) customers how the products work. This is in line with Calder and Malthouse (2009) who expressed the utilitarian experience of live stream videos, which provides information and helps customers making important decisions.

This research highlighted the increasingly importance of using video marketing in strategies for businesses, which could be either a TV Commercial, Instagram Story or Instagram Live. For brands and companies it is crucial to utilize the different features of Instagram stories and live to increase



customer engagement. Therefore, the results of the multiple linear regression analysis show some interesting insights, which might be relevant for (social media) marketing managers.

First of all, this research showed that live streaming content is clearly unthinkable in any marketing strategy, as live streaming videos will increase customer engagement. The importance for marketers to implement live streaming is due to the cost efficiency, the real-time interaction and clear measurement methods. Thus, it's relevant for marketers to create and share videos with a real-time interaction, as this allows potential consumers to ask questions or request opinions of other users. This research calls for brands and companies to pay more attention to participation and interaction in marketing tools.

Second, as earlier research already emphasized the importance of videos during an event, product launch or promotion, this could be relevant for live streaming as well. In this research Instagram Live had a significant positive impact on showing how products work and providing information that helps making buying decisions. Companies or marketers can, for example, use live videos for new product launches. From a managerial perspective, it is important to realize that live streaming creates a sense of urgency that's hard to replicate with traditional video.

Furthermore, it is essential to realize that information will look boring if it is only presented in a text or blog. Customers are expecting more and more personalized interactions and content. Live streaming can be used to create an online experience and companies can provide highly personalized services. Companies or marketers can use live videos to create a personal experience and exceed customer expectations.

Finally, this research pointed out the idea of learning more in a live stream video as an important driver for consumer motivation. Based on this research it seems that Instagram Live and Instagram Story are more applicable for educational purposes than the TV Commercial. Accordingly, this study recommends from a managerial perspective, that marketers must be aware of the usefulness of educational purposes in videos on Instagram. Educational and 'how-to-use' content might be well-suited, as customers would rather learn more about a product by watching a video. The fulfillment of those needs motivate customers. Therefore, it is recommended that marketers focus on educative purposes with live streaming videos.

## 5.2 Limitations and future research

Several limitations were present in this study. First of all, limitations include sample and sample size. While the age range varied from 16- 41 years, the sample consisted of young people. The results indicate that the mean age of the respondents was between 21 and 25 years old. Moreover, 76,2% had at least a bachelor's degree, indicating that the respondents were primarily well-educated. Caution should be taken when extending these results to other contexts because the respondents were relatively young and well-educated. This constraint might limit the results since this study did not equally obtain samples

from all ages and educational backgrounds. A larger sample size would have provided a more reliable data set. Further research could expand the audience to a more diverse sample and therefore increasing the sample size is recommended.

Secondly, this study focused specifically on make-up of the brand Honest Beauty with videos of Jessica Alba. The test product was limited to one specific brand despite the fact that many potential consumers might be interested in other brands. Future research might focus on other brands or even other product categories as cosmetics was limited to women only. Moreover, an important limitation of this research was the influencer herself. To make a good comparison between the effects of different videos, there is chosen for the same product, brand and actress. However, it has not been tested in a pre-test whether respondents were familiar with her or followed her on Instagram. This might influence the results of the research. So, further research could consider to test this influencer effect first. A pre-test should ensure that consumers know or like the influencer.

Third, the results could be biased due to the fact that the setting was unrealistic. In the survey only one video was shown for participants. Besides, it did not entirely replicate the usual Instagram experience and a different effect could therefore be the result. As well as the limited information being provided in the shortened videos. In particular, in the Instagram Live video the real-time interaction was not realistic. This has a major impact on the results. While the live streaming had several features to represent being a live stream, the fact remained that the video was not live. This could have influenced respondents live streaming experience, as interactivity is an important characteristic. Furthermore, research draw attention to the length of the video that stimulates customer engagement. Instagram Stories can only be 60 seconds in length, while Instagram Live can extend to a full hour. The length of the video is also not tested in this experiment. Future research should therefore set up an experiment through Instagram, to make it more realistic and to observe the interaction through question-answers.

Fourthly, an interesting variable that might have consequences for the results is the time of the video. Since this research tested consumer motivation as a moderator, further research could investigate in the positive relation of time as moderation. As research suggests that Instagram posts in the weekend will get slightly higher engagement than posting on weekdays, this might be interesting for live videos as well. Besides, it is recommended to investigate in the call to action possibility of Instagram, as this is a great advantage over a TV Commercial. Instagram videos allow a viewer to take action, by for example clicking on a link, which can positively influence customer engagement.

Finally, as this research mainly focuses on Instagram, findings could also be replicated on other similar and popular platforms, such as TikTok, to further explore the effect of online streaming. Future research might investigate to what extend videos on TikTok could amplify customer engagement.

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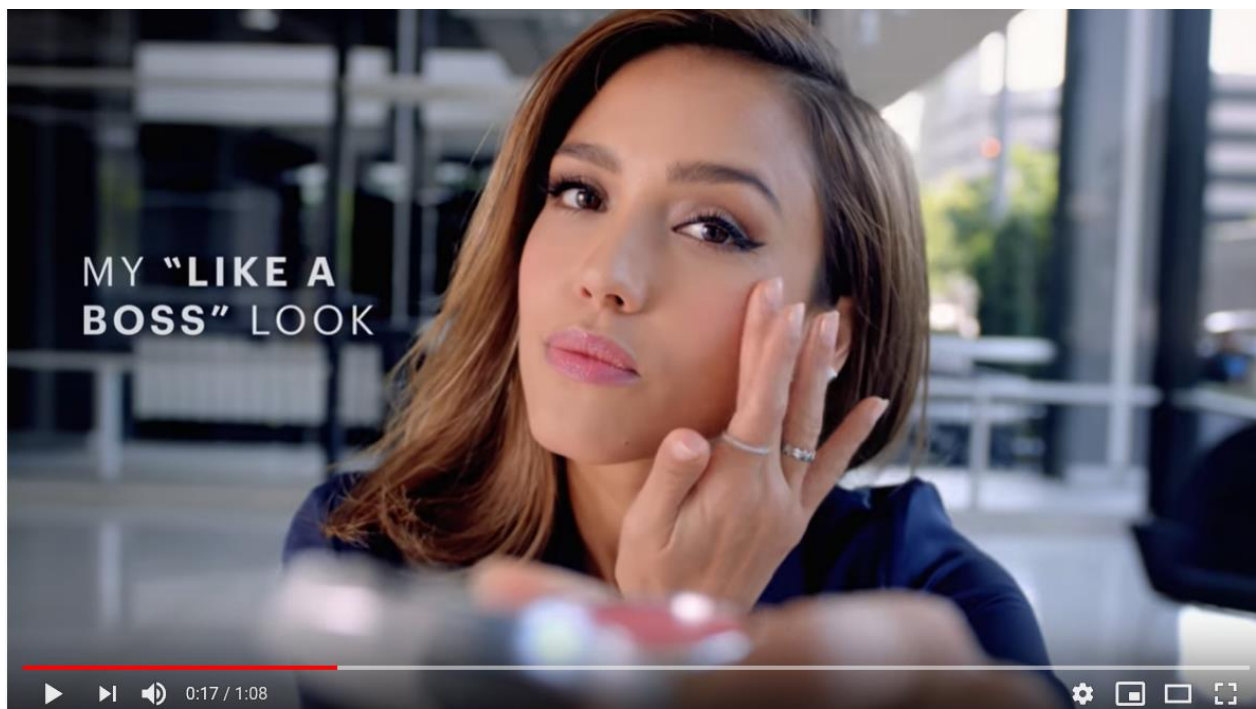
## APPENDIX

### Appendix I- Videos used in the survey

#### *Introduction of the videos*

You're about to watch the make-up video. The original video is a lot longer in length, but small fragments of the original video are used for this research. This means that the video below gives an impression of the original video, no important parts have been extracted. No substantive questions are asked about the video. Try to watch carefully, pay close attention to what happens in the video.

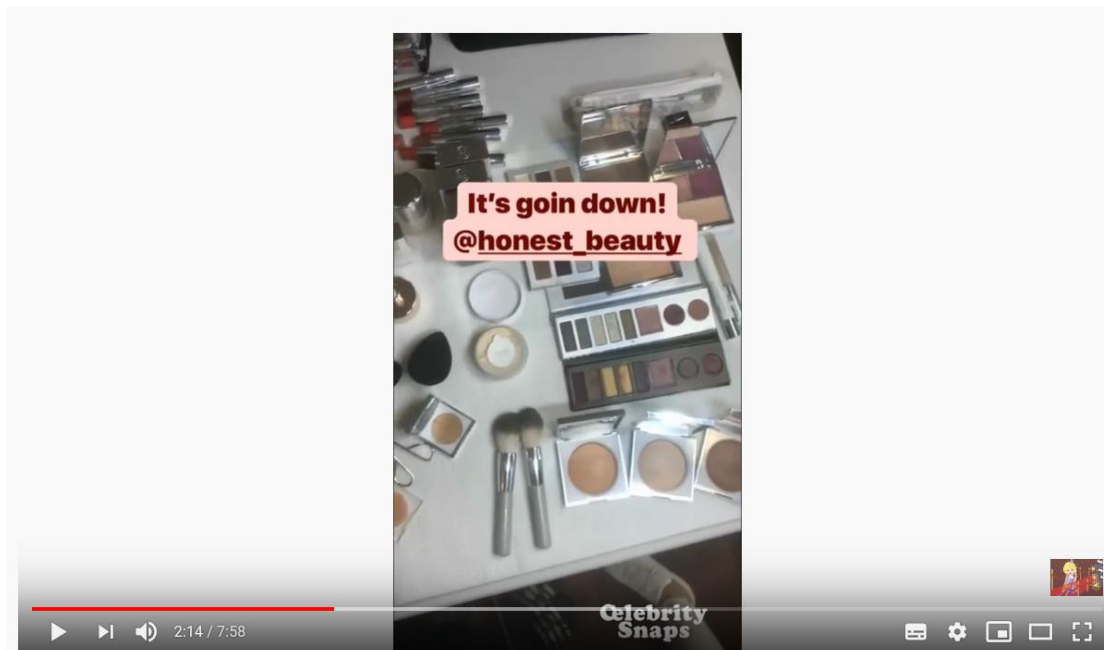
#### Video 1- TV Commercial



Honest Beauty & Jessica Alba launch [#LetsBeHonest](#)

Original link: <https://www.youtube.com/watch?v=4PIPAblGa58>

## Video 2- Instagram Story

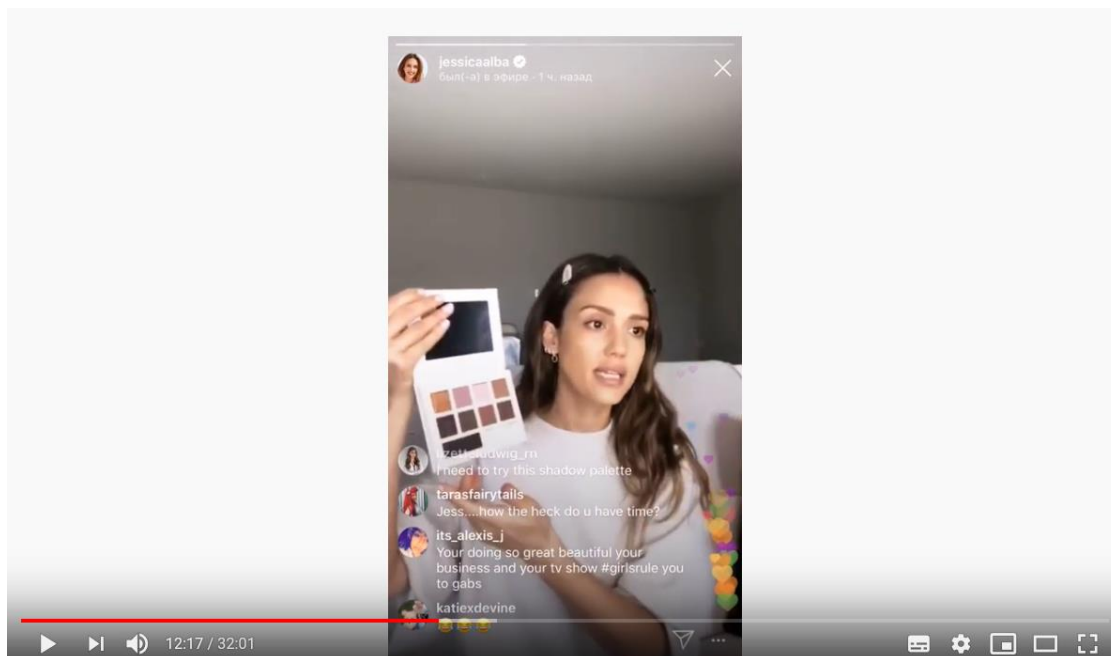


Jessica Alba Instagram Stories | November 2017 Full |

Original link: <https://www.youtube.com/watch?v=Jy7LVoAAma0>

02:14- 03:12

## Video 3- Instagram Live




Jessica Alba | Instagram Live Stream | May 21, 2019.

Original link: <https://www.youtube.com/watch?v=3jX4rqoB56I>




12.13 – 13.09

## Appendix II- Survey questions

Table 6.1- Survey Questions

<b>Introduction survey:</b> Before we start, I would like to thank you for participating in this questionnaire. This questionnaire will be used for my master thesis in Marketing that I am currently working on at the Erasmus University Rotterdam. The target group for this questionnaire is women. A video is used in this survey, which you have to watch carefully. Therefore, make sure you are in a quiet environment, so you can concentrate on the video and the questions. The questionnaire will take between 10 to 15 minutes. This questionnaire is completely anonymous and you will only be able to participate once.			
	Variable	Question	Answers
Part 1	Q1- Gender	What is your gender?	Male, Female, Other
	Q2- Country	Where are you from?	The Netherlands, Outside the Netherlands but within Europe, Outside Europe
	Q3- Year of birth	What is your year of birth?	<1980, 1981- 1995, 1996- 2010, 2011>
	Q4- Age	What is your age?	<10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41>
	Q5- Education	What is your current or highest reached educational level?	None, High/ Secondary School (Mavo, Havo or VWO), MBO, HBO Bachelor, WO Bachelor, WO Master, PHD
Part 2	Q6- Traditional channels	Which traditional media do you use or ever come across? More options possible.	Nothing, Newspaper, Magazine, Radio, TV, Newsletter, Folders/Flyers, Billboards, Others
	Q7- Social media channels	Which social media channels do you use? More options possible.	Nothing, YouTube, Instagram, Facebook, Twitter, Pinterest, Snapchat, LinkedIn, Others
	Q8- Hours active on social media	How would you describe your social media use on average per week?	Never (0 hours), very rarely (1- 7 hours), rarely (8- 14 hours), frequently (15- 21 hours), very frequently (22 hours or more).
Part 3	Q9- Video content	How often do you watch online video content?	Never, less than 5 times a year, 6-11 times a year, monthly, weekly, daily, more times a day.
	Q10- Live streaming	How often do you watch live streaming content?	Never, less than 5 times a year, 6-11 times a year, monthly, weekly, daily, more times a day.
	Q11- Reason Video content	What is your incentive for watching video content? More options possible.	It is informative, it is amusing, it is educational, it gives the ability to communicate and ask questions, it shows how products work, I have another motivation.
	Q12- TV	Do you watch TV?	Yes, No
Part 4	Q13- TV Frequency	How often do you watch TV on average per week?	Never (0 hours), very rarely (1- 7 hours), rarely (8- 14 hours), frequently (15- 21 hours), very frequently (22 hours or more).
	Q14- TV Reason	What is your main reason to watch TV? More options possible.	It is informative, it is amusing, it is educational, it gives the ability to communicate and ask questions, it shows how products work, I have another motivation.
	Q15- TV Motivation	Can you rate your motivation for TV on a scale of 0-5.	0 1 2 3 4 5
		TV	



Part 5	Q16- Instagram	Do you use Instagram?	Yes, No
	Q17- Instagram Frequency	How often do you use Instagram on average per week?	Never (0 hours), very rarely (1- 7 hours), rarely (8- 14 hours), frequently (15- 21 hours), very frequently (22 hours or more).
	Q18- Instagram Timeline	How often do you scroll through your timeline on Instagram on average per week?	Never (0 times), very rarely (1- 7 times), rarely (8- 14 times), frequently (15- 21 times), very frequently (22 times or more).
Part 6	Q19- Instagram Story	Do you know Instagram Story	Yes, No
	Q20- Story Frequency (create)	How many Instagram Stories do you create yourself on average per week?	Never (0 times), very rarely (1- 7 times), rarely (8- 14 times), frequently (15- 21 times), very frequently (22 times or more).
	Q21- Story Frequency (watch)	How many Instagram Stories do you watch on average per week?	Never (0 times), very rarely (1- 7 times), rarely (8- 14 times), frequently (15- 21 times), very frequently (22 times or more).
	Q22- Story Reason	What is your main reason to watch Instagram Story? More options possible.	It is informative, it is amusing, it is educational, it gives the ability to communicate and ask questions, it shows how products work, I have another motivation.
	Q23- Story Motivation	Can you rate your motivation for Instagram Story on a scale of 0-5.	<div> <div>012345</div> <div>Instagram Story</div> <div></div> </div>
Part 7	Q24- Instagram Live	Do you know Instagram Live	Yes, No
	Q25- Live Frequency (create)	How often do you create Instagram Live yourself on average per week?	Never (0 times), very rarely (1- 7 times), rarely (8- 14 times), frequently (15- 21 times), very frequently (22 times or more).
	Q26- Live Frequency (watch)	How often do you watch Instagram Live on average per week?	Never (0 times), very rarely (1- 7 times), rarely (8- 14 times), frequently (15- 21 times), very frequently (22 times or more).
	Q27- Live Reason	What is your main reason to watch Instagram Live? More options possible.	It is informative, it is amusing, it is educational, it gives the ability to communicate and ask questions, it shows how products work, I have another motivation.
	Q28- Live Motivation	Can you rate your motivation for Instagram Live on a scale of 0-5.	<div> <div>012345</div> <div>Instagram Live</div> <div></div> </div>
Part 8	Q29- Make-up	Do you use make-up?	Yes, No
	Q30- Purchase Frequency	How often do you purchase make-up on average?	Never, less than 5 times a year, 6-11 times a year, monthly, weekly, daily, more times a day.
	Q31- Importance make-up	Can you rate how important make-up is for you, on a scale of 0-5.	<div> <div>012345</div> <div>Make-up</div> <div></div> </div>

**Introduction video:** You're about to watch the make-up video. The original video is a lot longer in length, but small fragments of the original video are used for this investigation. This means that the video below gives an impression of the original video, no important parts have been extracted. No substantive questions are asked about the video. Try to watch carefully, pay close attention to what happens in the video.

Part 9	Video Shown	Video Shown (Appendix I): TV Commercial, Instagram Story or Instagram Live (randomize)	
Part 10	Customer engagement	Statements (Appendix III)	A 5-point Likert scale: strongly disagree, disagree, neither disagree nor agree, agree, strongly agree.
Thank you for participating in this survey.			

### Appendix III- Measurement Customer Engagement

Table 6.2- Statements to measure Customer Engagement used in the survey

<b>Dependent variable: Customer Engagement</b>	
I would describe the content of the video as interesting (O'Brien & Toms, 2010).	
I have received sufficient information in this video (O'Brien & Toms, 2010).	
This video clearly explained to me how to use the product (O'Brien & Toms, 2010).	
For me, this video is a very useful tool to pass on complaints and suggestions about the product (Dessart, Veloutsou, & Morgan-Thomas, 2015).	
This video explains more about this product than I already knew (Calder, Malthouse, & Schaedel, 2009), (O'Brien & Toms, 2010).	
This video provides information that helps me making decisions about using or buying make-up (Calder, Malthouse, & Schaedel, 2009).	
Watching the video was fun (O'Brien & Toms, 2010).	
The subject of the video, make-up, was interesting (Dessart, Veloutsou, & Morgan-Thomas, 2015).	
Because of this video I am positively surprised about make-up (Calder, Malthouse, & Schaedel, 2009).	
Watching the video was worthwhile (O'Brien & Toms, 2010).	
I'm interested in more content and videos about make-up (Calder, Malthouse, & Schaedel, 2009), (Dessart, Veloutsou, & Morgan-Thomas, 2015).	
Watching this video improved my mood/ makes me happier (Calder, Malthouse, & Schaedel, 2009), (Dessart, Veloutsou, & Morgan-Thomas, 2015).	
I could write a positive review on this video (Dessart, Veloutsou, & Morgan-Thomas, 2015).	
I experienced the video as interactive (Cai & Wohn, 2019).	
I was involved in watching this video, I focused completely on watching it (O'Brien & Toms, 2010).	
I would recommend this video or share it with my friends/family (O'Brien & Toms, 2010), (Shao, 2009).	
After seeing this video, I'm considering using this product (O'Brien & Toms, 2010), (Calder, Malthouse, & Schaedel, 2009).	
After seeing this video, I'm considering buying this product (O'Brien & Toms, 2010), (Calder, Malthouse, & Schaedel, 2009).	
In general, I am satisfied about this video.	



## Appendix IV- Descriptive Statistics control variables: Age, Education and Make-up Experience

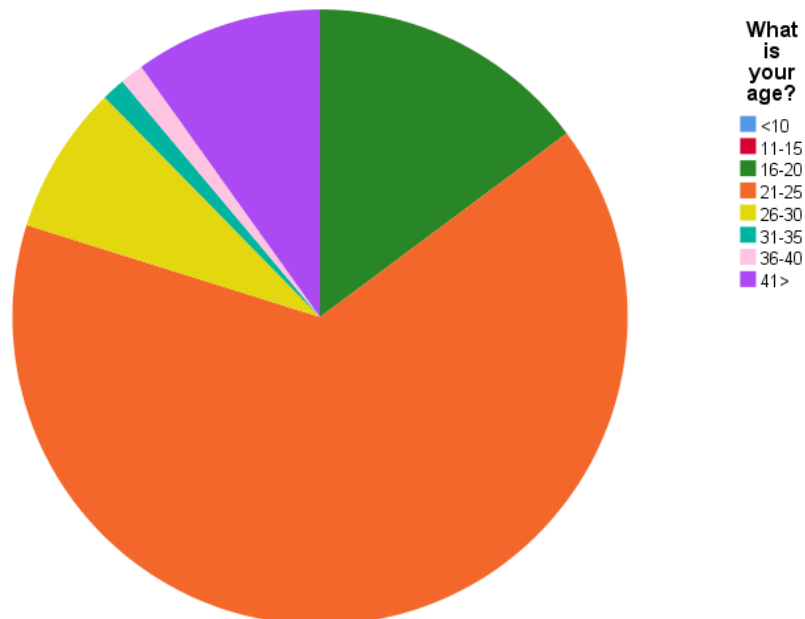


Figure 8- Circle Diagram 'What is your age?'

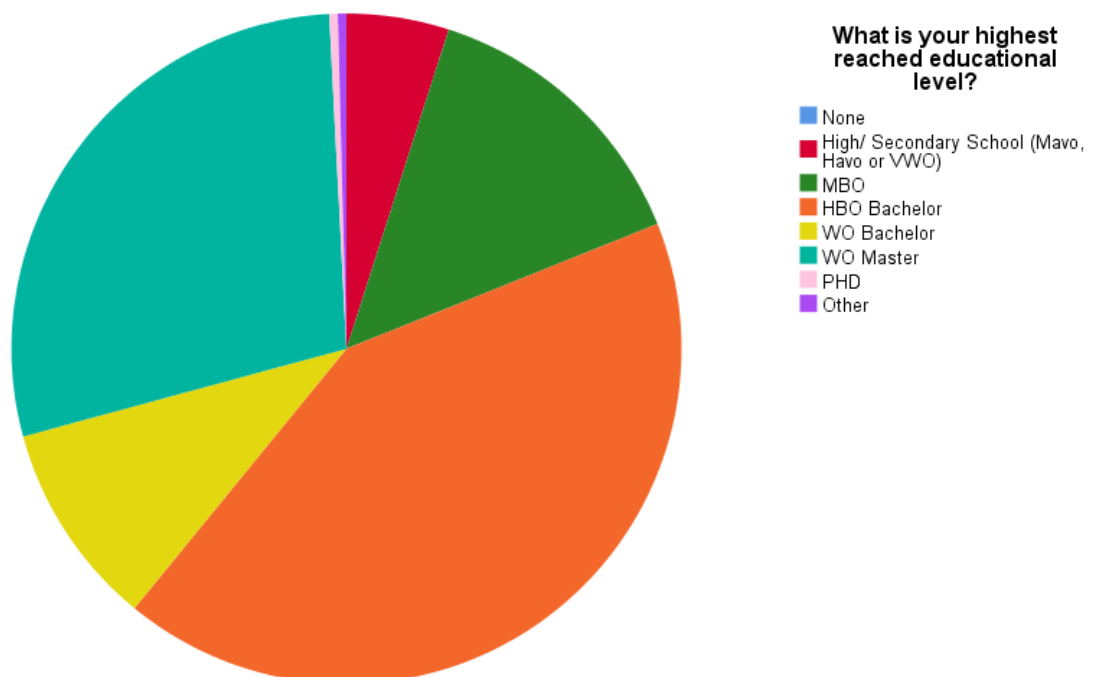


Figure 9- Circle Diagram 'What is your highest reached educational level?'

Table 6.3- Descriptive Statistics 'Make-up'

	N	Min	Max	Mean	Standard deviation
Q29- Do you use make-up?	242	1	2	1,07	0,263
Q30- How often do you purchase make-up on average?	224	1	6	3,33	1,166
Q31- Can you rate how important make-up is for you, on a scale of 0-5?	222	1	5	3,28	1,160

N= 18 answered 'No' on Q29 'Do you use make-up?', and therefore skipped Q30 and Q31. Respondents who answered 'Never' at Q30 'How often do you purchase make-up on average?' (N=2), skipped Q31. The mean for Q30 is 3, which is answer option '6-11 times a year'. In Figure 10 below, the distribution among the different answer options on this question shown.

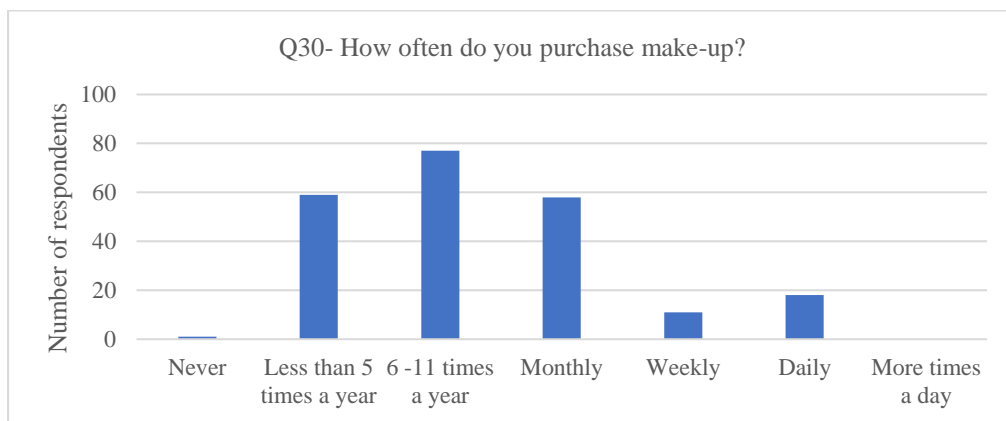


Figure 10- Descriptive Statistics Q30 'How often do you purchase make-up?'

The mean for Q31 is also 3, which means respondents rate the importance of make-up on average 3 out of 5. In Figure 11 below, the distribution among the different answer options on this question is shown.

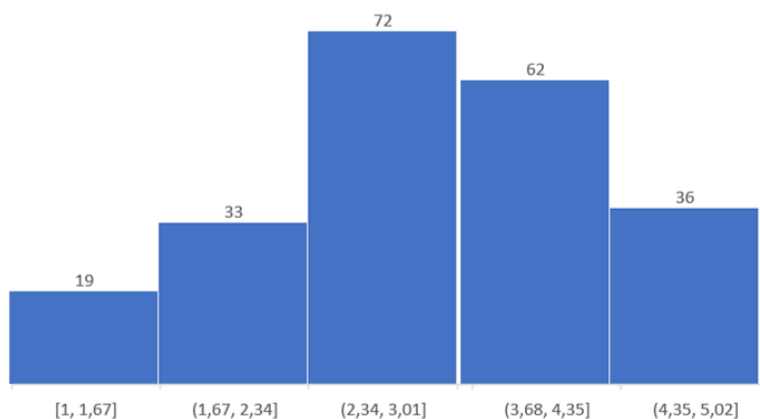


Figure 11- Descriptive Statistics Q31 'Can you rate how important make-up is for you?'

## Appendix V- Descriptive Statistics independent variables: TV Commercial, Instagram Story and Instagram Live

Table 6.4- Descriptive statistics for the independent variables

	Frequency	Percent	Valid Percent	Cumulative Percent
<i>How often do you watch TV on average per week?</i>				
Never (0 hours)	15	5,9	6,2	6,2
Very rarely (1 -7 hours)	84	33,1	34,6	40,7
Rarely (8 -14 hours)	86	33,9	35,4	76,1
Frequently (15 -21 hours)	53	20,9	21,8	97,9
Very frequently (22 hours or more)	5	2,0	2,1	100,0
Total	243	95,7	100,0	
<i>How many Instagram Stories do you create yourself on average per week?</i>				
Never (0 hours)	45	17,7	20,4	20,4
Very rarely (1 -7 hours)	137	53,9	62,0	82,4
Rarely (8 -14 hours)	28	11,0	12,7	95,0
Frequently (15 -21 hours)	7	2,8	3,2	98,2
Very frequently (22 hours or more)	4	1,6	1,8	100,0
Total	221	87,0	100,0	
<i>How many Instagram Stories do you watch on average per week?</i>				
Never (0 hours)	4	1,6	1,8	1,8
Very rarely (1 -7 hours)	19	7,5	8,6	10,4
Rarely (8 -14 hours)	44	17,3	19,9	30,3
Frequently (15 -21 hours)	62	24,4	28,1	58,4
Very frequently (22 hours or more)	92	36,2	41,6	100,0
Total	221	87,0	100,0	
<i>How often do you create Instagram Live yourself on average per week?</i>				
Never (0 hours)	187	73,6	93,0	93,0
Very rarely (1 -7 hours)	12	4,7	6,0	99,0
Rarely (8 -14 hours)	2	0,8	1,0	100,0
Total	201	79,1	100,0	
<i>How often do you watch Instagram Live on average per week?</i>				
Never (0 hours)	82	32,3	40,8	40,8
Very rarely (1 -7 hours)	96	37,8	47,8	88,6
Rarely (8 -14 hours)	14	5,5	7,0	95,5
Frequently (15 -21 hours)	4	1,6	2,0	97,5
Very frequently (22 hours or more)	5	2,0	2,5	100,0
Total	201	79,1	100,0	

Notes. The independent variables are scores between one (never) and five (very frequently).

## Appendix VI- Descriptive Statistics moderator variable: Consumer Motivation

'Percent of cases' is used in order to see what the motivation is for the respondents for watching a TV Commercial, Instagram Story or Instagram Live, as this was a multiple answer question.

Table 6.5- Descriptive statistics for incentive to watch videos

	Responses		Percent of cases
	N	Percent	
Reason for watching TV (N=239)			
N=3 answered ‘No’ on Q12- Do you watch TV?			
Or ‘Never’ on Q13- How often do you watch TV on average per week?			
Informative	156	33,8%	65,3%
Amusing	221	47,9%	92,5%
Education	77	16,7%	32,2%
The ability to communicate and ask questions	3	0,7%	1,3%
It shows how products work	4	0,9%	1,7%
Reason for watching Instagram Story (N=214)			
N=28 answered ‘No’ on Q19- Do you know Instagram Story?			
Or ‘Never’ on Q21- How often do you watch Instagram Story on average per week?			
Informative	37	11,1%	17,3%
Amusing	210	63,3%	98,1%
Education	12	3,6%	5,6%
The ability to communicate and ask questions	39	11,7%	18,2%
It shows how products work	34	10,2%	15,9%
Reason for watching Instagram Live (N=200)			
N=42 answered ‘No’ on Q24- Do you know Instagram Live?			
Or ‘Never’ on Q26- How often do you watch Instagram Live on average per week?			
Informative	59	16,0%	29,5%
Amusing	105	28,5%	52,5%
Education	56	15,2%	28,0%
The ability to communicate and ask questions	74	20,1%	37,0%
It shows how products work	75	20,3%	37,5%

The motivation for watching an Instagram Story was the highest (3,11), followed by a TV Commercial (2,65) and finally Instagram Live (2,46). However, they didn't differ much from each other.

Table 6.6- Descriptive statistics for consumer motivation

<i>Variable: Rate your motivation for watching</i>	N	Min	Max	Mean	Standard deviation	Variance
TV	243	0	5	2,65	1,148	1,318
Instagram Story	219	0	5	3,11	1,224	1,498
Instagram Live	201	0	5	2,46	1,375	1,890

## Appendix VII- Pearson's correlation matrix: Customer Engagement (dependent variable)

Table 6.7- Pearson's correlation matrix Customer Engagement statements

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
(1) I would describe the content of the video as interesting	1																		
(2) I have received sufficient information in this video	.656**	1																	
(3) This video clearly explained to me how to use the product	.255**	.392**	1																
(4) For me, this video is a very useful tool to pass on complaints and suggestions about the product.	.273**	.279**	.279**	1															
(5) This video explains more about this product than I already knew	.137*	.336**	.447**	.248**	1														
(6) This video provides information that helps me making decisions about using or buying make-up	.367**	.439**	.460**	.255**	.384**	1													
(7) Watching the video was fun	.626**	.505**	.258**	.246**	.138*	.408**	1												
(8) The subject of the video, make-up, was interesting	.621**	.483**	.252**	.222**	.061	.321**	.716**	1											
(9) Because of this video I am positively surprised about make-up	.473**	.441**	.251**	.211**	.210**	.441**	.563**	.561**	1										
(10) Watching the video was worthwhile	.578**	.524**	.279**	.297**	.197**	.434**	.670**	.583**	.661**	1									
(11) I'm interested in more content and videos about make-up	.579**	.403**	.198**	.231**	.084	.340**	.528**	.634**	.504**	.542**	1								
(12) Watching this video improved my mood/ makes me happier	.537**	.419**	.250**	.226**	.143*	.322**	.657**	.570**	.534**	.609**	.526**	1							
(13) I could write a positive review on this video	.449**	.377**	.348**	.241**	.188**	.396**	.581**	.491**	.516**	.556**	.410**	.593**	1						

(14) I experienced the video as interactive	.383 **	.327 **	.325 **	.397 **	.189 **	.206 **	.412 **	.441 **	.360 **	.456 **	.372 **	.424 **	.473 **	1					
(15) I was involved in watching this video, I focused completely on watching it	.381 **	.273 **	.288 **	.142 *	.097	.196 **	.561 **	.514 **	.413 **	.474 **	.406 **	.466 **	.443 **	.454 **	1				
(16) I would recommend this video or share it with my friends/family	.507 **	.483 **	.315 **	.203 **	.282 **	.322 **	.534 **	.502 **	.527 **	.611 **	.449 **	.499 **	.465 **	.442 **	.453 **	1			
(17) After seeing this video, I'm considering using this product	.563 **	.554 **	.301 **	.197 **	.141 *	.446 **	.617 **	.530 **	.609 **	.588 **	.503 **	.569 **	.543 **	.370 **	.399 **	.545 **	1		
(18) After seeing this video, I'm considering buying this product	.530 **	.478 **	.255 **	.220 **	.183 **	.416 **	.546 **	.476 **	.577 **	.614 **	.498 **	.504 **	.508 **	.337 **	.370 **	.593 **	.851 **	1	
(19) In general, I am satisfied about this video.	.596 **	.555 **	.407 **	.219 **	.231 **	.505 **	.726 **	.588 **	.554 **	.642 **	.495 **	.667 **	.691 **	.440 **	.529 **	.567 **	.674 **	.620 **	1

Notes. The dependent are scores between one (strongly disagree) and five (strongly agree); \*p < 0,05 (2-tailed), \*\*p < 0,01 (2-tailed).

## Appendix VIII- Pearson's correlation matrix: Independent variables

Table 6.8- Pearson's correlation matrix Independent variables (Questions 8, 9, 10, 13, 17, 18, 20, 21, 25, 26)

	Q8	Q9	Q10	Q13	Q17	Q18	Q20	Q21	Q25	Q26
(8) How would you describe your social media use on average per week?	1									
(9) How often do you watch online video content?	.255*	1								
(10) How often do you watch live streaming content?	.188*	.145*	1							
(13) How often do you watch TV on average per week?	0,091	-0,089	0,088	1						
(17) How often do you use Instagram on average per week?	.430*	.153*	.238*	-0,016	1					
(18) How often do you scroll through your timeline on Instagram on average per week?	.224*	0,079	.152*	-0,025	.495*	1				
(20) How many Instagram Stories do you create yourself on average per week?	.158*	0,055	.151*	.139*	.261*	.258*	1			
(21) How many Instagram Stories do you watch on average per week?	.166*	0,093	.171*	-0,007	.293*	.556*	.283*	1		
(25) How often do you create Instagram Live yourself on average per week?	-0,106	-0,023	.233*	.163*	0,087	0,039	.280*	-0,039	1	
(26) How often do you watch Instagram Live on average per week?	-0,032	0,075	.431*	.152*	0,116	0,134	.175*	.246*	.431*	1

Notes. The independent variables (Q9) and (Q10) are scores between one (never) and seven (more times a day); The other independent variables are scores between one (never) and five (very frequently); \*p < 0,05 (2-tailed).

## Appendix IX- ANOVA: Differences in video shown on Customer Engagement.

Table 6.9- ANOVA: Differences in video shown (IV) on each customer engagement individual statement (DV).

Variable		Sum of Squares	df	Mean Square	F	Sig.
I would describe the content of the video as interesting	Between Groups	6,553	2	3,277	3,249	0,041*
	Within Groups	241,001	239	1,008		
	Total	247,554	241			
I have received sufficient information in this video	Between Groups	2,040	2	1,020	1,045	0,353
	Within Groups	233,398	239	0,977		
	Total	235,438	241			
This video clearly explained to me how to use the product	Between Groups	8,168	2	4,084	3,973	0,020*
	Within Groups	245,683	239	1,028		
	Total	253,851	241			
For me, this video is a very useful tool to pass on complaints and suggestions about the product.	Between Groups	3,454	2	1,727	2,068	0,129
	Within Groups	199,575	239	0,835		
	Total	203,029	241			
This video explains more about this product than I already knew	Between Groups	8,354	2	4,177	3,985	0,020*
	Within Groups	250,493	239	1,048		
	Total	258,847	241			
This video provides information that helps me making decisions about using or buying make-up	Between Groups	10,374	2	5,187	4,670	0,010*
	Within Groups	265,477	239	1,111		
	Total	275,851	241			
Watching the video was fun	Between Groups	20,972	2	10,486	10,037	0,000*
	Within Groups	249,689	239	1,045		
	Total	270,661	241			
The subject of the video, make-up, was interesting	Between Groups	10,685	2	5,343	4,858	0,009*
	Within Groups	262,839	239	1,100		
	Total	273,525	241			
Because of this video I am positively surprised about make-up	Between Groups	3,827	2	1,914	2,155	0,118
	Within Groups	212,259	239	0,888		
	Total	216,087	241			
Watching the video was worthwhile	Between Groups	10,309	2	5,154	5,571	0,004*
	Within Groups	221,134	239	0,925		
	Total	231,442	241			
I'm interested in more content and videos about make-up	Between Groups	0,569	2	0,284	0,217	0,805
	Within Groups	313,485	239	1,312		
	Total	314,054	241			
Watching this video improved my mood/ makes me happier	Between Groups	18,742	2	9,371	9,457	0,000*
	Within Groups	236,829	239	0,991		
	Total	255,570	241			
I could write a positive review on this video	Between Groups	11,713	2	5,857	6,169	0,002*
	Within Groups	226,886	239	0,949		
	Total	238,599	241			
I experienced the video as interactive	Between Groups	6,726	2	3,363	3,276	0,039*
	Within Groups	245,361	239	1,027		
	Total	252,087	241			



I was involved in watching this video, I focused completely on watching it	Between Groups	25,405	2	12,702	11,275	0,000*
	Within Groups	269,261	239	1,127		
	Total	294,665	241			
I would recommend this video or share it with my friends/family	Between Groups	8,222	2	4,111	4,512	0,012*
	Within Groups	217,766	239	0,911		
	Total	225,988	241			
After seeing this video, I'm considering using this product	Between Groups	9,851	2	4,926	4,083	0,018*
	Within Groups	288,314	239	1,206		
	Total	298,165	241			
After seeing this video, I'm considering buying this product	Between Groups	15,317	2	7,658	7,420	0,001*
	Within Groups	246,683	239	1,032		
	Total	262,000	241			
In general, I am satisfied about this video.	Between Groups	13,958	2	6,979	7,091	0,001*
	Within Groups	235,220	239	0,984		

Notes. The dependent variables are scores between one (strongly disagree) and five (strongly agree); \*  $p < \alpha 0,05$ .

## Appendix X- Testing Assumptions

Table 6.10- Normal distribution based on Kurtosis-Skewness test Customer Engagement (dependent variables)

			Statistic	Std. Error	
<b>Factor 1 Customer Engagement in general</b>	Mean		2,6939	0,05048	
	95% Confidence Interval for Mean	Lower Bound	2,5944		
		Upper Bound	2,7933		
	5% Trimmed Mean		2,7020		
	Median		2,7500		
	Variance		0,617		
	Std. Deviation		0,78536		
	Minimum		1,00		
	Maximum		4,75		
	Range		3,75		
	Interquartile Range		1,10		
	<b>Skewness</b>		-0,204	0,156	(-0,204/ 0,156) -1,307*
	<b>Kurtosis</b>		-0,505	0,312	(-0,505/ 0,312) -1,618*
<b>Factor 2 Product Information</b>	Mean		2,8774	0,05285	
	95% Confidence Interval for Mean	Lower Bound	2,7733		
		Upper Bound	2,9815		
	5% Trimmed Mean		2,8993		
	Median		3,0000		
	Variance		0,676		
	Std. Deviation		0,82220		
	Minimum		1,00		
	Maximum		4,67		
	Range		3,67		
	Interquartile Range		1,00		
	<b>Skewness</b>		-0,243	0,156	(-0,243/ 0,156) -1,55*
	<b>Kurtosis</b>		-0,293	0,312	(-0,293/ 0,312) -0,939*

Notes. \* between – 1,96 and 1,96

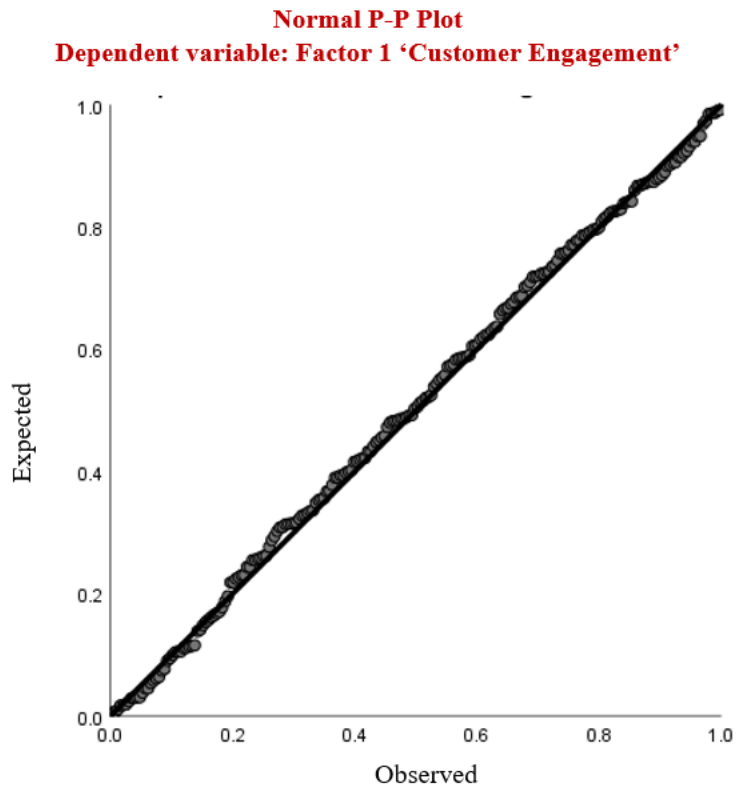


Figure 12- Normal P-P Plot- The linear relationship between the independent variables and the dependent variable Factor 1 'Customer Engagement in general'

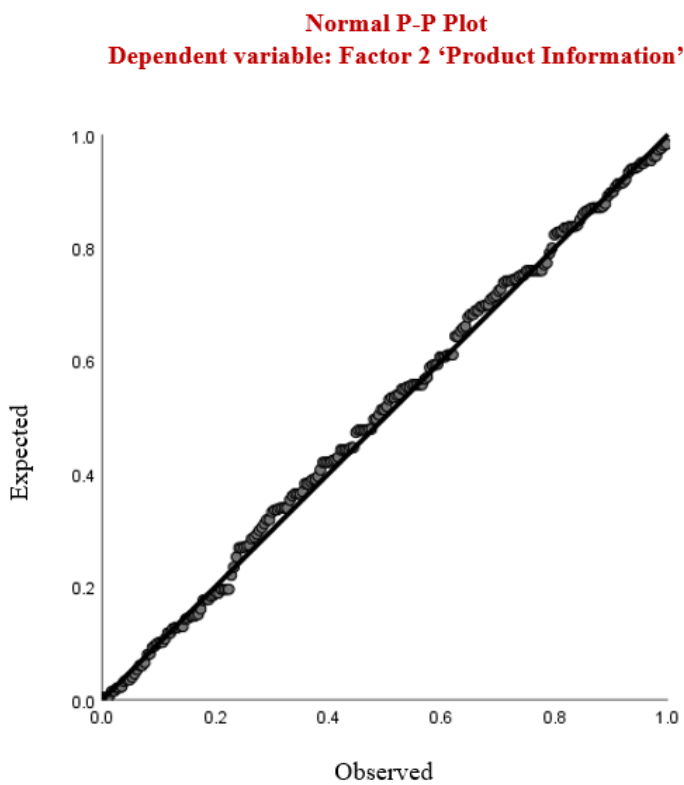


Figure 13- Normal P-P Plot- The linear relationship between the independent variables and the dependent variable Factor 2 'Product Information'