Livestreaming markets- A study of livestreaming's potential to grow amidst social distancing and connection to treat loneliness

Đovani Varga

9th July 2020

Erasmus University

Bachelor of Economics and Business Economics

Erasmus School of Economics

Bachelor Thesis

Student number: 357924

Supervisor: Prof. G.W. Havranek

Second supervisor: Prof. S. Lim

Abstract

Research into the livestreaming market is still relatively new and is primarily focused on the gaming industry. Due to the corona virus pandemic a lot of livestreaming initiatives started to emerge, this is the reason why I wanted to research this market and the possibilities this market may provide and lastly due to the interactive part I wanted to research if it might provide a solution to social isolation. This eventually led to the following research question: "Which livestreaming genres have a potential to grow and what social impacts might livestreaming have in the Netherlands?"

I used a descriptive survey method to gain quantitative data. I gathered the primary data myself. With a minimum of 30% of the respondents likely to watch an online-shopping livestream, that would suggest that roughly 6 million would be likely watch that genre. This shows that there is a large market potential in the Netherlands for all six of the genres tested, social, music, education, gaming, online-shopping and sports livestreaming respectively. As the other genres showcased more interest. However with music and education scoring highest in the willingness to pay in both monthly and pay per stream. This would suggest that the biggest opportunity and potential to grow lies within these two genres. The Corona virus

pandemic also helped with the popularity of streaming in general and livestreaming has also seen a boost. Twitch alone had seen a growth of 50% new active streamers in only two months.

Interactivity is a key feature in livestreaming. The active act of interacting together with the passive act of watching, positively influence each other. Interactivity also helps getting people in a flow state to donate more money during livestreams and is important when promoting livestreaming. As livestreaming is a relatively new technology, knowing how to use said technology is considered an important factor to adapt the new technology. As it is used online, the focus should be to market livestreaming online. Content marketing strategy could lead to meaningful relationships with the customers, leading to brand communities which is found to be partly positively related to WOM. However for content marketing to be effective research into the target audience is vital. Currently there is no robust research into the characteristics of livestream consumers. Another marketing tool that is proven to be significantly effective especially regarding the younger generation is influencer marketing. Investing in content marketing and influencer marketing could be essential in helping the livestreaming market t grow.

Literature further shows that meaningful and loyal connections can be made in virtual communities. The current pandemic has led and will lead to psychological distress, which is positively associated with loneliness One of the methods to treat loneliness is social support which motivates people to interact and create meaningful connections with other people. This is further supported with empirical research showing a significant difference between people who watched livestreams feeling less lonely than people who didn't. Suggesting that livestreaming can be used to connect lonely people with each other to create meaningful bonds and reduce the workload of the health workers. And also treat loneliness that way. Especially in times were the workload on our health workers are high, this might prove solutions and new business opportunities.

To conclude all six of the tested genres show potential, however music and educational livestreaming genres showcase most potential. Livestreaming also might provide a new method of treating loneliness.

Contents page

Chapter 1 - Introduction

Recently the Corona virus pandemic led to lockdowns in a lot of countries across the world. Large group gatherings were and in some cases are still prohibited. Musicians couldn't perform live anymore, sport events were cancelled, schools closed down, theatre shows and even some television shows were cancelled. This led to new initiatives from all kinds of industries. Universities and schools adapted by making education accessible from home, musicians and even some television makers used livestreaming as a tool to reach out to people who had to stay at home. The effects of the pandemic still remain uncertain but it could lead to some new living habits such as staying at home more frequently and in the Netherlands we are already talking about a 1,5 meter society RIVM (2020) were social distancing is enforced. Perhaps even working from home might become the new standard.

The elderly together with other at-risk groups were and in some cases still are isolated and protected from the corona virus. Concerns about their psychological health may occur especially regarding loneliness and involuntarily social isolation. Besides the at-risk groups other people might also be at risk of social isolation due to the lockdowns. In the Netherlands nearly 1 in 10 people stated to be frequently lonely in 2019, where single parents and single people were most vulnerable to severe loneliness and where the elderly aged over 75 had the highest severe emotional isolation (Central Bureau for Statistics, 2020). As the elderly population grows and as the future remains uncertain because of the pandemic perhaps livestreaming might be a way of connecting people and limiting social isolation. Livestreaming in general has social interactions between the watchers and also with the live streamer. Perhaps this interactive part might help with the social isolation problem.

Research into the livestreaming market is still relatively new and is primarily focused on the gaming industry. This also means information about the market is scarce and potential is scarce. Due to the corona virus pandemic a lot of livestreaming initiatives started to emerge. This is the reason why I wanted to research this market and the possibilities this market may provide and lastly due to the interactive part I would like to research if it might provide a solution to social isolation.

This leads to the main research question.

"Which livestreaming genres have a potential to grow and what social impacts might livestreaming have in the Netherlands?"

1.1 Theoretical sub-questions

To answer this research question I will first discuss what livestreaming is, what formats are currently used, which markets already offer livestream services and what opportunities literature already describes. After that I will take a look at the motivations viewers have for watching live streams together with why they donate money to streamers, after that I will look at ways to promote livestreaming. I will also take a look at the psychological effects the pandemic has together with the problem of loneliness and see if the literature can provide answers if livestreaming can help with the loneliness problem. Finally I will take a look at current status of the livestreaming market. The following theoretical sub questions follow.

How does livestreaming work?

What are the formats used to livestream?

Which current genres are represented in livestreaming and what opportunities does the literature describe for live streaming?

What are the motivations for viewing livestreams and why do viewers donate?

How to market livestreaming?

Could livestreaming help with social isolation?

What is the current status of the livestreaming market?

1.2 Empirical sub-questions

After answering these questions I will answer the empirical sub-questions. I will use a survey to determine which genres show potential, what the willingness to pay is for streaming together with testing if lonely people are interested in watching livestreams. This results in the following sub-questions.

Which genres of livestreaming is appealing to potential and current viewers?

What is the willingness to pay for livestream services?

Are lonely people interested in watching livestreams?

1.3 Possible research limitations

Due to the Corona virus pandemic, qualitative research is limited due to social distancing. Another limitation might be the representation of the survey being held. As a student with limited time to write this research I might not get an entirely representative sample. Another limitation might be that there is has not yet been a lot of research conducted on the livestreaming industry as a whole, mainly focussing on the gaming industry.

Chapter 2 – Literature Study

The world is becoming more and more digitally connected. One of the up and coming industries is the livestreaming industry, it changed the way how we connect with people online, especially in the gaming industry by blurring the lines between game space, social networks and face to face communications (Burroughs & Rama, 2015). Livestreaming however is not given a complete and accurate definition in previous studies. Hamilton et al. (2014) claim that livestreaming is a public broadcast of live audio and video streams alongside a shared chat channel, for instance in video game livestreaming the streamers share live footage of them playing a game, while also sharing footage of themselves in real time. The viewers of the stream can interact with the streamer through a chat. Whilst Pires et al (2015) simplify it by saying that livestreaming allows anyone to broadcast a video stream over the internet. In this study I will refer to livestreaming as the act of broadcasting video and sound of an event over the internet as it happens as described by the Cambridge Dictionary (Livestream, 2020). This means that as a person records and streams an activity live on the internet, consumers can directly watch and listen to the stream, without the act of having to download this. Nowadays TV broadcasts, sport events, video game streams, traveling and social media videos can all be livestreamed. Key difference between livestreaming and regular streaming is that the broadcast of a regular stream, can be recorded beforehand. Think of platforms such as Youtube, Netflix or Amazon Prime, where shows or videos are pre-recorded and the consumer can stream and watch it anytime they like or want. Whereas with livestreams, the consumer can only watch this process live as it happens.
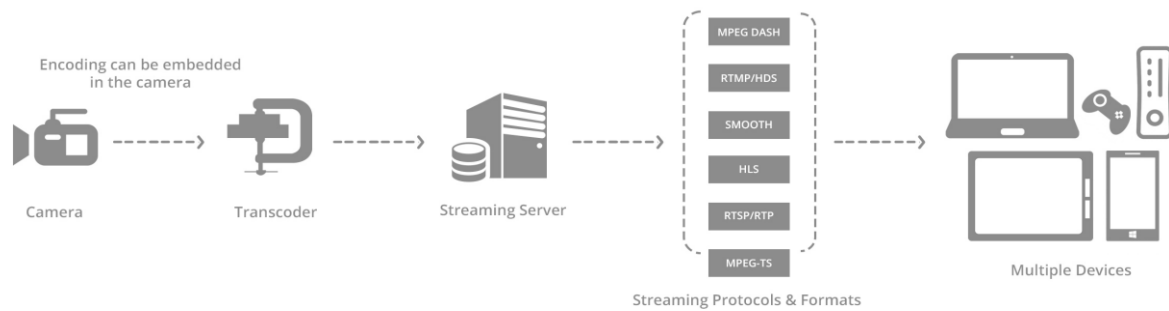
2.1 How does live streaming work?

Figure 1 Simplified process of live streaming

As seen in figure 1 above, the process of livestreaming first captures the audio and video footage the streamer wants to show. The camera output is forwarded to a streaming platform, however there are different output formats where the most common ones are M-JPEG and H.264 streams. Depending on the camera and output, it may or may not be necessary to transcode it to a different format. This takes a significant amount of processing power. Which results in some latency and delays the stream. The server stores the footage for a brief amount of time and is responsible for serving them to the browser, different server-client protocols are available. The consumer, in this case the viewer or listener, are the ones who finally watch this content. This happens through a streaming platform embedded on the website, platform, video game console or via a mobile application which processes, decode and render the data send to them. (Rodriguez-Gil et al., 2017).

One of the unique features of livestreaming is the interactive part between viewer and streamer. Unlike traditional formats such as television or video on demand (VOD) for instance Netflix or Amazon Prime there is no interaction between viewer and broadcaster. Rodrigues-Gil et al. (2017) claim that this interactive part of the livestream is a key feature in which the actions of the viewer can even affect the content of the stream. Livestreaming allows the consumers to react in real time to the streamer. The streamer doesn't only create content it is creating content in consequence of the information he or she receives, which affects the livestream (Scheibe et al., 2016).

Another aspect which makes livestreaming exciting is the fact that anyone can stream and broadcast on the internet through platforms such as Twitch, Youtube live or Younow. The only thing necessary is a camera and an internet connection. The Central Bureau for Statistics (2019) reported that by 2019, 97% of the population in the Netherlands has access to the internet and 87,4 % uses it for communication or social media purposes. This

potentially leads to a large pool of people being able to create content. For example Twitch has seen a growth from 2 million unique monthly broadcasters in 2017 to 5.5 million unique monthly streamers in 2020. Even the effects of the pandemic already are already visible as in march 2020 there were 5 million streamers and as of may 2020 this has even grown to 7,4 million (Twitchtracker, 2020).

Livestreaming works by capturing footage, sending it to a server which then shares it with the viewers. The social interaction between streamer and viewers adds a new depth to watching content and anyone with a camera and an internet connection, can become a streamer.

2.2 What are the formats used to live stream?

In general a stream consists of a video being broadcast live and a chat to be able to communicate with the streamer and the audience. The content can be created by anyone. There are some exceptions and this is mainly in the sports industry, were livestreams are basically the same as they are on television. Only the medium for watching is different as it is streamed. A key feature that livestreaming has, is that a lot of platforms allow viewers to donate money or virtual currency to the streamer to show appreciation. To analyse which streaming formats are currently used, I will look at Twitch as it is a prominent player in the market with over 7,4 million unique monthly broadcasters as of May 2020 (Twitchtracker, 2020). I will use Twitch as a basis and also look at other platforms and where or how they differ from Twitch.
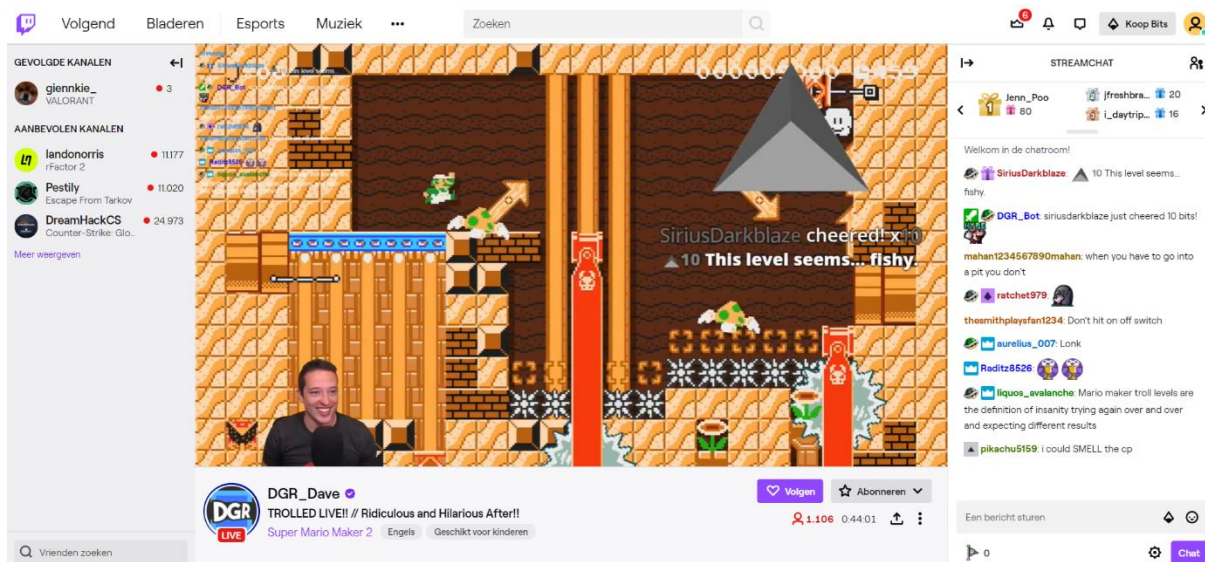

Figure 2. Twitch interface, an example of a live stream

2.2.1 Twitch

As one of the largest streaming platforms there are a number of ways to watch Twitch, through the website but also through applications embedded in smartphones or gaming consoles. The usual format is the live gameplay footage of a game, with in the corner the person playing the game and a chat on the right. Twitch lets you watch all the streams for free without having to create an account, without an account you cannot use the chat function to interact with the streamer and viewers. You will also occasionally see advertisements. You can create a free account, with this account you can interact with the chat but you will still occasionally see ads. To stop seeing the ads there are two options. The first one being a monthly subscription fee called twitch turbo, where you pay $8.99 a month, this also includes some customization options in the chat. The other one is being subscribed to a channel to directly support a streamer. There are three tiers, each tier gives you extra options in emoticons and customization. Tier 1 is priced at $4.99, tier 2 is priced at $9.99 and tier 3 is priced at $24.99. Twitch also has a cheering system where you can buy and donate "bits" to streamers to cheer them on. As you donate bits, depending on how much bits you donate, a small animation with music playing will pop up on the screen as seen in figure 2, where 10 bits were donated to the streamer. For each bit donated $0.01 goes to the streamer. Buying a 100 bits on twitch costs you $1.40 ex VAT. Which means that 28.6% goes directly to Twitch. A streamer can also add a pay-pal link or any other payment links, where viewers can directly send them money and supporting the streamer.

Twitch earns money through virtual gifting, ad revenue and monthly subscriptions.

2.2.2 Other formats

The livestreaming of sport events usually have a monthly subscription for instance like the Eurosport player, where the monthly subscription fee is €6.99 a month (Eurosport, 2020). They also sometimes offer a 24-hour pass to watch live events broadcasted that day or they offer the option to pay per match or event. Fox sports offers a 24-hours pass for €7.95 and the price for a single match is €6,00 (FOX Sports, 2020). There is live commentary but there is no interaction possible. You cannot watch the match or enter the stream without payment up front. This pay wall to pay money before watching the stream is also seen in some up and coming music livestreaming platforms, where the audience pays a fee up front such as €5 and gets a code to watch the stream. If during the stream, they want to donate extra money, this option is still available. We can see at other platforms that monthly subscriptions and showing advertisements are also a thing. Finally virtual currency is also available at other platforms, one example is YouNow.

In general a livestream consists of a video being broadcast live with a chat function to be able to communicate with the streamer and the audience, the only exception seems to be livestreams of sport events. Not all streams are free to watch, some require up front payments. A key feature that livestreaming has, is that a lot of platforms allow the viewers to donate money or virtual currency to the streamer to show appreciation. Monthly subscriptions are also a common thing. This leads to three variables of payment I will test in my empirical research to research payment behaviour for different genres. First one is not wanting to pay but accepting advertisements, second one is the willingness to pay monthly and last one is the willingness to pay per stream. This will help me get a better understanding if a certain genre shows potential what the best way is to introduce this to the market. To test the monthly pricing I will use Twitch as a format again and start off from €5 to a maximum of €25. For testing Pay per view I will use the reference point seen in up and coming music livestreams together with sporting livestreams and vary the prices from €2,50 to €12,50 per stream.

2.3 Which current genres are represented in livestreaming and what opportunities does the literature describe for live streaming?

Based on current platforms there are already a number of genres that offer livestreaming services. Gaming and e-sports are represented by platforms such as Twitch, Youtube and Facebook gaming. The sports industry is also represented in the market. Fox sports, Arena sport, Eurosport are platforms that offer livestreaming in the sports segment. The Social industry is booming in China also western platforms such as YouNow represent the social industry and are focused on self-potrayal videos (Stohr et al., 2015). The music industry is also represented by platforms such as Stageit and Twitch even. These are just some examples of genres already represented in the livestreaming industry. Literature showcases some other potential markets.

2.3.1 Online shopping

Lu et al. (2018) observed a new format being used in the e-commerce. Products varying from books, DVD's to even cars were shown in live-streams. With the intent of promoting and selling these products. They found with an average likelihood of 3.64 (M=3.64, SD = 0.77) that it was likely that viewers wanted to try the products as they had the chance. Live streaming here is being used as a tool to sell products online and to create a new experience. This might present firms new ways of selling products and creating a better bond with their customers through humanization.

2.3.2 Education

In South Africa a student protest in 2015 disrupted classes which led that some Universities were forced to postpone certain programmes until the end of 2016 (Hodes, 2016). This event was an incentive for Smit & Rossouw (2019) to do an exploratory study on the effectiveness of live-streamed lecturing. They showed that the use of livestreaming are not necessarily detrimental to student performances. In fact their research even shows that it might enhance student performances. Especially in light of the Corona virus pandemic this might result in opportunities for universities to implement live stream lectures.

Currently the livestreaming industry already offers the following genres. Social or self-portrayal, gaming, sports, music and the literature describes opportunities for online-shopping and education. For my empirical research I will research these genres and what their potential is to grow at this moment.

2.4 What are the motivations for viewing live streams and why do viewers donate?

In contrast to regular media or social media where viewers can post a reaction and the creator can potentially read it and react afterwards. Live streaming rewards interaction and makes it more enjoyable. Brundl et al. (2017) show that the perceived co-experience has a strong positive effect on enjoying live streams. They show that the active act of interacting together with the passive act of watching, positively influence each other. However Lessel & Altmeyer (2019) show that the audience does not appreciate it if interactive options interfere with the stream. For instance, spamming messages that show up on the screen are found disturbing and lowered the enjoyment, these are called trolling. Polls on the other side were shown to be very popular. The audience can for instance choose between two options, like what level the streamer should play next. Another interactive feature enjoyed was the fact that the streamer could play either against the audience or together with the audience. The interactive part however also has it's limitations depending on how many viewers there are. If there are a 10.000 viewers and 1000 of them write something in the chat Hamilton et al. (2014) compared this to a roar in a stadium. Which can disrupt the interactive part the audience enjoys.

When looking at other motivations of why people like livestreams, Wang & Chou (2019) identified four motivations for watching live-streams. Leisure, where the audience can relax, have a break and enjoy themselves. Celebrity worship, where the viewers identify themselves with the streamer and learns about them by viewing their streams. Social connection, where they use live streaming to connect with their family, friends or others. The

last one they identify is voyeurism, in their context it means that the viewers are curious about the streamer in such a way that they want to know everything about them. This drives them to view the livestream to fulfil their own desires.

There is a lack of robust research on the age of the viewers, therefore I will test if there is a significant difference in interest to watch livestreams between age groups. These results might give more insight in to whom to address promotion campaigns to reach a larger audience. This leads to the following null hypothesis.

H1

H_0 : There is no significant difference in interest to watch livestreams between age-groups

Li et al (2018) show that 21,4% of the viewers donate. So why is this the case? Flow theory might give some more insight, it is also know as being in the zone, it can be seen as a person completely absorbing what he or she does, fully enjoying and losing sense of time in the process (Csikszentmihalyi, 1975, 1988). Being in a flow state, people tend to experience way more enjoyment compared to daily activities. Different levels of flow can occur. From feeling no flow at all, to moderately feeling a flow to being in a complete flow state. Li et al. (2018) came to the conclusion that being in a state of flow is positively associated with consumption intention of virtual gifts and donating money. They also came to the conclusion that social presence, curiosity, social media dependence and interactivity all were significantly positively associated with flow in live streaming and intention of virtual gifting. Where social presence refers to the intimacy of a live stream, which is achieved by the streamer filming him or herself. Curiosity refers to the viewer his willingness to experience something new and embraces this. Social media dependence is one's reoccurring habit in social media activity such as being on a platform each day. Finally interactivity is the interactive part of a stream, such as the chat.

Interactivity plays a big role in the enjoyment of watching livestreams. Other motivations found to watch livestreams are leisure, celebrity worship, social connection and voyeurism. And finally getting into a flow state makes donating more likely. Because interactivity is an important factor in livestreaming, for each genre I will test if interactivity is wanted in the livestream, This will also help determining which genres have higher chances of money being donated during a livestream. As interactivity helps someone get into to a flow state. I tested the following variables. No interaction, Interaction with the audience only, interaction with the streamer only and interaction with the audience and the streamer. This might give

11

insight in which genres are more suitable for interaction. In chapters 2.2 and 2.3 I discussed there were two paying formats. Monthly and pay per stream, I also discussed 6 different genres that are represented in the market. In literature however there is still a lack in robust research in how much consumers are willing to pay per stream. Therefore I will test if there is a significant difference in willingness to pay per genre. These results in the following two null hypotheses.

H2

H_0 : *There is no significant difference in willingness to pay per month between livestreaming genres*

H3

H_0 : *There is no significant difference in willingness to pay per stream between livestreaming genres*

2.5 How to market livestreaming?

Besides these motivations, the usage of livestreaming might be a barrier for some people as it involves relatively new technology. Butler & Selbom (2002) claim that knowing how to use a technology is an important factor in determining if a person adapts a new technology. This is important in how to market livestreaming as it is relatively new to a lot of potential viewers. The Central Bureau for Statistics (2019) reported that in 2019, 62.3% of the Dutch population older than the age of 12 used the internet to watch television. 87.4% of the Dutch population aged older than 12 used the internet for communication and social media. It can be argued that livestreaming shares a bit of both worlds. It is used to stream a live broadcast such as watching television but is used as a social media platform due to it's interactivity. This showcases that digital marketing should have priority in presenting livestreaming to a larger audience as potentially 62.3% of the Dutch population knows how to use similar technology online. The following null-hypothesis will be tested.

H4

H_0 : *There is no significant difference in interest to watch livestreams between people who watched livestreams before the pandemic and those who didn't*

2.5.1 Content marketing

Content marketing is one of the newer digital marketing approaches. Currently there is not a universally accepted definition of content marketing, however according to the Content Marketing Institute it is, "A strategic marketing approach focused on creating and distributing

valuable, relevant, and consistent content to attract and retain a clearly defined audience and, ultimately, to drive profitable customer action" (Content Marketing Institute, 2020). According to Baltes (2015), content marketing focusses on raising brand awareness, building a relationship based on trust with the target segment, creating a need for a specific product, developing customer loyalty and testing new product or business ideas by education, entertainment or information. Important in content marketing is knowing your audience. Therefore an extensive research on the target audience is vital in order to create a content marketing strategy. A strategy that meets the interests of the audience in order to develop a relationship and brand loyalty with potential viewers. One way to achieve this is through brand communities. According to McAlexander et al. (2002) to create lasting and meaningful relationships with the customers, brand communities are essential. Muniz and O'Guinn (2001) define a brand community as "a specialized, non-geographically bound community, based on a structured set of social relationships among users of a brand". Such a community involves consumers in the processes of the firm and integrates consumers with the brand. Coelho et al. (2019) show that brand community is in part positively related to word of mouth (WOM from now on). Brand communities lead to a higher commitment to the brand which in turns positively influences WOM. Meuter et al. (2013) describe WOM as an interaction or exchange of information between people who are familiar with each other. A high number of research studies came to the conclusion that that WOM communication has the most influence on consumer decisions and is considered to be one of the most credible sources (Villanueva et al., 2008, Trusov et al., 2009). Thus investing in content marketing should be vital in positioning livestreaming and promote the relatively new market.

2.5.2 Influencer marketing

Social media influencers have become an important part of online interaction. Their opinions have a great impact on their followers especially regarding the younger generation. More and more firms have been cooperating together with influencers to promote their businesses. According to Kádeková & Holienčinová (2018) an influencer "is an individual with a significant following on social media who is paid by brands to promote their products to said followers, via free products and trips and/or cash payment per promotional post". Bognar et al (2019) even show a significantly positive reaction to influencers their recommendations, meaning that using influencers promote livestreaming channels a viable option. It might even be considered offering contracts to certain influencers for them to livestream on a platform, thus giving a boost to a new platform.

As livestreaming is a relatively new technology, knowing how to use said technology is considered an important factor to adapt the new technology. As it is used online, the focus should be to market livestreaming online. Content marketing strategy could lead to meaningful relationships with the customers, leading to brand communities which is found to be partly positively related to WOM. However for content marketing to be effective research into the target audience is vital. Currently there is no robust research into the characteristics of livestream consumers. Another marketing tool that is proven to be significantly effective especially regarding the younger generation is influencer marketing. Investing in content marketing and influencer marketing could be essential in helping the livestreaming market to grow.

2.6 Could livestreaming help with social isolation?

As stated earlier, nearly 1 out of 10 people in the Netherlands suffer from loneliness (Central Bureau for Statistics, 2020). With the Covid-19 pandemic, Garfin et al. (2020) stated that repeated exposure to the outbreak can cause psychological distress, which then will lead to adverse physical and mental health issues as time progresses (Holman et al, 2020). Research has further shown a positive association between loneliness and psychological distress. (Paul et al., 2006, Jackson & Cochran, 1991). As the pressure now rises on our healthcare workers, we need to find solutions in tackling loneliness and perhaps a solution lies in livestreaming. Loneliness is defined as feeling emotional distressed when a person is estranged from activities that provide opportunities for intimacy (Rook, 1984). This implies that people who do not feel emotional distress when not having any social interactions are not specified as lonely. McWirther (1990) provides three solutions for treating loneliness. The first one being cognitive behaviour therapy. Where they tempt to modify self-defeating thought patterns and dysfunctional beliefs. It is encouraged to recognize automatic negative thoughts and to write them down, so inconsistencies can be recognized and replaced by thought patterns that are not self destructive. The second method mentioned is social skills training. Which are usually organized around problems initiating, maintaining and ending relationships. It encourages people to re-evaluate factors contributing to their feelings of loneliness and improve on their social skills. The last method mentioned is social support, which focuses on providing a lonely individual new opportunities and networks were people are interconnected and important to each other. Especially the last method can work with livestreaming as Yee (2006) describes livestream viewers are motivated to participate in a virtual environment because they want to form important and interconnected relationships with other users. Badrinarayanan et al. (2015) also found that psychological bonds in virtual

communities contribute to forming loyalty towards said community. It seems that meaningful and loyal connections can be made in virtual communities.

1 out of 10 people in the Netherlands suffer from loneliness. We also see that repeated exposure to the current pandemic also leads to psychological distress, which is positively associated with loneliness. There are three methods to treat loneliness, one of them is social support which motivates people to interact and create meaningful connections with other people. Livestreaming might provide opportunities to create virtual communities in which people might feel less lonely. In my empirical research I will test if lonely people have more incentive to try and watch livestreams together if they prefer interactivity over people who aren't lonely. In my empirical research I will test if lonely people are more willing to give livestreaming a chance and test if they value interactivity with the audience more, as that is what is lacking in their day to day lives. Finally I will test if people who watched livestreams before the pandemic are less lonely. Therefore I will test the following 3 null hypotheses.

H5

H_0 : *Lonely people and people who aren't lonely show the same interest to watch livestreams*

H6

H_0 : *Lonely people and people who aren't lonely show the same interest in interactivity with the audience*

H7

H_0 : *People who watched livestreams before the pandemic are just as lonely as people who did not watch livestreams before the pandemic.*

2.7 What is the current status of the livestreaming market?

In 2018 almost all revenue from live events were generated by traditional formats such as broadcasting live through television or attending the events by going to theatres, concerts or exhibitions (Deloitte, 2017). New genres such as livestreaming and eSports however were enjoying a surging growth even though it was still 1.5% from all the live revenue. It was expected that their growth in 2018 alone would consist of 47%, reaching a revenue of $7.4 billion. They estimated that China would remain the largest market for live streaming and grow around 32%, with an estimate revenue of $4.4 billion. Further research regarding the livestreaming market is scarce.
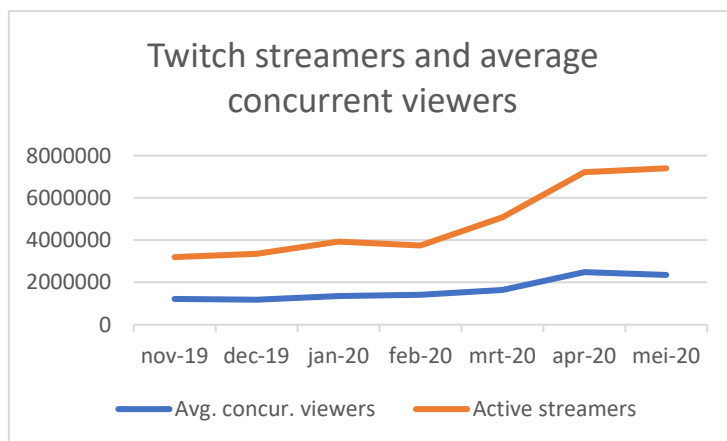
Figure 3. Twitch streamers and average concurrent viewers

The impact the coronavirus pandemic had on the growth of the industry is visible in the average concurrent viewers and streamers on Twitch on a monthly basis (Twitchtracker, 2020). As seen in figure 3 the amount of streamers saw a rise from February and where the viewers saw a substantial rise in March 2020. Coniva (2020), also showcased an immediate impact on streaming behaviour of people because of the COVID-19 pandemic. They showed that in March alone streaming grew with more than 20%. Conviva however does not report on live streaming, but streaming in general. This also includes the VOD sector such as Netflix or Disney plus. However for a group to accept new or innovative technology, it needs to be compatible with current technology (Hu et al., 2017, Wu et al., 2017). The Twitch numbers together with streaming in general shows that this market is growing. This indicated the market might even grow faster than initially predicted by Deloitte. However there is still a lack in robust research into the growth of the market and market research should provide more detail as right now research on livestreaming markets is still relatively new.

Chapter 3 - Methodology

In this chapter I will present the research methodology I used to answer my research questions. My research design, data collection and data analysis. The overall research question was "Which livestreaming genres have a potential to grow and what social impacts might live streaming have in the Netherlands?"

To be able to answer the overall research question I first needed to answer these empirical research questions.

Which genres of livestreaming is appealing to potential and current viewers?

What is the willingness to pay for livestream services?

Are lonely people interested in watching livestreams?

3.1 Research design

Because research in livestreaming is relatively new I wanted to gain more understanding on the publics reaction to all the new genres the Corona virus pandemic presented with it. I used a descriptive survey method to gain quantitative data. I gathered the primary data myself. I wanted to asses sociodemographic information such as gender, age, if someone watched livestreaming prior to the pandemic and loneliness in relation to livestreaming. Qualitative research or exploratory research is the process of gaining a first impression on the subject. Quantitative research is the process of collecting and analysing numerical data. It can be used to make predictions, test causal relations and generalize results to larger populations.

3.2 Survey

The survey was divided into two sections. Respondent statistics and characteristics and livestream characteristics including, willingness to watch a genre, willingness to pay and interaction options. The main purpose of this survey was to see which genres have potential in the livestreaming market, what the willingness to pay is per genre and if there is a difference in interest between lonely people and people who do not feel lonely and if lonely people prefer interactivity in livestreams more than people who are not lonely.

The respondent statistics and characteristics consists of questions indicating if the sample is representative of the Dutch population. This has been done by asking questions about the gender and age of the respondents. Age had 9 options starting from under 18(classified as group 1), 18-24, 2-34, 35-44, 45-54, 55-64, 65-74, 75-84 and older than 84(classified as

group 9). The results gathered from this were used as independent variables in the data analysis. Further questions about respondent characteristics were if someone watched livestreams before the corona pandemic and how often a respondent felt lonely. These questions were as followed. *How often do you feel lonely?* Respondents could answer on a 5-point Likert scale ranging from never (classified as group 5) to always (classified as group 1) the respondents were classified as lonely if the score was between 3, which was often and 1, which is always. The other question was. *Did you watch any livestreams prior to the Corona virus pandemic? If so, how often?* Respondents could again answer on a 5-point Likert scale ranging from Daily(classified as group 1) to never (classified as group 5). Only if the respondents answered never were they classified as not having watched any livestreams prior to the Covid-19 pandemic. This is because the next answer was "once a week" classified as group 4. These were also used as independent variables in the data analysis.

The livestream section consists of the same questions per each of the six genres, online-shopping, social, education, sports, music and gaming. First the respondent was shown a picture and a brief description of the genre followed by the question if they were interested in watching such a stream. They could answer on a 5-point Likert scale ranging from Extremely likely (classified as group 1) to extremely unlikely (classified as group 5). If the answers were in the range of group 1 and 2, only then would they be asked follow up questions on this particular livestreaming genre. The follow up question was as follows. *Would you be willing to pay to watch a social livestream? Answering no implies advertisements will be shown during the livestream*. There were three answer possibilities here. "No", "Yes, I would pay a monthly fee" or "Yes, I would pay per stream". This was used to measure willingness to pay for each genre. If the respondent chose either the monthly or pay per stream option, they would be shown a range of price options were they could choose from. These price ranges were based on the information obtained in chapter 2.2. The price range respondents could choose for the monthly subscription were on a 5-point Likert scale and started from €5 up until €25, with steps of €5 between them. The price range respondents could choose for the pay per view option were also on a 5-point Likert scale and started from €2,50 up until €12,50, with steps of €2,50 between them. This was used to test differences in willingness to pay between livestreaming genres. The only exception where I did not include pricing options was with the online-shopping livestream genre, as that is a shopping experience and the assumption was made that online-shopping platforms earn through selling the products and not through subscriptions fees.

3.3 Data description

The sample set consists of 133 respondents and were exclusively gathered through online platforms such as Facebook and Reddit because of the Corona virus pandemic. This to satisfy the need for a representative sample. The survey was posted on Reddit forums to mainly gather a younger audience and through multiple Facebook pages to also include the older audience. Qualtrics was used as a survey program which allows for professional data descriptions and easily exportable data to either Excel and later to SPSS which was used to conduct statistical tests. The data was gathered from June 15th until June the 26th.

The average age mean is equal to 3,9, which means the average age was between 35 and 44 years old with a standard deviation of 1,93. This roughly translates to a standard deviation of 17 years. When testing for skewness and kurtosis, skewness scored a 0.63 and kurtosis the data set scored a -0.048 which suggests the scores are not skewed and the distribution is not flat. However when looking at the histogram, it does feel slightly skewed towards respondents under the age of 35 with a peak of 33 respondents with ages between 25-34. This is probably due to the collection method online were it is a more familiar form of communication for the younger audience. This might mean the results are slightly biased towards a younger audience. However the statistical tests show it is not skewed and thus the data is usable to conduct T-tests and ANOVA tests. When comparing the age distribution to the Dutch population it is visible that the sample lacks respondents under 18 and is over represented in the 25-34 age category. This means that results especially regarding these two age groups might be slightly biased. The sample has 68 female respondents (51.1%) and 65 male respondents (48.9%). This is in line with the Dutch population as 50.3% of the Dutch population is female and 49.7% male in 2019 (Central Bureau for Statistics, 2019). 47% of the respondents claimed to be lonely, either sometimes or frequently whereas 53% of the respondents claimed to not be lonely. This is not in line with the statistics the Central Bureau for Statistics presented (2020) as they show that on average somewhere between the 30% and 40% feel either sometimes lonely or frequently lonely. This could perhaps be explained by either the pandemic having an effect or the fact that one question about loneliness is not enough to accurately test if someone is lonely. Results surrounding age and loneliness might be biased because of this.

3.4 Data analysis

As mentioned before the variables age, loneliness and watched livestreaming prior to the pandemic were the independent variables. With age having 9 groups, loneliness, either being lonely or not lonely and watched livestream as yes or no. I exported the raw data from

Qualtrics and used only numerical values. I transformed loneliness into either a 1(lonely) or a 0(not lonely) based on the outcomes of the 5-point Likert scale. The same way I also transformed if someone watched livestreaming prior to the pandemic into either a 1(watched prior) or a 0 (did not watch prior) based on the outcomes of the 5-point Likert scale.

The dependent variables were if someone was interested in watching a certain genre, Their willingness to pay, how much they were willing to pay and if they would prefer interactivity for that specific genre. Interest in a genre was transformed into either a 1(interested) or a 0(not interested) based on the outcomes of the 5-point Likert scale. After that I added them together per person to create a maximum score of 6. This so I could interest in different genres based on if a person watched livestreams prior and if they were more inclined to watch more genres. I used a t-test to compare the means of the two groups. I also used this added score to test if there was any significant difference between age groups and interest in multiple genres. I used an ANOVA test to analyse this.

To test the willingness to pay per genre I separated the three groups into 3 numerical values. 1, meaning no. 2, meaning yes, I would be willing to pay monthly and 3, meaning yes, I would be willing to pay per view. To test if there was any difference per genre and the willingness to pay I separated monthly and pay per view as they are not comparable. Paying monthly could indicate that the person is willing to pay a certain amount to watch daily, whereas paying per stream could indicate a person adding that much value per one stream and not a time period. To test if the groups or genres differed for either paying monthly or pay per view I used an ANOVA test, to see if they are significantly the same or not.

And finally to test the interactivity, I divided the answers into two groups. Both interactions audience were transformed into 1 and the interaction with only the livestreamer and no interaction were transformed to 0. To test if lonely people add more value to social interaction with the audience I performed a t-test for each genre to compare the means of the lonely and the not lonely to see if there was any significant difference.

Chapter 4 - Research Outcome

In this chapter I will discuss the survey results and outcomes. I will answer the empirical questions and hypotheses.

4.1 Which genres of livestreaming is appealing to potential and current viewers?

This was measured by presenting pictures with explanations of different livestreaming genres and asking how likely it would be if they would watch said genre. If somewhat likely or extremely likely were chosen this would imply an interest in that genre. The following results followed.
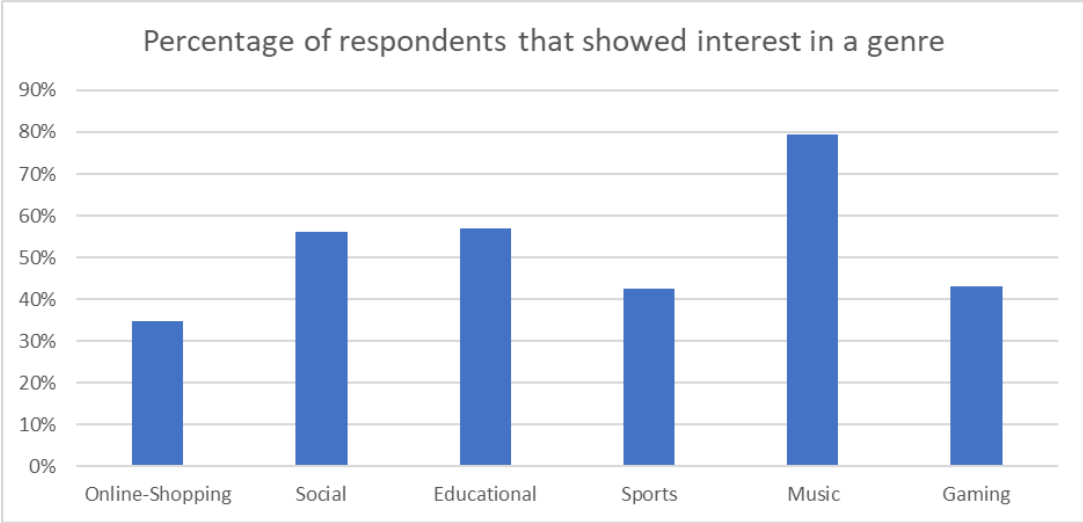
Figure 4. Percentage of respondents that showed interest in watching a genre.

Based on these results seen in figure 4. 79.5% of all the respondents showed interest in music livestreaming. Educational and social livestreaming also showed interest with respectively 56.8% and 56.1% of the respondents likely to watch such a livestream. Surprisingly the gaming and sports genres were less appealing with 43.2% and 42.4% of the respondents likely to watch them. Especially since the livestreaming market is mainly focused on those 2 genres. Online shopping showed the least interest with 34.8% of the respondents likely to watch or participate in an online-shopping livestream.

As can be seen in figure 4, music livestreaming is the most appealing followed by educational, social, gaming, sports and lastly online-shopping.

H1

H$_0$: There is no significant difference in interest to watch livestreams between people who watched livestreams before the pandemic and those who didn't

Table 1.

Group descriptives

	Group	N	Mean	SD	SE
Number of genres	Did not watch livestreams prior	64	2,859375	1,081844	0,135231
	Watched livestreams prior	69	3,333333	0,995086	0,119794

Table 2.

Independent Samples T-Test between people who watched livestreams prior and those who didn't

						95% Confidence interval of the difference	
	Statistic	df	p	Mean difference	Std. Error difference	Lower	Upper
Number of genres	-2,632	131	0,0010*	-0,473958333	0,18008994	-0,8302192	-0,1176975

* T-test was significant (P<0,05)

The first hypothesis was tested by an independent samples t-test. Where the independent variable was if the respondent watched livestreams prior to the Corona pandemic or not. The dependent variable that was tested here was how many new genres the would likely watch. With a p-value of 0,010 which is smaller than p=0.05, the null hypothesis is rejected and there is a significant difference in interest in livestreams between people who watched livestreams before the pandemic and those who didn't. People who watched livestreams have an average mean of 3.3 genres they are interested in whereas people who didn't have a mean of 2.9 genres.

H2

H$_0$: There is no significant difference in interest to watch livestreams between age-groups

Table 3.

Group descriptives

Group_age	Mean	N	Std. Deviation
Under 18	4	11	0,89443
18-24	3,0476	21	0,92066
25-34	3,2424	33	1,2755
35-44	2,9545	22	0,95005
45-54	2,7778	18	1,11437
55-64	3,1429	14	0,86444
65-74	3,125	8	0,64087
74-84	2,5	2	0,70711
Above 84	2,25	4	0,95743
Total	3,1053	133	1,06075

Table 4.

One-way ANOVA to compare the means of interest in livestreaming genres between age groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15,608	8	1,951	1,82	0,079
Within Groups	132,918	124	1,072		
Total	148,526	132			

The second hypothesis was tested by means of a one-way ANOVA that is used to compare the means of interest in livestreaming genres between age groups. The p-value = 0.079 which suggests this test isn't significant in a 95% confidence interval. However it is significant in 90% confidence interval. I will not reject the null hypothesis but do note, there seems to be a small difference between age groups. When looking at the means in the table, it might suggest that the younger the respondent the more genres he or she is willing to watch.

4.2 What is the willingness to pay for livestream services?

To measure the willingness to pay I looked at current streaming formats used right now and asked the respondents if they were willing to pay and if so, if they were willing to pay per stream or monthly. I excluded online-shopping as explained earlier, I assumed the platforms

there are earning money by selling their products.

First I measured the proportions per genre. With the following results.

Proportions of respondents willing to pay monthly, per stream or not willing to pay per genre
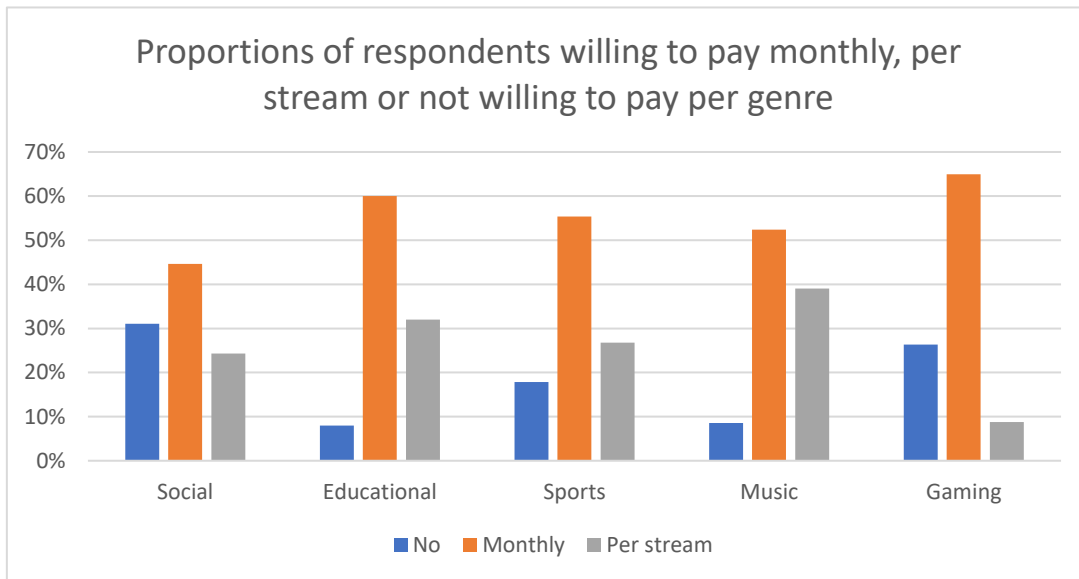
Figure 5. Proportions of respondents willing to pay monthly, per stream or not willing to pay per genre

As seen in figure 5, the majority of the respondents prefer to pay monthly over paying per stream. It can be seen that overall people are willing to pay to watch livestreams. Over 90% of the respondents are willing to pay for educational and music livestreams. 92% are willing to pay for educational livestreams, respectively 60% monthly and 32% per stream. 91% of the respondents are willing to pay for music livestreaming, respectively 52% monthly and 39% per stream. Sports and gaming also enjoy high willingness to pay to watch with 82% and 74% willing to pay to watch. Social livestreaming has the least willing to pay with 69%.

When measuring how much the respondent was actually willing to pay per genre, I added the values the respondents chose and divided it by the amount of respondents thus creating the average amount that the respondents were willing to pay. This resulted in the following results per genre. On average people are willing to pay € 15,14 a month and €5.44 per stream for livestream services.

Table 5.

Average willingness to pay per genre, monthly and pay per stream

Genre	n	Monthly		Per stream	
		n	Average price	n	Average price
Social	51	33	€ 13,18	18	€ 3,06
Educational	69	45	€ 17,67	24	€ 6,67
Sports	46	31	€ 13,87	15	€ 4,83
Music	96	55	€ 16,64	41	€ 7,13
Gaming	42	37	€ 14,32	5	€ 5,50

As seen in table 5, Educational and Music are both valued the most by the respondents.. To test if these differences are significant I conducted a one-way ANOVA testing the two null hypotheses as seen in chapter 2.4

H3

H_0: *There is no significant difference in willingness to pay per month between livestreaming genres*

Table 6.

One-way ANOVA to compare the monthly average willingness to pay between genres

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	592,473	4	148,118	3,237	0,013
Within Groups	8967,228	196	45,751		
Total	9559,701	200			

The third hypothesis was tested by means of a one-way ANOVA that is used to compare the monthly average willingness to pay between genres and to see if there is any significant difference in willingness to pay between genres. The p-value = 0.013, which is smaller than p=0.05 thus refuting the null hypothesis. This result suggests there are significant differences in willingness to pay per month per livestreaming genres. Because the means of educational and music were similar and the means between social, sports and gaming as well. I decided to test that. A T-test was used to compare the means between educational and music livestreams. This resulted in a p-value = 0.414, which is larger than p=0.05 thus suggesting there are no significant differences between the monthly average willingness to pay of music

and education. After that I used a one-way ANOVA to test the average willingness to pay between social, sports and gaming livestreams. This resulted in a p-value of 0.804 which again is not significant, thus there is no significant difference between the monthly average willingness to pay for social, sports and gaming livestreams.

This results into a significant difference between Education and music livestreams and social, sports and gaming livestreams. The respondents were significantly willing to pay more monthly for education and music livestreams than for the other genres.

H4

H_0 : There is no significant difference in willingness to pay per stream between livestreaming genres

Table 7.

One-way ANOVA to compare the pay per stream average willingness to pay between genres

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	240,056	4	60,014	8,306	0,000
Within Groups	708,123	98	7,226		
Total	948,18	102			

The fourth hypothesis was also tested by means of a one-way ANOVA that is used to compare the pay per stream average willingness to pay between genres and to see if there is any significant difference in willingness to pay between genres. With a p-value of 0.000 this suggests again that there is a significant difference as it is lower than the p-value of 0.05 again refuting the null hypothesis. There is a significant difference in willingness to pay per stream between livestreaming genres. I again as with the previous hypothesis used a one-way ANOVA to test the average willingness to pay between social, sports and gaming livestreams. This resulted in a p-value of 0.037, which this time was significant. To test which mean was significantly different I used a t-test between Sports and gaming. This resulted into a p-value of 0.671 which is larger than p-value = 0.05, suggesting these aren't significantly different from each other, meaning that social livestreaming is the significantly different one. Finally I used a t-test to compare the means between educational and music livestreams. This resulted in a p-value = 0.532, which is larger than p=0.05 thus again suggesting there

are no significant differences between the pay per stream average willingness to pay of music and education. This results in the fact that people are significantly willing to pay the most for music and education, followed by sports and gaming and are valuing social livestreaming the least.

4.3 Are lonely people interested in watching livestreams?

In chapter 4.1 it is already shown there is interest in watching livestreams. To measure if lonely people want to watch livestreams I tested if there was any significant difference between lonely people and people who aren't lonely.

H5

H_0 : Lonely people and people who aren't lonely show the same interest to watch livestreams

Table 8.

Group descriptives

	Group	N	Mean	SD	SE
Number of genres	Lonely	63	3,174603	1,17143	0,147586
	Not lonely	70	3,042857	0,954558	0,114091

Table 9.

Independent Samples T-Test between people who are lonely and those who aren't

	Statistic	df	p	Mean difference	Std. Error difference	95% Confidence interval of the difference	
						Lower	Upper
Number of genres	0,7139	131	0,477	0,131746032	0,18455658	-0,2333509	0,49684297

The fifth hypothesis was tested by an independent samples t-test. Where the independent variable was if the respondent felt lonely or not. The dependent variable that was tested here was how many new genres they would likely watch. The p-value of this test was 0.477, which

is larger than 0.05. The null hypotheses wasn't rejected and suggesting there is no significant difference between lonely people and people who aren't lonely. They show the same interest in watching livestreams.

H6

H_0: Lonely people and people who aren't lonely show the same interest in interactivity with the audience

The sixth hypothesis was also tested by a multiple independent samples t-test. Where the independent variable was if the respondent felt lonely or not. The dependent variable that was tested here was interest in interactivity with the audience. This t-test was repeated for each genre, as each genre might show different trends interactivity and thus cannot be compared. The following p-values came out of the independent samples t-tests.

Table 10.

T-test p-values per genre to test if lonely people and people who aren't lonely show the same interest in interactivity

Genre	p-value	Significant
Social	0,275	No
Educational	0,180	No
Sports	0,879	No
Music	0,820	No
Gaming	0,947	No
Online-shopping	0,967	No

Non were significant, so the null hypothesis wasn't rejected. Suggesting there is no difference in valuing interactivity of the audience between people who feel lonely and people who don't.

H7

H_0: People who watched livestreams before the pandemic are just as lonely as people who did not watch livestreams before the pandemic.

The seventh and final hypothesis was also tested by a multiple independent samples t-test. Where the independent variable was if the respondent watched livestreams before the pandemic. The dependent variable that was tested here was loneliness. The p-value of this

test was 0,049 which is smaller than 0.05. The null hypotheses is rejected and suggesting there is a significant difference in loneliness and if people watched livestreams prior to the pandemic.

Table 11.
Group descriptives

	Group	N	Mean	SD	SE
Loneliness	Did not watch livestreams prior	64	0,56	0,5	0,0625
	Watched livestreams prior	69	0,39	0,491618	0,059184

Table 12.

Independent Samples T-Test comparing loneliness between people who watched livestreams prior to the pandemic and people who did not

						95% Confidence interval of the difference	
	Statistic	df	p	Mean difference	Std. Error difference	Lower	Upper
Interaction audience	-1,99	131	0,049	-0,171195652	0,0860203	-0,3413643	-0,001027

Chapter 5 - Conclusions and recommendations

5.1 Key findings literature

The Corona virus pandemic had an immediate effect on livestreaming. Twitch reported around 5 million active streamers in march of 2020 which grew to 7,4 million active streamers in may of 2020. This is a growth of 50% in two months time. Not only livestreaming, but streaming in general has seen growth as reported by Conviva (2020). Because of the lockdowns worldwide, people were forced to stay at home more, thus making the step to start watching streams higher. The corona pandemic also introduced new genres because of the lockdowns. Music artists couldn't perform live on a stage, thus making the transition to a livestreaming platform.

Interaction between the streamer and the audience is considered vital in what makes livestreaming appealing to the audience. The active act of interacting together with the passive act of watching, positively influence each other. However if messages are being

spammed this can actually have a negative effect on the enjoyment of livestreaming. Other motivations found to watch livestreams are Leisure, celebrity worship, social connection and voyeurism. When promoting livestreaming taking this into consideration is important, especially interactivity should be promoted as it is shown to be most vital part in enjoying livestreams.

As livestreaming is a relatively new technology, knowing how to use said technology is considered an important factor to adapt the new technology. As it is used online, the focus should be to market livestreaming online. Content marketing strategy could lead to meaningful relationships with the customers, leading to brand communities which is found to be partly positively related to WOM. However for content marketing to be effective research into the target audience is vital. Currently there is no robust research into the characteristics of livestream consumers. Another marketing tool that is proven to be significantly effective especially regarding the younger generation is influencer marketing. Investing in content marketing and influencer marketing could be essential in helping the livestreaming market to grow.

1 out of 10 people in the Netherlands suffer from loneliness. We also see that repeated exposure to the current pandemic also leads to psychological distress, which is positively associated with loneliness. There are three methods to treat loneliness, one of them is social support which motivates people to interact and create meaningful connections with other people. Livestreaming might provide opportunities to create virtual communities in which people might feel less lonely. This might reduce the workload on the long term for healthcare workers, who especially during the pandemic are mainly occupied treating Corona patients.

5.2 Key findings empirical research

It seems likely that a lot of people are willing to watch a livestream. 79.5% of all the respondents showed interest in music livestreaming. Educational and social livestreaming also showed interest with respectively 56.8% and 56.1% of the respondents likely to watch such a livestream. Surprisingly the gaming and sports genres were less appealing with 43.2% and 42.4% of the respondents likely to watch them. Especially since the livestreaming market is currently mainly focused on those 2 genres. It could be that for sports a lot of people still prefer the traditional medium. The gaming genre could perhaps be considered more a niche market, whereas music, education and social livestreaming have more variety. If a person doesn't prefer gaming he or she will not watch a gaming livestream, but there is bound to be a music genre he or she likes. This shows potential for other genres such as

educational and music as they are not represented that much in livestreaming. Online shopping showed the least interest with 34.8% of the respondents likely to watch or participate in an online-shopping livestream. That said even if only 34.8% of the respondents were interested in online-shopping this would result in roughly 6 million potential viewers in the Netherlands alone. This showcases the potential livestreaming has

People who watched livestreams prior to the pandemic were significantly more likely to give more genres of livestreaming a chance. This makes sense as is argued in chapter 2.4 that for a person to accept new or innovative technology, knowing how to use a technology is an important factor in determining if a person adapts a new technology.

There is no significant difference in age groups and willingness to watch livestreams with a 95% confidence interval, however with a 90% confidence interval, the results are significantly different. It seems that the younger people are more likely to watch livestreams. This could be perhaps explained by technological proficiency, however all the surveys were done online which suggests that the elderly that did take the survey were already proficient with a computer. The fact there is a small difference in interest shows that when promoting livestreams the target audience should not only be the younger generation, but more spread out including the older generations.

On average people are willing to pay € 15,14 a month and €5.44 per stream for livestream services. Education and music streaming services were valued both monthly and per stream significantly higher than the other genres. Social livestreaming has the lowest average means for both monthly and pay per stream. However only varied significantly lower in the pay per stream category.

Finally the results show that there were no significant differences between lonely and people who aren't lonely, which suggests lonely people are just as likely to watch livestreams as people who didn't feel lonely. Surprisingly lonely people did not value interactivity with the audience more than people who aren't lonely. This could be due to the fact that one of the key elements why people enjoy livestreams, is due to the nature of the interactivity.

Another important conclusion is that there was a significant difference in experiencing loneliness between people who already watched livestreams prior to the pandemic and people who didn't. This is in line with the key finding in the literature research which suggested that watching livestreams creates social communities and thus being able to help with treating loneliness.

5.3 Conclusion

Finally to give an answer to the main research question.

"Which livestreaming genres have a potential to grow and what social impacts might live streaming have in the Netherlands?"

With a minimum of 30% of the respondents likely to watch an online-shopping livestream, that would suggest that roughly 6 million would be likely watch that genre. This shows that there is a large market potential in the Netherlands for all six of the genres, social, music, education, gaming, online-shopping and sports livestreaming respectively. As the other genres showcased more interest. However with music and education scoring highest in the willingness to pay in both monthly and pay per stream. This would suggest that the biggest opportunity and potential to grow lies within these two genres. The Corona virus pandemic also helped with the popularity of streaming in general and livestreaming has also seen a boost. Twitch alone had seen a growth of 50% new active streamers in only two months.

Interactivity is a key feature in livestreaming. The active act of interacting together with the passive act of watching, positively influence each other. Interactivity also helps getting people in a flow state to donate more money during livestreams and is important when promoting livestreaming. Literature further shows that meaningful and loyal connections can be made in virtual communities. The current pandemic has led and will lead to psychological distress, which is positively associated with loneliness One of the methods to treat loneliness is social support which motivates people to interact and create meaningful connections with other people. This is further supported with empirical research showing a significant difference between people who watched livestreams feeling less lonely than people who didn't. Suggesting that livestreaming can be used to connect lonely people with each other to create meaningful bonds and reduce the workload of the health workers. And also treat loneliness that way. Especially in times were the workload on our health workers are high, this might prove solutions and new business opportunities.

To conclude all six of the tested genres show potential, however music and educational livestreaming genres showcase most potential. Livestreaming also might provide a new method of treating loneliness.

5.4 Limitations and recommendations

One of the more obvious limitations I faced during this thesis was the Corona virus pandemic. This withheld me from doing exploratory research as I wouldn't want to pose a risk to myself and other people. Meaning I couldn't do more research in interactivity per

genre and characteristics of people watching livestreams. Another limitation I face as a student is the limited amount of time to work on this thesis, this only means I couldn't explore this subject more intensively. The fact that this is still a relatively new market, means not much research has been conducted, this made searching for relevant literature quite a challenge however I managed to find relevant information on the subject and my research questions. One element I could have included was the costs of becoming a streamer and do research on the costs of hosting a livestreaming platform. This would've provided me more concrete information on which genres have potential to grow. If the costs were lower than the willingness to pay, this would mean a genre would be profitable and showcase the potential to grow even more.

Another element I could have included in my survey was how often someone would watch a livestream genre. This would again provide some more information on which genres have potential to grow. The results might also be slightly biased towards the younger audience which cause a slight bias in the results.

For further research I would recommend diving deeper into characteristics of the people watching livestreams as it is vital in marketing livestreaming through content marketing. I would also recommend to effectively test if loneliness can be treated through livestreaming or online communities as I. Literature shows meaningful relationships can be build through online platforms and empirical research shows a significant difference in loneliness between people who watched and didn't watch livestreams.

Another suggestion for further research would be to effectively test different streaming formats with a conjoint analysis. An conjoint analysis could give more insight in what the audience finds valuable in livestreaming.

Finally I would suggest research into donating during livestreams with virtual and real currency. This might be researchable by collecting footage of livestreams and figure out when or why people donate the most. Conducting exploratory research by using in-depth interviews.

Bibliography

Badrinarayanan, V. A., Sierra, J. J., & Martin, K. M. (2015). A dual identification framework of online multiplayer video games: The case of massively multiplayer online role playing games (MMORPGs). *Journal of Business Research, 68*(5), 1045-1052. Retrieved from https://search-proquest-com.eur.idm.oclc.org/docview/1683080925?accountid=13598

Baltes, L. P. (2015). Content marketing - the fundamental tool of digital marketing. *Bulletin of the Transilvania University of Brasov.Economic Sciences.Series V, 8*(2), 111-118. Retrieved from https://search-proquest-com.eur.idm.oclc.org/docview/1768395633?accountid=13598

Bognar, Z. B., Puljic, N. P., & Kadezabek, D. (2019). *Impact Of Influencer Marketing On Consumer Behaviour*. Varazdin: Varazdin Development and Entrepreneurship Agency (VADEA). Retrieved from https://search-proquest-com.eur.idm.oclc.org/docview/2269009742?accountid=13598

Bründl, S., Matt, C., & Hess, T. (2017). Consumer use of social live streaming services: The influence of co-experience and effectance on enjoyment.

Burroughs, B., & Rama, P. (2015). The eSports Trojan horse: Twitch and streaming futures. Journal For Virtual Worlds Research, 8(2).

Butler, D. L., & Sellbom, M. (2002). Barriers to adopting technology. *Educause Quarterly*, *2*(1), 22-28.

Central Bureau for Statistics. (2019, October 8). Internet; toegang, gebruik en faciliteiten. https://opendata.cbs.nl/statline/#/CBS/nl/dataset/83429NED/table?fromstatweb

Central Bureau for Statistics. (2019, December 16). Bevolkingspiramide. https://www.cbs.nl/nl-nl/visualisaties/bevolkingspiramide

Central Bureau for Statistics. (2020, March 27). *Nearly 1 in 10 Dutch people frequently lonely in 2019*. https://www.cbs.nl/en-gb/news/2020/13/nearly-1-in-10-dutch-people-frequently-lonely-in-2019

Coelho, A., Bairrada, C., & Peres, F. (2019). Brand communities' relational outcomes, through brand love. *The Journal of Product and Brand Management, 28*(2), 154-165. doi:http://dx.doi.org.eur.idm.oclc.org/10.1108/JPBM-09-2017-1593

Conviva. (2020). Conviva's State of Streaming Q1 2020.
https://www.conviva.com/research/convivas-state-of-streaming-q1-2020/

Csikszentmihalyi, M. (1975). Flowing: A general model of intrinsically rewarding experiences.
Journal of Humanistic Psychology.

Csikszentmihalyi, M. (1988). The flow experience and its significance for human psychology.

Deloitte. (2017). Live thrives in an online world.
https://www2.deloitte.com/content/dam/Deloitte/global/Images/infographics/technologymediat
elecommunications/gx-deloitte-tmt-2018-online-world-report.pdf

Eurosport. (2020). Live Sport Stream and on Demand Videos | Eurosport Player.
https://www.eurosportplayer.com/

FOX Sports. (2020). Het begint bij FOX sports. https://campagnes.foxsports.nl/abonneren

Garfin, D. R., Silver, R. C., & Holman, E. A. (2020). The novel coronavirus (COVID-2019)
outbreak: Amplification of public health consequences by media exposure. *Health
Psychology, 39*(5), 355-357. http://dx.doi.org/10.1037/hea0000875

Hamilton, W.A., Garretson, O., & Kerne A. (2014). Streaming on twitch: fostering
participatory communities of play within live mixed media. *Association for Computing
Machinery*, 1315–1324. https://doi.org/10.1145/2556288.2557048

Hodes, R., 2016, 'Questioning "fees must fall"', *African Affairs* 116(462), 140–150. https://doi.
org/10. 1093/afraf/adw072

Holman, E. A., Garfin, D. R., Lubens, P., & Silver, R. C. (2020). Media Exposure to Collective
Trauma, Mental Health, and Functioning: Does It Matter What You See?. Clinical
Psychological Science, 8(1), 111-124.

Hu, M., Zhang, M., & Wang, Y. (2017). Why do audiences choose to keep watching on live
video streaming platforms? An explanation of dual identification framework. Computers in
Human Behavior, 75, 594-606.

Jackson, J., & Cochran, S. D. (1991). Loneliness and psychological distress. The Journal of
psychology, 125(3), 257-262.

Kádeková, Z., & Holienčinová, M. (2018). INFLUENCER MARKETING AS A MODERN PHENOMENON CREATING A NEW FRONTIER OF VIRTUAL OPPORTUNITIES. *Communication Today, 9*(2), 90-105. Retrieved from https://search-proquest-com.eur.idm.oclc.org/docview/2137429273?accountid=13598

Lessel, P., & Altmeyer, M. (2019). Understanding and empowering interactions between streamer and audience in game live streams. Interactions, 27(1), 40-45.

Li, B., Hou, F., Guan, Z., Chong, A. Y. L., Hirano, M., Myers, M. & Kijima, K., (2018). What drives people to purchase virtual gifts in live streaming? The mediating role of flow. *Proceedings of the 22nd Pacific Asia conference on Information Systems*, 3434-3447.

Livestream. (2020). In Cambridge Dictionary. Retrieved from https://dictionary.cambridge.org/dictionary/english/livestream

Lu, Z., Xia, H., Heo, S. & Wigdor. D. (2018). You Watch, You Give, and You Engage: A Study of Live Streaming Practices in China. *Association for Computing Machinery*, 466, 1–13. https://doi.org/10.1145/3173574.3174040

McAlexander, J. H., Schouten, J. W., & Koening, H. F. (2002). Building brand community. *Journal of Marketing, 66*(1), 38-54. doi:http://dx.doi.org.eur.idm.oclc.org/10.1509/jmkg.66.1.38.18451

McWhirter, B. T. (1990). Loneliness: A review of current literature, with implications for counseling and research. *Journal of Counseling and Development : JCD, 68*(4), 417. doi:http://dx.doi.org.eur.idm.oclc.org/10.1002/j.1556-6676.1990.tb02521.x

Meuter, M. L., McCabe, D. B., & Curran, J. M. (2013). Electronic word-of-mouth versus interpersonal word-of-mouth: Are all forms of word-of-mouth equally influential? *Services Marketing Quarterly, 34*(3), 240. Retrieved from https://search-proquest-com.eur.idm.oclc.org/docview/1370763163?accountid=13598

Muniz,Albert M.,,Jr, & O'Guinn, T.,C. (2001). Brand community. *Journal of Consumer Research, 27*(4), 412-432. Retrieved from https://search-proquest-com.eur.idm.oclc.org/docview/57003125?accountid=13598

Paul, C., Ayis, S., & Ebrahim, S. (2006). Psychological distress, loneliness and disability in old age. Psychology, Health & Medicine, 11(2), 221-232.

Pires K., & Simon G. (2015). YouTube live and Twitch: a tour of user-generated live streaming systems. *Association for Computing Machinery*, 225–230. https://doi.org/10.1145/2713168.2713195

RIVM. (2020, May 7). De 1,5 meter maatschappij is een lastige opgave | RIVM. https://www.rivm.nl/nieuws/1%2C5-meter-maatschappij-lastige-opgave

Rodriguez-Gil, L., Orduña, P., García-Zubia, J., & López-de-Ipiña, D. (2018). Interactive live-streaming technologies and approaches for web-based applications. Multimedia Tools and Applications, 77(6), 6471-6502.

Rook, K. S. (1984). Promoting social bonding: Strategies for helping the lonely and socially isolated. American Psychologist, 39(12), 1389.

Scheibe, K., Fietkiewicz, K. J., & Stock, W. G. (2016). Information behavior on social live streaming services. *Journal of Information Science Theory and Practice, 4*(2), 6-20. https://doi.org/10.1633/jistap.2016.4.2.1

Smit, S., & Rossouw, M. (2019). An exploratory study: Testing the effectiveness of a live-streamed lecture at tertiary level for accounting students. *Journal of Economic and Financial Sciences, 12*(1) doi:http://dx.doi.org.eur.idm.oclc.org/10.4102/jef.v12i1.401

Stohr, D., Li, T., Wilk, S., Santini, S., & Effelsberg, W. (2015, October). An analysis of the YouNow live streaming platform. In 2015 IEEE 40th local computer networks conference workshops (LCN Workshops) (pp. 673-679). IEEE.

Trusov, M., Bucklin, R. E., & Pauwels, K. (2009). Effects of word-of-mouth versus traditional marketing: Findings from an internet social networking site. *Journal of Marketing, 73*(5), 90. Retrieved from https://search-proquest-com.eur.idm.oclc.org/docview/227840355?accountid=13598

Twitchtracker. (2020). Twitch Channels, Games and Global Statistics. https://twitchtracker.com/

Villanueva, J., Yoo, S., & Hanssens, D. M. (2008). The impact of marketing-induced versus word-of-mouth customer acquisition on customer equity growth. *JMR, Journal of Marketing Research, 45*(1), 48. Retrieved from https://search-proquest-com.eur.idm.oclc.org/docview/235240478?accountid=13598

Wang, C., & Chou, F. (2019). Audiences' motives for watching live video streaming. *Contemporary Management Research, 15*(4), 273-285. doi:http://dx.doi.org.eur.idm.oclc.org/10.7903/cmr.20058

Wu, S. H., Huang, S. C. T., Tsai, C. Y. D., & Lin, P. Y. (2017). Customer citizenship behavior on social networking sites. Internet Research.

Yee, N. (2006). The demographics, motivations, and derived experiences of users of massively multi-user online graphical environments. Presence: Teleoperators and virtual environments, 15(3), 309-329.

Appendix

Table 13.

Distribution statistics of the respondents regarding age

Age group	Frequency	Percent	Cumulative Percent
Under 18	11	8,3%	8,3%
18-24	21	15,8%	24,1%
25-34	33	24,8%	48,9%
35-44	22	16,5%	65,4%
45-54	18	13,5%	78,9%
55-64	14	10,5%	89,5%
65-74	8	6,0%	95,5%
74-84	2	1,5%	97,0%
Above 84	4	3,0%	100,0%
Total	133	100%	

Table 14.

Age statistics of the respondents

N	133
Mean	3,9248
Std. Deviation	1,93306
Skewness	0,625
Std. Error of Skewness	0,21
Kurtosis	-0,048
Std. Error of Kurtosis	0,417
Minimum	1
Maximum	9
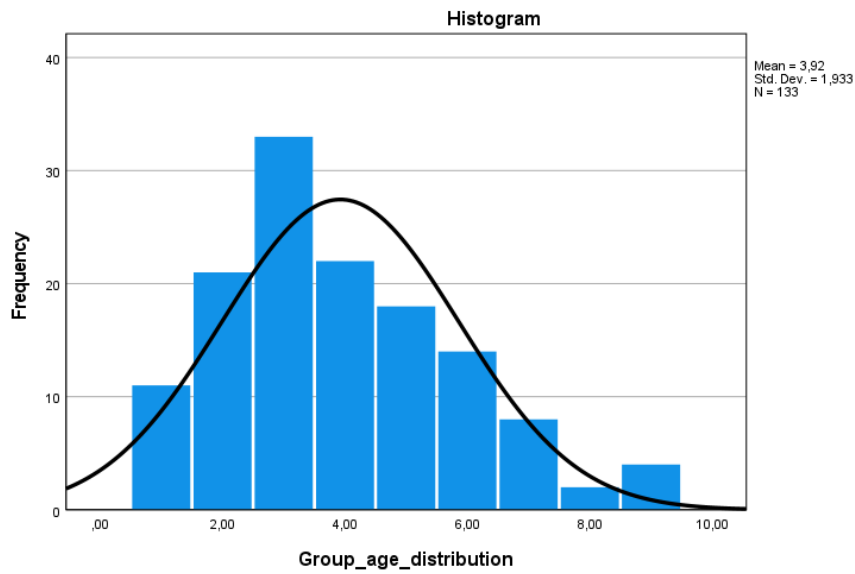
Figure 6. Age distribution histogram of the respondents
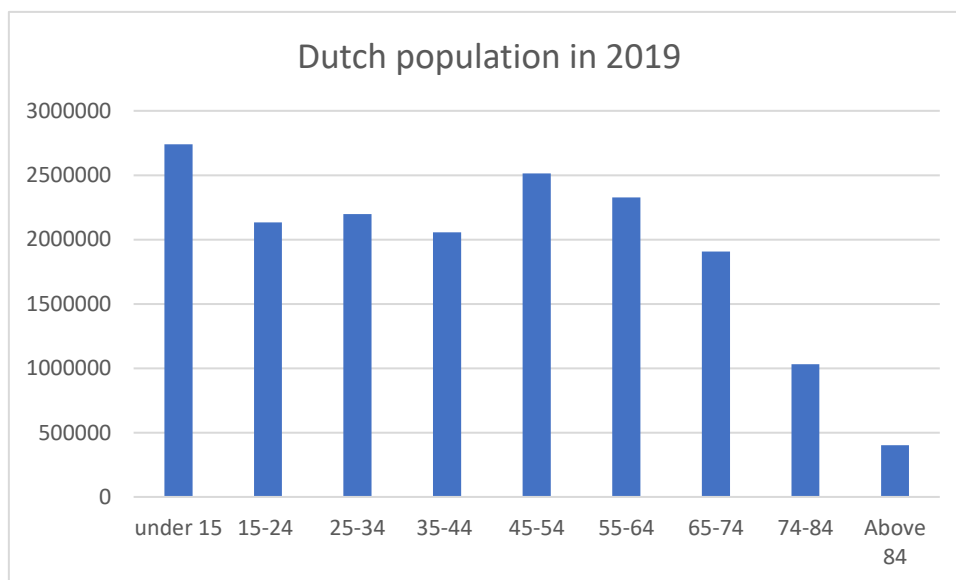
Figure 7. Age distribution histogram of the Dutch population. (Central Bureau for Statistics, 2019)

Table 15.

Test of Equality of variances (Levene's) between people who watched livestreams prior and those who didn't

F	df	p
0,017	1	0,897

Table 16.

Test of Equality of variances (Levene's) between lonely and those who aren't lonely

F	df	p
1,214	1	0,273

Table 17.

Group descriptives

	Group	N	Mean	SD	SE
Price per month	Education	45	17,67	6,622963	0,987293
	Music	55	16,64	5,935966	0,800405

Table 18.

Independent Samples T-Test between willingness to pay monthly for education and music livestreams

	Statistic	df	p	Mean difference	Std. Error difference	95% Confidence interval of the difference	
						Lower	Upper
Price per month	0,8196	98	0,414	1,03030303	1,25705222	-1,4642762	3,52488225

Table 19.

Test of Equality of variances (Levene's) between willingness to pay monthly for education and music livestreams

F	df	p
2,594	1	0,82

Table 20.

One-way ANOVA to compare the average willingness to pay per month between social, sports and gaming livestreams

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	22,92467	2	11,46234	0,218777	0,804
Within Groups	5134,501	98	52,39287		
Total	5157,426	100			

Table 21.

One-way ANOVA to compare the average willingness to pay per stream between social, sports and gaming livestreams

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	37,48538	2	18,74269	3,638797	0,037
Within Groups	180,2778	35	5,150794		
Total	217,7632	37			

Table 22.

Group descriptives

	Group	N	Mean	SD	SE
Price per stream	Sports	15	4,83	2,58199	0,66667
	Gaming	5	5,50	4,10792	1,83712

Table 23.

Independent Samples T-Test between willingness to pay per stream for sports and gaming livestreams

| | Statistic | df | p | Mean difference | Std. Error difference | 95% Confidence interval of the difference | |
						Lower	Upper
Price per stream	-0,432	18	0,671	-0,666666667	1,54360489	-3,9096602	2,57632686

Table 24.

Test of Equality of variances (Levene's) between willingness to pay per stream for sports and gaming livestreams

F	df	p
0,848	1	0,369

Table 25.

Group descriptives

	Group	N	Mean	SD	SE
Price per stream	Education	24	6,67	2,623749	0,53557
	Music	41	7,13	3,039376	0,474671

Table 26.

Independent Samples T-Test between willingness to pay per stream for sports and gaming livestreams

| | Statistic | df | p | Mean difference | Std. Error difference | 95% Confidence interval of the difference | |
						Lower	Upper
Price per stream	-0,628	63	0,532	-0,467479675	0,74394748	-1,9541401	1,01918074

Table 27.

Test of Equality of variances (Levene's) between willingness to pay per stream for education and music livestreams

F	df	p
0,565	1	0,455

Table 28.

Group descriptives

	Group	N	Mean	SD	SE
Interaction audience gaming	Lonely	22	0,91	0,294245	0,062733
	Not lonely	35	0,91	0,284029	0,04801

Table 29.

Independent Samples T-Test preferring social interaction with an audience in gaming livestreams between lonely and people who aren't lonely

	Statistic	df	p	Mean difference	Std. Error difference	95% Confidence interval of the difference	
						Lower	Upper
Interaction audience	-0,066	55	0,947	-0,005194805	0,07835065	-0,162213	0,15182341

Table 30.

Test of Equality of variances (Levene's) between interaction with audience in gaming livestreams for lonely and people who aren't lonely

F	df	p
0,018	1	0,895

Table 31.

Group descriptives

	Group	N	Mean	SD	SE
Interaction audience music	Lonely	47	0,66	0,478975	0,069866
	Not lonely	58	0,64	0,484796	0,063657

Table 32.

Independent Samples T-Test preferring social interaction with an audience in music livestreams between lonely and people who aren't lonely

						95% Confidence interval of the difference	
	Statistic	df	p	Mean difference	Std. Error difference	Lower	Upper
Interaction audience	0,2287	103	0,820	0,021643434	0,09463756	-0,1660478	0,20933472

Table 33.

Test of Equality of variances (Levene's) between interaction with audience in music livestreams for lonely and people who aren't lonely

F	df	p
0,212	1	0,646

Table 34.

Group descriptives

	Group	N	Mean	SD	SE
Interaction audience sports	Lonely	25	0,44	0,506623	0,101325
	Not lonely	31	0,42	0,50161	0,090092

Table 35.

Independent Samples T-Test preferring social interaction with an audience in sports livestreams between lonely and people who aren't lonely

| | Statistic | df | p | Mean difference | Std. Error difference | 95% Confidence interval of the difference | |
						Lower	Upper
Interaction audience	0,1524	54	0,879	0,020645161	0,13543767	-0,250891	0,29218133

Table 36.

Test of Equality of variances (Levene's) between interaction with audience in sports livestreams for lonely and people who aren't lonely

F	df	p
0,088	1	0,767

Table 37.

Group descriptives

	Group	N	Mean	SD	SE
Interaction audience education	Lonely	39	0,49	0,50637	0,08108
	Not lonely	36	0,33	0,47809	0,07968

Table 38.

Independent Samples T-Test preferring social interaction with an audience in education livestreams between lonely and people who aren't lonely

	Statistic	df	p	Mean difference	Std. Error difference	95% Confidence interval of the difference	
						Lower	Upper
Interaction audience	1,3533	72,96	0,180	0,153846154	0,11368302	-0,0727259	0,38041822

* Levene's test is significant (p<0,05), suggesting a violation of the assumption of equal variances, thus the results from the T-test were equal variances were not assumed was used

Table 39.

Test of Equality of variances (Levene's) between interaction with audience in education livestreams for lonely and people who aren't lonely

F	df	p
4,655	1	0,034

* Levene's test is significant (p<0,05), suggesting a violation of the assumption of equal variances

Table 38.

Group descriptives

	Group	N	Mean	SD	SE
Interaction audience social	Lonely	42	0,90	0,297102	0,045844
	Not lonely	32	0,81	0,396558	0,070102

Table 40.

Independent Samples T-Test preferring social interaction with an audience in social livestreams between lonely and people who aren't lonely

	Statistic	df	p	Mean difference	Std. Error difference	95% Confidence interval of the difference	
						Lower	Upper
Interaction audience	1,1015	55,51	0,275	0,092261905	0,08376138	-0,0755651	0,26008889

* Levene's test is significant (p<0,05), suggesting a violation of the assumption of equal variances, thus

the results from the T-test were equal variances were not assumed was used

Table 41.

Test of Equality of variances (Levene's) between interaction with audience in education livestreams for lonely and people who aren't lonely

F	df	p
5,357	1	0,023

* Levene's test is significant (p<0,05), suggesting a violation of the assumption of equal variances

Table 42.

Group descriptives

	Group	N	Mean	SD	SE
Interaction audience shopping	Lonely	25	0,28	0,458258	0,091652
	Not lonely	21	0,29	0,46291	0,101015

Table 43.

Independent Samples T-Test preferring social interaction with an audience in online-shopping livestreams between lonely and people who aren't lonely

	Statistic	df	p	Mean difference	Std. Error difference	95% Confidence interval of the difference	
						Lower	Upper
Interaction audience	-0,042	44	0,967	-0,005714286	0,13627431	-0,2803571	0,26892853

Table 44.

Test of Equality of variances (Levene's) between interaction with audience in online-shopping livestreams for lonely and people who aren't lonely

F	df	p
0,007	1	0,934

Table 45.

Test of Equality of variances (Levene's) comparing loneliness between people who watched livestreams prior to the pandemic and people who did not

F	df	p
1,064	1	0,304

Table 46.

Raw data of the survey

		Male	Female							
Q1	What is your gender?	65	68							

		< 18	18-24	25-34	35-44	45-54	55-64	65-74	75-84	> 84
Q2	How old are you?	11	21	33	22	18	14	8	2	4

		Always	Most of time	Half of the time	Sometimes	Never
Q3	How often do you feel lonely?	9	28	26	33	37

		Daily	4-6 times a week	2-3 times a week	Once a week	Never
Q4	Did you watch any live streams prior to the corona virus pandemic? if so, how often?	23	4	23	19	64

		Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
Q5	How likely is it that you will watch	15	31	18	19	50

an online shopping livestream?

		No	Yes, audience	Yes, streamer	Yes both
Q6	Would you want there to be an interaction?	4	1	29	12

		Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
Q7	How likely is it that you will watch a social livestream?	34	40	16	15	28

		No	Yes, monthly	Yes, pay per stream
Q8	Would you be willing to pay to watch an social livestream? Answering no implies advertisements will be shown during the livestream	23	33	18

		€ 5,00	€ 10,00	€ 15,00	€ 20,00	€ 25,00

Q 9	How much would you be willing to pay on a monthly basis?	7	9	10	3	4

		€ 2,50	€ 5,00	€ 7,50	€ 10,00	€ 12,50
Q 10	How much would you be willing to pay per stream?	14	4	-	-	-

		No	Yes, audience	Yes, streamer	Yes, both
Q 11	Would you want there to be an interaction?	5	1	5	63

		Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
Q 12	How likely is it that you will watch an educational livestream?	28	47	24	19	15

		No	Yes, monthly	Yes, pay per stream

Q 13	Would you be willing to pay to watch an educational livestream? Answering no implies advertisements will be shown during the livestream	6	45	24		

		€ 5,00	€ 10,00	€ 15,00	€ 20,00	€ 25,00
Q 14	How much would you be willing to pay on a monthly basis?	2	12	6	10	15

		€ 2,50	€ 5,00	€ 7,50	€ 10,00	€ 12,50
Q 15	How much would you be willing to pay per stream?	2	11	5	5	1

		No	Yes, audience	Yes, streamer	Yes, both
Q 16	Would you want there to be an interaction?	16	3	28	28

		Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely

Q17	How likely is it that you will watch a sports livestream?	34	21	17	18	42

		No	Yes, monthly	Yes, pay per stream		
Q18	Would you be willing to pay to watch a sports livestream? Answering no implies advertisements will be shown during the livestream	10	31	15		

		€ 5,00	€ 10,00	€ 15,00	€ 20,00	€ 25,00
Q19	How much would you be willing to pay on a monthly basis?	9	9	3		10

		€ 2,50	€ 5,00	€ 7,50	€ 10,00	€ 12,50
Q20	How much would you be willing to pay per stream?	6	6	1	2	

	No	Yes, audience	Yes, streamer	Yes, both

Q 21	Would you want there to be an interaction?	32	12	-	12

		Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
Q 22	How likely is it that you will watch a music livestream?	56	49	13	5	10

		No	Yes, monthly	Yes, pay per stream
Q 23	Would you be willing to pay to watch a music livestream? Answering no implies advertisements will be shown during the livestream	9	55	41

		€ 5,00	€ 10,00	€ 15,00	€ 20,00	€ 25,00
Q 24	How much would you be willing to pay on a monthly basis?	5	8	15	18	9

		€ 2,50	€ 5,00	€ 7,50	€ 10,00	€ 12,50

Q25	How much would you be willing to pay per stream?	7	9	11	11	3

		No	Yes, audience	Yes, streamer	Yes, both
Q26	Would you want there to be an interaction?	30	21	7	47

		Extremely likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Extremely unlikely
Q27	How likely is it that you will watch a gaming livestream?	37	20	9	14	53

		No	Yes, monthly	Yes, pay per stream
Q28	Would you be willing to pay to watch a gaming livestream? Answering no implies advertisements will be shown during the livestream	15	37	5

		€ 5,00	€ 10,00	€ 15,00	€ 20,00	€ 25,00

Q 29	How much would you be willing to pay on a monthly basis?	4	17	5	2	9

		€ 2,50	€ 5,00	€ 7,50	€ 10,00	€ 12,50
Q 30	How much would you be willing to pay per stream?	2	2	-	-	1

		No	Yes, audience	Yes, streamer	Yes, both
Q 31	Would you want there to be an interaction?	4	2	1	50

Survey livestreaming

1. **This survey informs my university thesis project on new opportunities in the livestreaming market.**
   I will be showing you different streaming formats and ask if you would be interested in watching them and how much you would be willing to pay.

   It takes roughly 5-10 minutes to finish this survey.

   Thank you in advance for taking the time to fill this in.

2. **What is your gender?**
   - Male
   - Female
3. **How old are you?**
   - Under 18
   - 18-24
   - 25-34
   - 35-44
   - 45-54
   - 55-64
   - 65-74
   - 75-84
   - 85 or older
4. **How often do you feel lonely?**
   - Always
   - Most of the time
   - About half the time
   - Sometimes
   - Never
5. **Did you watch any livestreams prior to the Corona virus pandemic? If so, how often?**
   - Daily
   - 4-6 times a week
   - 2-3 times a week

- Once a week

- Never

6. **This is an example of an online shopping livestream, where someone can help you with your online shopping and suggest what you can buy.**
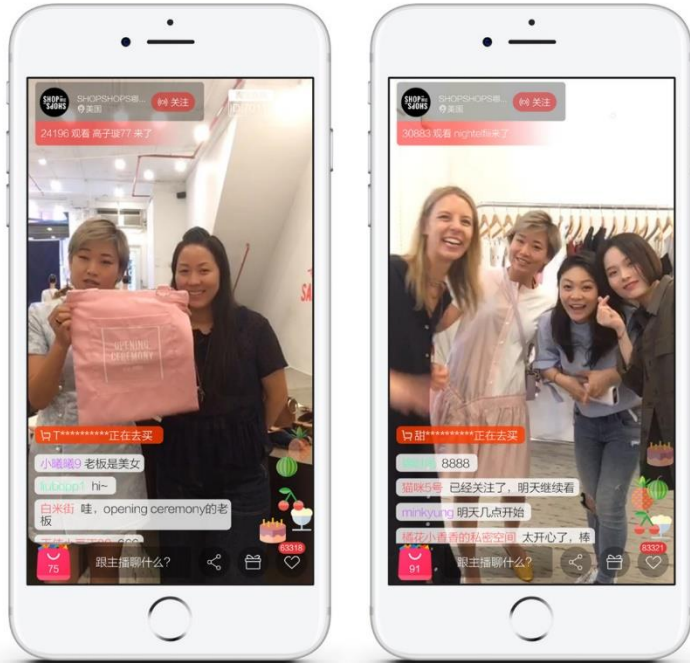
7. **How likely is it that you will watch an online shopping livestream?**
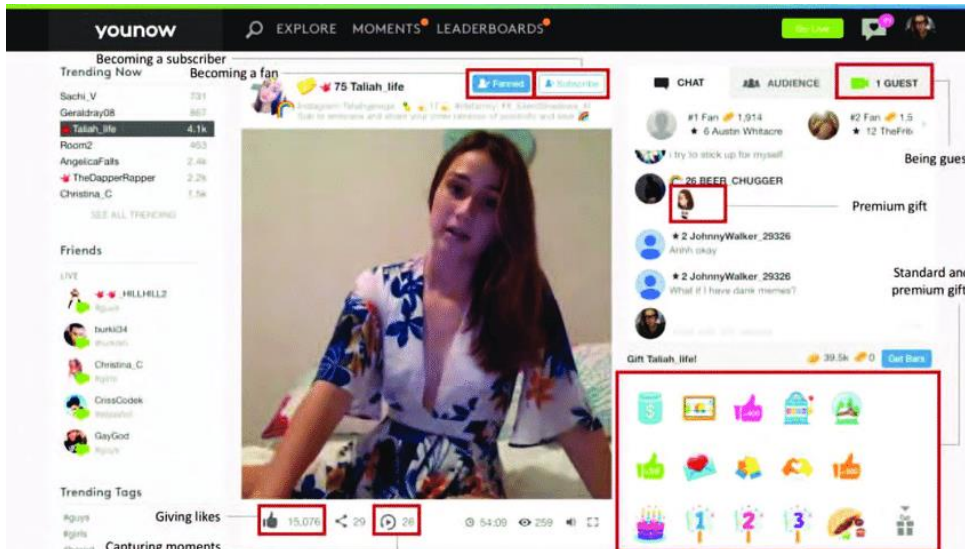   - Extremely likely

   - Somewhat likely

   - Neither likely nor unlikely

   - Somewhat unlikely

   - Extremely unlikely

8. **Would you want there to be an interaction?**

   (Note, only if "Extremely likely" or "Somewhat likely" are chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)

   - No

   - Yes, I would only like to communicate with the audience

   - Yes, I would only like to communicate with the livestreamer

   - Yes, I would like to communicate with the audience and the livestreamer

9. **This is an example of a social livestream, where someone shares their daily experiences varying from talking about their day, cooking, taking a walk outside or even studying.**

10. **How likely is it that you will watch a social livestream?**
    - Extremely likely
    - Somewhat likely
    - Neither likely nor unlikely
    - Somewhat unlikely
    - Extremely unlikely

11. **Would you be willing to pay to watch a social livestream? Answering no implies advertisements will be shown during the livestream**
    (Note, only if "Extremely likely" or "Somewhat likely" are chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)
    - No
    - Yes, I would pay a monthly fee
    - Yes, I would pay per stream

12. **How much would you be willing to pay on a monthly basis?**
    (Note, only if "Yes, I would pay a monthly fee" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)

- € 5
- € 10
- € 15
- € 20
- € 25

13. How much would you be willing to pay per stream?

(Note, only if "Yes, I would pay per stream" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)

- € 2,50
- € 5
- € 7,50
- € 10
- € 12,50

14. Would you want there to be an interaction?

(Note, only if "Extremely likely" or "Somewhat likely" are chosen in question 10, the respondent will be shown this question otherwise it will not be shown

- No
- Yes, I would only like to communicate with the audience
- Yes, I would only like to communicate with the livestreamer
- Yes, I would like to communicate with the audience and the livestreamer

15. This is an example of an educational livestream, where someone shares their knowledge with you and you can learn.

16. How likely is it that you will watch an educational livestream?

- Extremely likely

- Somewhat likely

- Neither likely nor unlikely

- Somewhat unlikely

- Extremely unlikely

17. Would you be willing to pay to watch an educational livestream? Answering no implies advertisements will be shown during the livestream

(Note, only if "Extremely likely" or "Somewhat likely" are chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)

- No

- Yes, I would pay a monthly fee

- Yes, I would pay per stream

18. How much would you be willing to pay on a monthly basis?

(Note, only if "Yes, I would pay a monthly fee" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)

- € 5

- € 10

- € 15

- € 20

- € 25

19. How much would you be willing to pay per stream?

(Note, only if "Yes, I would pay per stream" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)

- € 2,50

- € 5

- € 7,50

- € 10

- € 12,50

20. Would you want there to be an interaction?

((Note, only if "Extremely likely" or "Somewhat likely" are chosen in question 16, the respondent will be shown this question otherwise it will not be shown)

- No

- Yes, I would only like to communicate with the audience

- Yes, I would only like to communicate with the livestreamer

- Yes, I would like to communicate with the audience and the livestreamer

21. This is an example of a sports livestream, where you can watch sport events live.
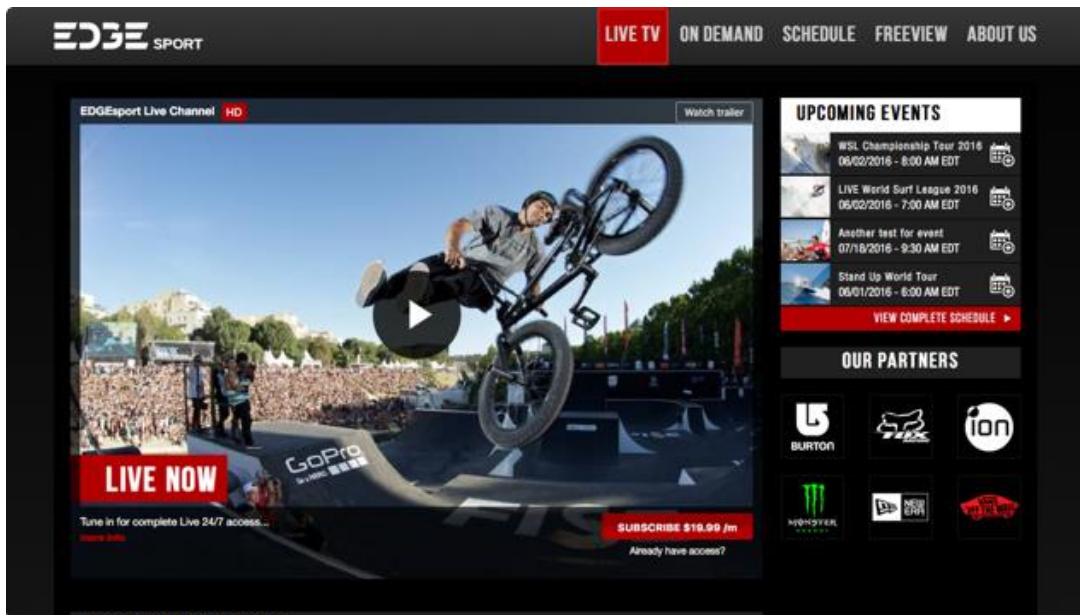
22. How likely is it that you will watch a sports livestream?
- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

23. Would you be willing to pay to watch a sports livestream? Answering no implies advertisements will be shown during the livestream
(Note, only if "Extremely likely" or "Somewhat likely" are chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)
- No
- Yes, I would pay a monthly fee
- Yes, I would pay per stream

24. How much would you be willing to pay on a monthly basis?
(Note, only if "Yes, I would pay a monthly fee" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)
- € 5
- € 10
- € 15

- € 20
- € 25

25. How much would you be willing to pay per stream?

(Note, only if "Yes, I would pay per stream" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)

- € 2,50
- € 5
- € 7,50
- € 10
- € 12,50

26. Would you want there to be an interaction?

(Note, only if "Extremely likely" or "Somewhat likely" are chosen in question 22, the respondent will be shown this question otherwise it will not be shown

- No
- Yes, I would only like to communicate with the audience
- Yes, I would only like to communicate with the livestreamer
- Yes, I would like to communicate with the audience and the livestreamer

27. This is an example of a music livestream, where you can watch musicians perform live.

28. How likely is it that you will watch a music livestream?

- Extremely likely
- Somewhat likely

- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

29. Would you be willing to pay to watch a music livestream? Answering no implies advertisements will be shown during the livestream

(Note, only if "Extremely likely" or "Somewhat likely" are chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)
- No
- Yes, I would pay a monthly fee
- Yes, I would pay per stream

30. How much would you be willing to pay on a monthly basis?

(Note, only if "Yes, I would pay a monthly fee" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)
- € 5
- € 10
- € 15
- € 20
- € 25

31. How much would you be willing to pay per stream?

(Note, only if "Yes, I would pay per stream" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)
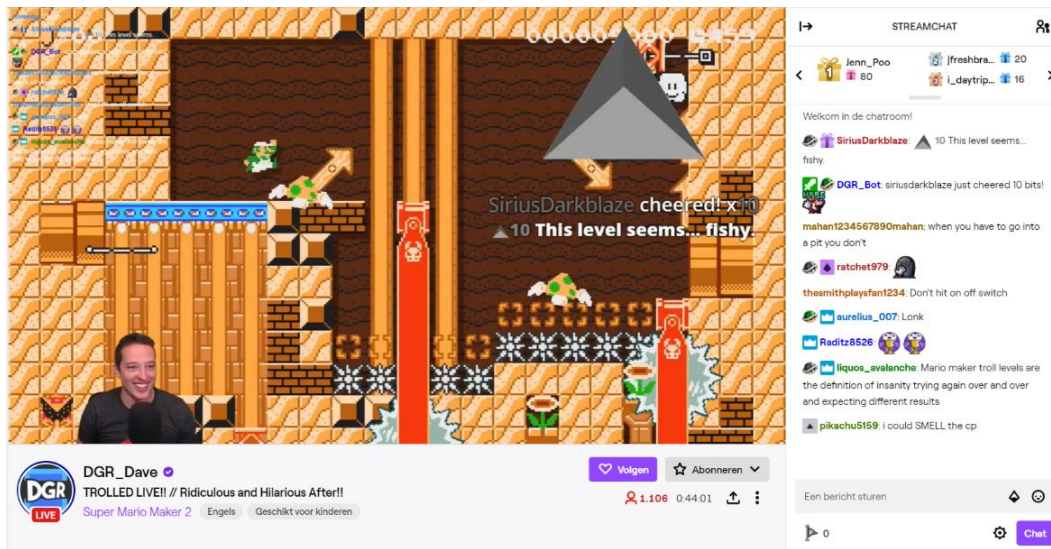- € 2,50
- € 5
- € 7,50
- € 10
- € 12,50

32. Would you want there to be an interaction?

(Note, only if "Extremely likely" or "Somewhat likely" are chosen in question 28, the respondent will be shown this question otherwise it will not be shown
- No
- Yes, I would only like to communicate with the audience
- Yes, I would only like to communicate with the livestreamer
- Yes, I would like to communicate with the audience and the livestreamer

33. This is an example of a gaming livestream, where you can watch a streamer play video games online or watch them compete with each other.

34. How likely is it that you will watch a gaming livestream?
- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

35. Would you be willing to pay to watch a gaming livestream? Answering no implies advertisements will be shown during the livestream
(Note, only if "Extremely likely" or "Somewhat likely" are chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)
- No
- Yes, I would pay a monthly fee
- Yes, I would pay per stream

36. How much would you be willing to pay on a monthly basis?
(Note, only if "Yes, I would pay a monthly fee" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)
- € 5
- € 10
- € 15
- € 20
- € 25

37. How much would you be willing to pay per stream?

(Note, only if "Yes, I would pay per stream" is chosen in the previous question, the respondent will be shown this question otherwise it will not be shown)

- € 2,50

- € 5

- € 7,50

- € 10

- € 12,50

38. Would you want there to be an interaction?

(Note, only if "Extremely likely" or "Somewhat likely" are chosen in question 34, the respondent will be shown this question otherwise it will not be shown

- No

- Yes, I would only like to communicate with the audience

- Yes, I would only like to communicate with the livestreamer

- Yes, I would like to communicate with the audience and the livestreamer

39. Thank you again for taking your time to fill in this survey for me.

If you have any suggestions or remarks please don't hesitate to write them here below.

- (Text box)

End of survey