



UMEÅ SCHOOL OF BUSINESS,
ECONOMICS AND STATISTICS
UMEÅ UNIVERSITY

The Future of Gaming?

**A study on the effects of cloud gaming on
traditional game purchase and engagement**

Josef Holmlund, Alexander Kokkonen

Department of Business Administration
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Supervisor: Vladimir Vanyushyn

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Umeå School of Business, Economics, and Statistics
Umeå University

Josef Holmlund & Alexander Kokkonen

Abstract

In recent years, there has been an increased number of people that are engaged in gaming - a phenomenon connected to constantly developing internet infrastructure and a growing middle class. The phenomenon of Cloud gaming has received increasing attention since it was introduced some years ago; in 2022 all Cloud gaming services combined had 31,7 million paying users. The number that is estimated to triple by 2025. Given this information, we proceeded to identify a gap in previous literature within the topic of Cloud gaming.

Previous research within the topic of Cloud gaming has predominantly discussed Cloud gaming as a business model rather than focusing on consumers. We sought to seize the opportunity to fill this research gap by studying consumers' motivations to engage in this new technology and examine which factors can influence the customer's decision-making process in the path to purchase. We also wanted this study to contribute to marketing practice by examining important current research priorities within the field of marketing. In order to investigate our research purposes, we adopted an exploratory qualitative study where we, with the help of online focus groups, investigated the customers' perceptions of Cloud gaming as a service and their motivations to engage in it. Another purpose of this study was to find out how the gaming industry may be affected by the increased usage of cloud gaming, therefore we wanted to conduct a semi-structured interview with an industry representative.

The most interesting result of this study indicates that a somewhat odd situation arises for the Cloud gaming companies where the respondents who spent the least amount of money and engage the least in traditional gaming, showed the greatest motivation to engage in Cloud gaming. Therefore we suggest that there are a number of different measures that must be kept in mind by marketers within the industry.

Keywords: Cloud gaming, Technology acceptance, subscription marketing, perceived value, perceived ease of use, consumer motivations, hard-core gamer, casual gamer, non-gamer

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1.0 Introduction

In this chapter, we will provide an overview of the concept of cloud gaming, briefly explaining what it is, how it works as well as giving some examples of the major companies who are in the industry. In addition to this, we will also elaborate on the practical relevance of the phenomenon. We will also elaborate on the research gap and research problem which will lead us to our research question and the purposes of this paper.

1.1 Brief Overview of Cloud Gaming

Gaming has become a popular hobby in the past decades especially after the COVID-19 pandemic, be it on PC, console or mobile, the number of people playing video games has been on a steady increase for years driven by better internet infrastructure, more affordable hardware and a growing middle class (Wijman, 2022). In 2022, the video game market generated an estimated US\$92.2 billion in revenues globally and if you factor in mobile games, \$184.4 billion, generated from 3.2 billion players (also including mobile) (Wijman, 2022). Despite this, gaming is considered by some to be quite an expensive hobby due to the hardware requirements for games. A games console or PC capable of running the newest games can set one back anywhere ranging from a couple thousand SEK and upwards of tens of thousands, this comes on top of the cost of the games themselves which could range from free to US\$60 (industry standard for triple A release) or even more, which is excluding possible in-game transactions which could be made. Therefore it is no surprise that not everybody is able to acquire the latest equipment which is able to run games smoothly. Another pressing matter regarding games is that as games advance and improve both technically and visually, some games have become quite demanding on a devices' storage and while this isn't true for every game that comes out, they can range up to 150 GB in storage space as is the case with the popular game "Red Dead Redemption 2" (Walton, 2019). This is an issue as downloads can be time consuming in addition to the fact that players might not have the space to allocate for such big games. However, there is a way around these issues, which is where "cloud gaming" comes into play.

Cloud gaming, also sometimes referred to as gaming on demand, gaming as a service, or game streaming, is a cloud-based service which provides the user with a different method of playing video games. Instead of the video game being processed and run on the end-user's own device (be it a PC or console), as is the case with most traditional video games, cloud gaming allows for the game to be run in a remote data center, where the actual processing and computing is done, only for it to be streamed back to the user's device via a video stream over the internet (Shea et al., 2013, p.16), whilst still allowing them to have full control over the game that they are playing. Through this method, the work which is usually attributed with running a video game, processing of graphics, different data as well as different calculations that have to be made by the end user's device is offloaded to a remote server, significantly reducing the work which has to be done by the user's device. In theory, this is advantageous for people who do not have access to a device powerful enough or outright incapable of running different games (Shea et al., 2013, p.16). In addition to this, since the games are being processed and run from a remote data center, that also means that all the game data is stored in said data center, removing the need for

downloading games, creating a service which can be described as ‘gaming on-demand’, factored in with the fact that most service providers require a subscription fee, think of cloud gaming as a netflix but for video games instead of movies and series.

In order to give a bit of context behind the technology, it is important to consider the history of how it came to be. Cloud gaming is a relatively new development in the video gaming industry, however, it’s roots can be traced back to the early 2000’s with a startup company called G-cluster showcasing the technology at E3 in the year 2000, this service was similar to the ones we see today, allowing users to play games on a remote server and streaming it back to their devices. However, the technology failed to gain traction due to internet connectivity and hardware limitations at the time and it would take more time until the technology would become viable. 9 years later, with improving data and video compression techniques, live streaming was becoming less and less demanding in terms of the amount of bandwidth required and it was under this context where a service called “OnLive” would be unveiled at the Game Developers Conference, they promised cloud gaming with resolutions of up to 720p with frame rates of up to 60 frames per second (Mangalindan, 2020) and the service was launched to the public in 2010. OnLive’s business model was described to be a “netflix-like” approach to video gaming, where after paying a subscription, the user would be able to access a library of games which OnLive supported. Unlike G-cluster before it, OnLive managed to gain some traction and even managed to partner with game publishers such as Ubisoft, 2K Games and THQ to contribute to their growing library of supported games, however, there was still difficulty in acquiring bigger triple A games due to the skepticism game publishers, who were accustomed to selling games at a full fixed price, had towards the technology, as they were unsure of what it could mean for the industry if OnLive’s “netflix-like” model were to become popular (Mangalindan, 2020). Around the same time, in 2010, the service “Gaikai” was announced and unlike OnLive, who offered the user access to full games, Gaikai’s approach was more akin to a form of online advertising, where they would stream demos of games instead. Due to this approach, Gaikai was viewed more favorably by game publishers, eventually leading them to partner with Electronic Arts.

Both Gaikai and OnLive would not last too long however with Gaikai being acquired by Sony in 2012 and OnLive also being acquired by Sony later in 2015 (Mangalindan, 2020). The acquisition of Gaikai and OnLive gave Sony access to a wide range of patents covering the field of cloud gaming and in 2014, Sony introduced PlayStation Now, their own cloud gaming service with the technology behind Gaikai being the foundation for it, and later OnLive’s technology would also help PlayStation Now develop. Playstation Now is one of the services still operating today, although it has now been integrated into “Playstation Plus Premium”, their highest tier of subscription for a Playstation membership as opposed to a standalone service. Nvidia also entered the market around the same time in 2013, with “Nvidia Grid”, later rebranded as “Nvidia GeForce Now”, offering a cloud gaming service focused on the PC gaming market and unlike most services still available today, allows the user to play games they already own, as long as it is supported on top of a subscription fee for the service itself and like Playstation’s service, is still available today.

Recently, with more and more advances into cloud computing, faster internet speeds and overall better hardware, Google had also launched its own cloud gaming service under the name “Project Stream”, a closed beta test which would later become “Google Stadia” once it was fully

released in 2019 and according to google, the service was popular among people who lived in metropolitan areas where internet speeds were not an issue (Mangalindan, 2020). Google announced however that Stadia would be shut down in 2022 and later did in January 2023 (Peters, 2023), due to what some considered a flawed business model of having users pay for a subscription in addition to buying games at full price, games that you would only have access to through Google Stadia (MacDonald, 2022). In 2020, Microsoft also introduced their own cloud gaming service called “Xbox Cloud Gaming”, which was to be integrated with Xbox’s ultimate tier membership, similar to Playstation’s service and is still available today. 2 weeks later, Amazon entered the market with “Luna” (Mangalindan, 2020), which completes the history of cloud gaming concerning the major players involved. According to Kareem Choudhry, a microsoft executive, cloud gaming has potential to grow in the future and believes that the further improvement and adoption of 5G would be a catalyst for that growth, making high internet speeds cheaper as well as more accessible (Mangalindan, 2020).

As for cloud gaming service providers, while it's impossible to briefly mention all of them, some of the major ones mentioned previously are: Nvidia GeForce Now (Nvidia), PlayStation Premium Plus (Sony), Xbox Cloud Gaming (Microsoft) and Amazon Luna (Amazon), and while these platforms all offer the same service of cloud gaming after paying a monthly subscription, their business models can vary largely. Nvidia GeForce Now for instance, has more than 1500 supported games (Nvidia, 2022), however, simply subscribing to the service will not entitle you access to any of those games, rather it connects your account with your Steam, Epic Games, Ubisoft Connect, and/or EA App (online video game distributors/storefronts) accounts, allowing you to play the games you have already accumulated through those, assuming they are one of the 1500 supported games, the service is available on windows PC, Mac, Google Chromebooks, Android devices and select smart TVs (Nvidia, 2022). In contrast, the 3 other services mentioned will generally grant you access to supported games after paying the subscription fee, a simple analogy would be Netflix but instead of movies and series, it's for video games, however, it's also important to add that the service offered by Microsoft and Sony will require you to have either an Xbox and Playstation controller respectively. These 3 are also available on similar devices as GeForce Now, with the exception of Playstation Premium Plus, which is only available on Playstation 4/5 and Windows PC (Xbox, 2023)(Amazon, 2023)(Playstation, 2022).

Before we start talking about cloud gaming and the possible effects it may have on consumers, we will illustrate the current state of the technology from a business perspective in order to demonstrate the practical relevance of the concept. In 2022, according to a market report conducted by Newzoo, there were a combined 31.7 million paying users across different cloud gaming services globally, with revenues totalling up to 2.4 billion USD, which is up 74% from the previous year and forecasted to triple by the year 2025 (Fernandes, 2022). Another noteworthy factor to bring up is the market shares of each geographic region from which these revenues come from, roughly 27% of the market share comes from North America, 30% from Europe, 36.5% from Asia-Pacific and the remaining coming from the Middle East, Africa and Latin America, as things stand, the geographic market shares are relatively similar, though the largest serviceable obtainable market is in Asia-Pacific, who make up 49.5%, in other words, nearly half of cloud gaming’s target audience resides in the Asia-Pacific region (Fernandes, 2022). From these numbers alone, it is clear that cloud gaming is a rapidly growing technology and this is further indicated by the serviceable obtainable market, going from 160.2 million

people in 2021 to 220.2 million in 2022, this number will also more than double to 464.9 million by 2025 as per Newzoo's forecasts (Fernandes, 2022).

1.2 Research Problem

1.2.1 Research gap

When examining previous research, we believed that this topic needs further investigation on how cloud gaming as a service has an impact on consumers' behavior and decision-making process. We have found out that most of earlier conducted research has discussed cloud gaming future opportunities and focus on viability of cloud gaming as a business model rather than looking at consumers specifically. Therefore, we think a more consumer focused study would be beneficial for this topic and this special service. This is a factor that has influenced our decision to carry out this study.

Another factor that gave us interest in investigating this area was through the marketing science institute which is an institute that publishes proposals for studies that deserve more attention in the upcoming year. The Marketing science institute (MSI) describes themselves as a non-profit member organization where they have invested in bringing together the top market leaders and scholars from the top companies with the aim of creating a platform for scientific research, collaborations and a peer-to-peer network, all in an unbiased purpose (Marketing science institute, 2023). MSI publishes research priorities periodically with the aim of supporting and guiding academic researchers who want to be involved and influence marketing practice. In the research priorities paper released for the years 2020-2022, Cloud gaming can be connected to various priorities such as, among other things, subscription marketing, customer-Technology Interface and innovation (Marketing science institute, 2020). In the newest report released that refers to the years 2022-2024, which is also most relevant in this case, cloud gaming can be linked to is customer experience and changes in how customers and firms interact (Marketing science institute, 2022). In summary, our study can be involved and contribute to and bring great value to the researchers as well as to the industry.

We have been able to identify that previous studies have mostly focused on cloud gaming from an industry point and as a business model. Although, in an article from Brink & Lee (2020) the authors discuss to what extent consumers trust cloud based services and the study itself is carried out with the help of quantitative data. Another study from Cai et al (2016) investigates previous within the topic of Cloud gaming with the purpose of giving the reader an overview of the topic and familiar with recent developments of the service. The study is based on quantitative data when analyzing the cloud gaming platforms. This gives us another reason to investigate this topic further using qualitative data because that method is not commonly used in the field and it can give us a deeper overview from the consumers' side.

Further research has been suggested by previous studies;, van der Werff et al (2019) explored trust in cloud based services and said that there is a lack of transparency for the consumer to be able to make knowledge-based decisions during the purchase process (van der Werff et al, 2019, p.1). Further research that was suggested was to investigate how multiple referents in the cloud environment would integrate in order to influence consumer behavior and purchasing decisions

(van der Werff et al, 2019, p.15). Furthermore, Krenz et.al (2011) studied how consumer acceptance was towards cloud computing based gaming. The authors suggested that further research should discuss consumers' decision making process and to explore what impact several factors such as monetary factors and the interest of playing games can have (Krenz, et.al 2011, p.49). Also, further research should be done on the relationship between consumer behavior and consumer attitude towards the service (Krenz, et al 2011, p.49). So our conclusion of these suggestions for future research is that there is a need for studies containing consumers' decision making process when it comes to cloud gaming and what factors may impact the consumer behavior.

1.3 Thesis Purpose

After identifying our research gap, we have selected the following research question:

“How does cloud gaming affect traditional game purchase and engagement behavior?”

In order to answer our selected research question we have developed some purposes with the thesis which we will discuss. The *first* purpose with this thesis is to look into the possible effects cloud gaming can have on consumer behavior, and what consequences that may have for the industry. In order to examine this purpose we will conduct an exploratory qualitative study where we will have a look at the consumer behavior and if technology such as cloud gaming can make consumers opt out of the traditional way of gaming and instead shift towards a new way of gaming with software as a service.

Our *second* purpose with this thesis is to look deeper into which factors can influence the customer's decision-making process in the path to purchase. In order to achieve this we will bring up factors such as subscription pricing model, nostalgia, perceived value, technology acceptance model, among other things. The purpose of this is to find out what effect each of these factors can have on the entire decision-making of consumers and give an overview of which factors come into play mainly.

Our *third* purpose is to investigate a part of the area that, to our knowledge, has not been explored before. We believe that this study can be important to address perhaps primarily for the industry, one also for shareholders and other stakeholders.

Research Question	How does cloud gaming affect traditional game purchase and engagement behavior?
First Purpose	Examine the possible effects cloud gaming can have on consumer behavior and what consequences that may have for the industry.
Second purpose	Investigate which factors can influence the

	customer's decision-making process in the path to purchase.
Third purpose	Conduct a study in a new field within the topic in order to contribute to the marketing practice.

Table 1. Overview of research question and research purposes.

2.0 Theoretical Framework

2.1 Definition of Cloud Gaming

Cloud gaming is not a new technology per se, with its roots being traced back to the early 2000's and with its relation to cloud computing, definitions of the term "cloud gaming" have been mentioned in previous literature. In addition to this, as mentioned previously, cloud gaming can be also known as the terms: "gaming on demand", "gaming as a service" and "game streaming" amongst others. In order to conduct our research more effectively, we will establish one single definition for cloud gaming, but first, we will review definitions of the term mentioned in previous literature.

Author/Year	Title	Definition
Shea et al. (2013, p.16)	Cloud Gaming: Architecture and Performance	"[Cloud gaming] Renders an interactive gaming application remotely in the cloud and streams the scenes as a video sequence back to the player over the internet"
Wei Cai & Chen. (2013, p.553)	Next Generation Mobile Cloud Gaming	"Interactive gaming utilizing mobile devices that access the cloud as an external resource for processing of game scenarios and interactions, and to enable advanced features such as cross-platform operations, battery conservation, and computational capacity improvement"
Chen et al. (2017, p.287)	Cloud Gaming	"Cloud gaming refers to a new way to deliver computer games to users via networks, where computationally complex games are executed on cloud servers, the rendered game scenes are streamed over the internet to gamers with thin clients on heterogeneous devices, and the control events generated by input devices are sent back

		to cloud servers for interactions”
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Table 2. Selected definitions of Cloud gaming from extant literature.

When looking at these definitions, we can see that there are themes between them and based on these, we can formulate a general definition of cloud gaming which we can base our research off from. Therefore we will define cloud gaming as such:

“Cloud Gaming refers to a subset of cloud computing which allows a player to run a videogame remotely, offloading the computational processes to a remote server, for it then to be live streamed back to the player’s device via the internet in a video format whilst maintaining full interactivity”.

2.2 Motivations for gaming

In order to look into how cloud gaming can affect consumer behavior, we must also consider the motivations people have to play videogames in general, in other words, why do people play video games? Since cloud gaming can be considered as a method of playing video games, with some advertising minimal compromises between playing games traditionally and through the cloud, we have to consider gamer’s motivations for playing video games in the first place, and then take into consideration if cloud gaming affects any of their factors of motivation. Firstly, a study by Hoffman & Nadelson (2010) revealed 3 main reasons individuals consider when deciding to engage in video gaming, those being: escapism/fun, social connectivity and the “achievement of task related goals through control”. Regarding the first of those factors, escapism and fun, 84% of respondents stated that their desired objective with engaging in video gaming is to have fun or relax and the reason behind this is to have a method of escaping from their daily routines, for example, school or work (Hoffman & Nadelson, 2010, p.257). These respondents considered gaming as a diversion and a method for relieving stress which results in a feeling of well-being as well as accomplishment. An interesting side note regarding escapism is that 20% of respondents stated that engaging in video gaming relieved feelings of anxiety and depression but this increases to 48% for respondents who spent 5 or more hours per week playing video games (Hoffman & Nadelson, 2010, p.257). Concerning the social connectivity motivation, 66% of the respondents in Hoffman & Nadelson (2010) stated that they played video games with others, this motivation specifically however can vary since the fulfillment of the desire for social connectivity through playing video games can derive from playing with others as a social activity whilst some seek competition instead, it is also mentioned that some individuals in the study planned their social activities around gaming, for example, planning “gaming nights” with friends or family (Hoffman & Nadelson, 2010, p.261). In addition to these two motivations is also the motivation of reaching goals, in most video games, there are goals which the player is aiming to achieve, whether it’s beating the game, online opponents, completing a specific task or more, respondents in the study stated that they were either very determined to reach a goal in a specific game or that sticking with a specific challenging task and eventually completing it was rewarding. The motivation of being able to achieve goals also works hand in hand with control, which is another motivation for individuals to engage in video gaming, since people are in control of the videogame, the satisfaction derived from achieving a goal is greater (Hoffman & Nadelson, 2010, p.262).

It is therefore clear that the motivations to engage in video gaming can be considered as being hedonistic in nature as the main motivations for individuals to play them derive from the desire to fulfill recreational, social as well as esteem needs (Hoffman & Nadelson, 2010, p.265). Bringing this back to the topic of cloud gaming, since cloud gaming is an alternative method of engaging in video gaming, an individual's motivation to engage in cloud gaming will depend on how the technology will affect the hedonistic gratifications of playing games in general, usually through traditional means, and whether or not players will have to make compromises for the game's ability to fulfill their recreational, social or esteem needs.

2.3 Subscription Marketing

The popularity of subscription based businesses has been increasing considerably in the past years and that is especially true in the world of online services, we have already mentioned in brief the similarities some cloud gaming services have with services such as Netflix, the main difference being that Netflix provides the consumer access to various movies and series, while cloud gaming provides the consumer access to games after paying for a subscription. Since cloud gaming is a cloud based service which requires the constant upkeep of servers and other infrastructure, it makes sense that most providers have gone down the software as a service route, requiring users to subscribe in order to gain access to the service, providing the service providers with a constant source of cash flow in order to offset their operational costs. The presence of subscriptions in cloud gaming platforms is also one of the reasons why cloud gaming can also be referred to as "gaming as a service" in addition to the on-demand nature of the services offered. This however poses a new issue for us who are looking into the possible effects of cloud gaming on consumer behavior, and therefore must now also take into consideration the possible effects a subscription based business model might affect consumer perceptions and intentions to engage.

To gain a better understanding of how consumers may perceive this subscription based model in comparison to traditional gaming we can take a look at a study conducted by Baek & Kim (2022), which looks into how consumer perception and purchase intention of a product type changes when a subscription model is introduced to said product which was originally sold at a one time basis. Therefore, this study can also be applied to the study of cloud gaming, where traditional games are usually bought on a one-time basis, whereas most cloud gaming platforms introduce a subscription fee in order to access a library of games. Firstly, to define what a subscription-based business model is, a common definition found in previous literature is that a subscription-based business model is where "customers pay a fixed fee at regular intervals to receive access to a product or service" (Baek & Kim, 2022, p.1) or something along those lines, this falls in well with the business models of the various service providers. Subscription based models are well suited to adapt to the consumer's changing requirements since in a subscription based model, the service can be simply updated in order to fulfill the new demands (Baek & Kim, 2022, p.2). In addition to this, for a subscription-based businesses to be viable, a long term relationship between the service provider and consumer must be established, a relationship which is based on periodic payments from the consumer and in return, access to the services/products until the subscription is canceled (Baek & Kim, 2022, p.1) and this would be

no different in the case of cloud gaming, it is for this reason that a subscription based business will need to consistently offer “relational values” in order to retain current subscribers (Baek & Kim, 2022, p21). Another significant factor is that according to Baek & Kim (2022), products which are perceived to have utilitarian attributes are more suitable for subscription based models and an increase in purchase intention was observed in contrast to when the product was purchased on a one-time basis (Baek & Kim, 2022, p.20). Bringing this back to the topic of cloud gaming, as discussed before, the motivations to engage in gaming in general can be considered to primarily hedonistic, however when looking at cloud gaming, it is also possible that it also brings some attributes into the equation which consumers may perceive as being utilitarian, such as being able to play a game from a less powerful device for instance. Baek & Kim (2022) further elaborate on this, stating that businesses that use a subscription model should first focus on products or services with a high utilitarian value in order to be initially successful. As for the perceptions on the product/service itself, the paper looked into how purchase intentions changed for search and experience goods, however, the purchase intention based on the type of product will depend on the customer, where they found that customers with more extensive knowledge will have a high purchase intention for experience products while less knowledgeable customers will lean towards search products (Baek & Kim, 2022, p.20).

2.4 From Traditional Gaming to Cloud Gaming

As mentioned previously, cloud gaming is a growing concept with many tech companies developing their own services in order to enter into the market. To recap, some of the major companies currently on the market with their own cloud gaming services are Nvidia, Sony, Microsoft and Amazon, with Chinese tech giants such as Tencent and ByteDance also currently experimenting with the concept (Che, 2021), take note that these do not make up all of the services currently available as naming all would be beyond the scope of this study as we aim to look at the consumer behavior surrounding cloud gaming as a concept. In addition to this, despite having varying business models, all these services have a general thing in common, which is that cloud gaming platforms are subscription based services which in terms of hardware, are very accessible. Cai et al. (2016) lists 3 possible factors which could be attributed to the growth of the technology. The first of which, is that gamers would not need to be constantly upgrading their current hardware, be it console or PC, in order to enjoy the most recent games, which could otherwise prove costly, secondly, for cloud service providers, since the infrastructure already exists and may not be used at full capacity, it would be profitable to sell their resources in order to support cloud gaming, and thirdly, for game developers, who would no longer need to spend as much time developing their game for different platforms (PC, Xbox, playstation etc.) (Cai et al., 2016, p.687). In addition to this, Chen et al. (2017) also lists some factors which would possibly be attractive to consumers, for instance, cloud gaming would allow gamers to have access to their games from anywhere and at anytime, allow for the possibility to purchase/rent a game on demand, specific unique features which may vary on the service which one uses, such as being able to share game replays with friends as well as the aforementioned lack of needing to upgrade hardware (Chen et al., 2017, p.288).

With all this taken into account, we can compare the differences between traditional gaming and cloud gaming. Firstly, concerning the upgrading of hardware, when gaming traditionally, the game would run on one's own hardware, which means that the player's computer or console

would require the computational capacity needed in order to smoothly run that game, however, with the advent of cloud gaming, the game is being run remotely from a data center, meaning that the only requirement would be a decent enough internet connection to support the live streaming as well as sending the inputs. Since video games are constantly evolving, they will also require more and more processing power in order to run and what that would mean for someone who is gaming traditionally is that eventually, they would need to upgrade their hardware, which could be costly, cloud gaming would eliminate this requirement. Secondly, regarding being able to have access to one's games from anywhere and anytime, traditionally, a player's games would be installed to their PC or console and unless they use a laptop or a handheld console, it might be difficult to play from anywhere and anytime, with cloud gaming, since it significantly reduces the hardware requirements to be able to run a game, the newest games could be played from a mobile device, as some services such as Nvidia Geforce now and Xbox cloud gaming offer a mobile app, alternatively, games can also be run on lighter and more portable laptops, a work laptop or chromebook for instance, which normally would not be able to run the latest games. Last but not least, cloud gaming would allow consumers to purchase or rent a game on demand, this refers to the instant access to a game or games which cloud gaming can offer, either through subscribing to a service and getting access to a library of games, such is the case with Playstation Premium Plus, Xbox Cloud Gaming and Amazon Luna, or purchasing a supported game from a third party distributor and playing it through Nvidia GeForce Now. For traditional gaming, this is not possible since buying a game would usually entail a download, which depending on internet speeds, could possibly take some time whereas with cloud gaming, the game would already be stored on the services' server, allowing instant, on-demand access.

However, every cloud has a silver lining and in order to get the entire image, we must also take a look at the current limitations of cloud gaming which might affect a consumer's decision to engage with cloud gaming. Cai et al. (2016) points out some of these limitations, the first of which being that of latency. Latency refers to the delay between the difference in time between a player's input and that input coming into fruition in the game, since cloud gaming involves sending a player's inputs over the internet to the data center where the game is actually being run, there is a delay involved between the input and what's being displayed on the player's screen. This delay may vary depending on a number of factors, internet speeds, physical distance to the data center the game is being run from amongst others. The input delays in cloud gaming may be enough to put some gamers off from the concept as for some games (such as competitive shooters), every millisecond might count and could be the difference between winning and losing (Cai et al., 2016, p.688). Another limitation is that cloud gaming requires a large amount of bandwidth as it involves live streaming at a high quality and cloud gaming services recommend an internet speed of anywhere from 5 Mbps, as is the case with playstation premium plus to 35 Mbps, which is what Nvidia recommends for a 1440p stream at 120 fps. As Cai et al. (2016) states, these internet speeds may not be available for everyone, however, this could improve later in the future (Cai et al., 2016, p.687).

In addition to this, as mentioned previously, cloud gaming is also considered to be software as a service, where the business model usually involves the use of a subscription plan of some sort as the means of monetization, it is for this reason that cloud gaming is sometimes referred to as "gaming as a service". This brings up the question of consumer engagement concerning

subscription based services and the possible motivations they might have to subscribe to a cloud gaming service as opposed to more traditional means of gaming.

2.5 Perceived Value

Since the aim of this paper is to look into how cloud gaming can affect consumer behavior as well as their decision making when it comes to gaming, it will be important to consider how consumers will perceive the value of cloud gaming to determine possible motivations consumers will have in engaging with the technology.

Before we talk about perceived value in relation to cloud gaming however, we must first look into how perceived value can be defined. Firstly, as stated by Zeithaml (1988), perceived value can be defined as the “overall assessment of the utility of a product based on perceptions of what is received and what is given” (Zeithaml, 1988, p.14). When discussing value it is important not to confuse it with quality, as the word ‘value’ may possibly imply. Instead, value as defined by Zeithaml (1988, p.14), is more personally and individually subjective in comparison to quality and is made up of numerous factors, of which quality may also be included. An example of this is a well built piece of furniture, which can be considered to be of high quality, despite this, not everyone will perceive it as having value to them as it may be the wrong size or too expensive, making the outcome of this transaction not worth the sacrifice as per their perception. If those two aforementioned negatives are not significant to the consumer, they may consider the outcome of acquiring the furniture worth the sacrifice and consequently, a valuable transaction, this is what is meant by “perceptions of what is received and what is given”. To further elaborate on this, the study also goes on to add that what is received by the consumer can be perceived differently depending on their needs as some might want convenience, while others will prefer quality or quantity, it is therefore clear that value can be ambiguous and what a consumer might consider valuable to themselves can differ on a person to person basis (Zeithaml, 1988, p.13). Additionally, Zeithaml (1988) devised four categories for what consumers may consider as having value to them which was derived from the responses from her study. These four groups are as follows: (1) Value is a low price, (2) Value is whatever I want in a product, (3) Value is the quality I get for the price I pay, and (4) Value is what I get for what I give (Zeithaml, 1988, p.13).

While Zeithaml’s model has been used in a large number of previous studies, it is considered to be unidimensional and despite having multiple factors, for example perceived quality, monetary sacrifice etc, coming together to influence a consumer’s perception on value, said value itself according to this model, is a single concept which could in practice be measured by rating value on a scale, as pointed out by Sanchez-Fernandez & Iniesta-Bonilla (2007, p.428-430). If we are to take a look at some of the multidimensional conceptualizations of perceived value, authors such as Babin, Darden & Griffin (1994), suggest that emotional factors should also play a role in addition to the economic and cognitive aspects, implying that consumer behavior is not only influenced by the need of satisfying functional, physical or economic needs, therefore consumer value is influenced by both hedonic and utilitarian motivations, hence a two dimensional scale (Babin et al., 1994, p.653). Furthermore, Sheth, Newman & Gross (1991) take into account five different dimensions of value into account which come together to influence the consumer choice behavior, these values are: (1) Functional value, (2) Conditional value, (3) Social value, (4) Emotional value and (5) Epistemic value (Sheth et al., 1991, p.160). Unlike Zeithaml’s model,

these dimensions are independent from one another and a consumer's choice to make a purchase can be affected by all of the dimensions or a combination of specific ones.

To briefly go over the 5 different dimensions of perceived value as per Sheth et al (1991), functional value is the perceived utility which an alternative service/product can provide through providing functional utilitarian or physical attributes, and in the case of cloud gaming, the alternative would be cloud gaming as opposed to traditional gaming. Functional value also includes monetary value which the alternative could have to the consumer. The second value which is elaborated upon is emotional value, which is a value which is derived from the perceived utility an alternative service/product can provide through arousing feelings or affective states (Sheth et al, 1991. p.161). Epistemic value refers to the alternative's ability to arouse curiosity, provide novelty as well as knowledge. Conditional value refers to the alternative's ability to satisfy a specific situation or set of circumstances which is currently being faced by the consumer (Sheth et al, 1991. p.162). Finally, there is also social value, which refers to the value acquired from an alternative product's ability to associate the consumer with specific social groups. We have decided to exclude this dimension as this value is often associated with conspicuous consumption and is not relevant in our study, however, if there are indications of it being present, it will of course be mentioned.

Linking this back to cloud gaming, in order to gain a better understanding of a consumer's motivations to engage in it, we must look into how consumers will perceive the concept. To do this, we would like to employ a multidimensional method of perceived value to gain a broader picture of their perceptions across different aspects which could affect their willingness to engage in cloud gaming and whether or not they will be willing to decide on cloud gaming or more traditional means or a mix of both. Since in a multidimensional approach, all the factors are independent from each other, we can gain a deeper understanding into each factor affecting their perceptions and in due course, can pinpoint both the advantages of cloud gaming and the major disadvantages which can help us later with further implications on the industry.

2.6 Technology Acceptance Model

Since we are going to be looking into cloud gaming, an emerging technology, it is natural that we also discuss the technology acceptance model. The technology acceptance model or TAM for short, has its founding origins in the work of Davis (1989) and is an extension on the theory of planned behavior. TAM discusses the reasons for people adopting new technologies. Initial models are rather simple and easy to understand, consisting of two scales which influence a consumer's willingness to adopt a new technology, these two scales are: perceived usefulness and perceived ease of use (Davis, 1989, p.320).

The first scale mentioned "perceived usefulness", is referring to how a certain technology can help an individual improve their performance of a job or specific task, or as Davis puts it, "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989, p.320). An increase in job performance can also generally be met with rewards such as raises, promotions and others, consequently incentivizing employees to seek technologies which can help them achieve this (Davis 1989, p.320). In the case of cloud gaming, perceived usefulness will refer to the technology's ability to fulfill the consumer's

hedonic and social needs for playing games which we have discussed previously as well as the perceived utilitarian aspects it can bring to the table. It is also important to note that while talking about the perceived usefulness in relation to cloud gaming, if the technology has any compromises which can affect the consumer's motivations for playing games in general, it could be perceived as being less useful to them if the consumer deems it significant enough. For cloud gaming, an example of a hedonic need which consumers are seeking to fulfill would be that of having fun or as a method of escapism, finding fulfillment in playing games which can distract them from work or school. In addition to this, a social gratification would be that of being able to play with others, either cooperatively, or competitively, fulfilling an individual's desire for social interaction. Finally, an example of a utilitarian gratification would be that cloud gaming could allow the consumer to play a game on a much wider range of devices regardless of its ability to process/render/run the game itself. As mentioned before, if cloud gaming does not limit the current hedonic gratifications too a certain degree while also offering some utilitarian gratifications, we can assume that consumers will find the technology "useful", however, that is not all there is to TAM as we still have to discuss the ease of use aspect.

As for the ease of use scale, Davis defines it as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989, p.320). Regarding the "free of effort" part, Davis (1989) describes effort as being a finite resource which can be allocated to performing a specific activity or task, and if one method of completing said task is easier than the other, assuming if all other variables are equal, then an individual will most likely end up adopting said method. Ghobadi et al, (2022) explains perceived ease of use as "personal expectations of how easy it will be" to use a certain system or technology and that it would be more likely to be accepted by the public if it is user friendly and in line with the users living standards (Ghobadi, et al, 2022, p.5) With all this taken into account, it is implied that there is only so much effort an individual will be willing to allocate to a certain task before running out and that means they will have to allocate this effort carefully. Talking about the ease of use scale in relation to cloud gaming is not as clear cut as perceived usefulness, however we can talk about the simple aspects such as the difficulty of signing up, how easy it is to install (if it's needed) and how easy a platform itself is to use (eg. navigating the interface, accessing the games). On top of those, we can also consider the limitation of input lag (if the consumer deems it significant enough) as the more delayed their inputs are, the more difficult it becomes to play a game, however, this may also play into the usefulness scale as whether or not the input lag is significant, it can affect cloud gaming's ability to satisfy an individual's hedonic needs. Another possible factor that can be considered when looking at ease of use is assuming that the consumer has a device which can not run a specific game, the difficulty of adopting and using cloud gaming may outweigh the difficulty of purchasing a new device. These are just some of the examples which could play a role in affecting a consumer's perceived ease of use.

2.7 Conceptual framework

Based on the above, we have developed a conceptual model that will demonstrate the effects cloud gaming can have on consumer behavior surrounding the gaming industry, the final outcome of course being the consumer's willingness to adopt cloud gaming as a new method of playing video games. This willingness to adopt will not only be a testament to the perceived value which cloud gaming can have to consumers but also to the future of a on-demand

subscription based model for gaming, similar to that of the netflix model, and whether or not consumers will be willing to adopt this new concept.

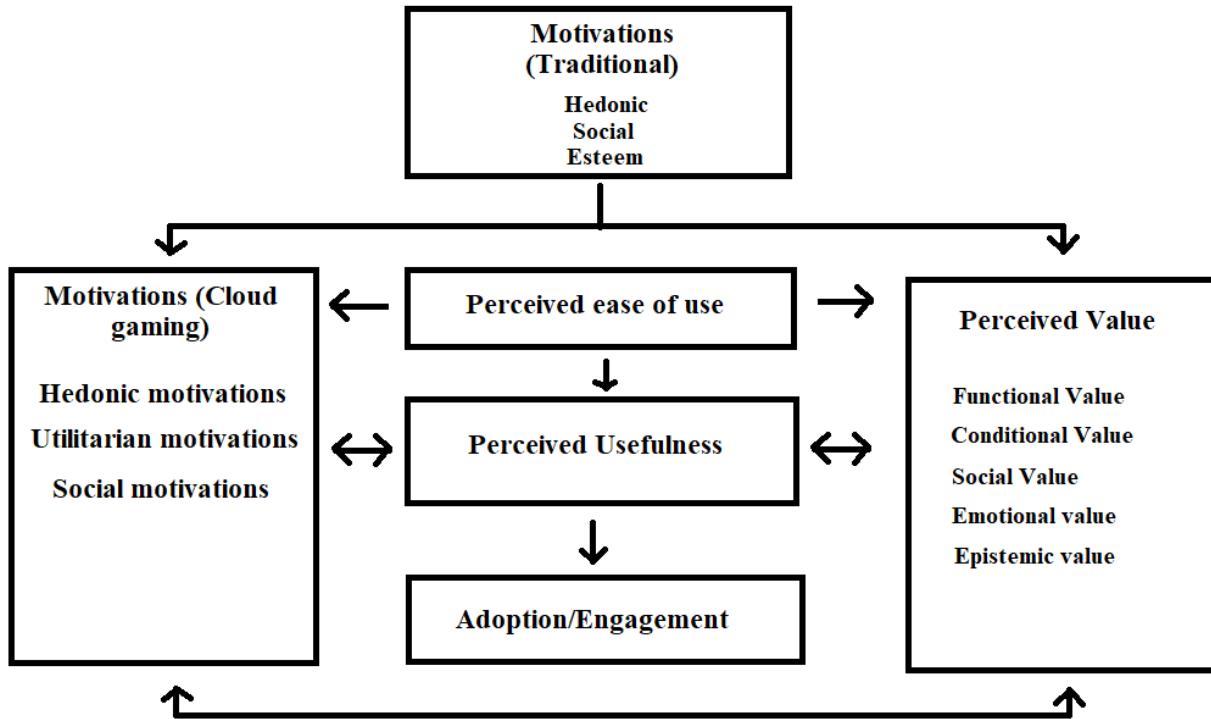


Figure 1. Conceptual framework

Motivations (Traditional)

We start off with the motivations consumers have for gaming in general, or for traditional gaming, since in order to understand why consumers would want to adopt cloud gaming, we also need to see why they game in general. These motivations will also form the basis for what consumers are expecting when they eventually consider cloud gaming as an alternative. If cloud gaming means that too many compromises to their traditional needs would have to be made, we can expect that there will be little willingness to adopt. Alternatively, if cloud gaming poses little threat to the traditional motivations, or even possibly improves the likelihood of fulfilling them, then we can expect a higher willingness to adopt.

Motivations (Cloud gaming)

Motivations for cloud gaming refers to the possible motivations consumers will have for cloud gaming specifically, the traditional motivations of course still play a role as the consumer is still playing a game. However there may be additional motivations such as utilitarian ones where the consumer considers it more useful to play through the cloud than to get a new device which will be able to run a game, just as an example. The motivations for cloud gaming will also go on to determine the consumers' technology acceptance of perceived usefulness as well as the perceived value.

Perceived Value

The perceived value of cloud gaming will play a role in determining the technology acceptance of cloud gaming in perceived usefulness as well as the motivations for cloud gaming, the

perceived value will also be based on the consumers' motivations for traditional gaming. As mentioned previously, if the sacrifices of adopting cloud gaming are too great in relation to their traditional needs, then the perceived usefulness and motivations will be affected negatively. The opposite may also occur.

Technology Acceptance (Perceived usefulness/perceived ease of use)

The technology acceptance consists of the perceived usefulness and perceived ease of use. Regarding perceived ease of use, it will play a role in determining both the motivations for cloud gaming as well as the perceived value that consumers may have but can also directly influence the perceived usefulness of cloud gaming. As for perceived usefulness, it will be affected by the motivations and perceived value as well as the aforementioned ease of use. These two will come together to determine the technology acceptance of cloud gaming and later go on to determine the willingness to adopt.

Adoption/Engagement

Adoption of cloud gaming is the result of the culmination of all previously discussed theories. As mentioned before, this will not only give us an insight on whether or not consumers are willing to adopt cloud gaming as an alternative method of playing games but also the consumers' conceptions on the new concept of a on-demand subscription based model.

3.0 Scientific Methodology

In this upcoming chapter, we will explain our research philosophy which relates to the ‘development of knowledge and the nature of that knowledge’ (Saunders et.al, 2012, p.127) as well as our chosen research approach.

3.1 Research philosophy

The word philosophy originates from the Greek language and means “the love of wisdom and research philosophy addresses values, beliefs and principles that are underlying a detailed study (Aliyu, et al 2015, p.11). When writing a research study it is important to recognize the epistemological (what values goes into the study) and ontological (how to know that the study is true) orientations as it can describe the entire course of study. It is also important to have axiology (how to write the study) in mind (Aliyu, et al 2015, p.11).

3.1.1 Ontology

Ontology can be referred to as the question: what is the form and nature of reality and what is there that we can know about (Aliyu, et al 2015, p.12). It means that researchers need to take a position regarding their own perceptions about how things really work and how they really are (Scotland, 2012, p. 9). The ontological position interpretivism is relativism (Scotland, 2012, p. 9) which refers to the view of truth and falsity and right and wrong when it comes to standard reasoning (Baghramian & Carter, 2015). However, the idea of relativism is that reality is subjective and therefore the view of what is true and false and right and wrong can differ depending on who you ask (Scotland, 2012, p. 11).

In our study with consumer behavior and decision making process when it comes to cloud gaming we will move towards a relativistic point of view because we believe that everyone has their own preference and thought about this service and therefore there are not any right or wrong answers.

3.1.2 Epistemology

Epistemology can be referred to as the relationship between the knower and the would-be knower (Aliyu, et al 2015, p.12) and the assumptions are concerned with how knowledge can be created and communicated (Scotland, 2012, p. 9). When looking at previous research (Aliyu, et.al 2015, pp.12), epistemology tends to lean towards positivism. Positivism is the idea of knowledge and the importance of knowledge being developed objectively (Park et al 2020, p. 691). That means researchers and participants can influence the development of knowledge, in our case, we will not be using objectivity when it comes to gaining knowledge because as mentioned earlier, there are not any previous studies or quantitative data that will answer our research question or the purposes. So we will be using subjectivity because we believe that every respondent's words matter in order to answer our research question.

3.1.3 Axiology

Axiology stems from the Greek language and refers to worth and reason (Hart, 1971, p. 29). Axiology can be explained using the question how can the would-be knower proceed to find out what it thinks can be found out (Aliyu, et al 2015, p.12). Many researchers strive to use an objective approach to thereby find out something (Aliyu, et al 2015, p.12). Scientific objectivity means that researchers should not be influenced by factors such as value judgements or personal interest when they perform a research study (Reiss & Sprenger, 2014). We personally will have great regard for conducting an objective study in order to obtain the most reliable results and not let various factors affect our study.

3.2 Research approach

The research approach is important because it makes it easier for the researcher when it comes to putting together research strategies and methodological choices (Saunders et al, 2012, p.147). Studies have also shown how knowledge about different research approaches can make it easier for the researcher to adopt the research design to be able to see limitations (Saunders et al, 2012, p.147). When deciding upon a research approach, there are 3 usual ways to proceed towards a research which are deductive, inductive and abductive approaches (Saunders et al, 2012, p.144).

A deductive approach can be explained as moving from the general to the particular (Aliyu, et al 2015, p.8) and it possesses several characteristics of importance (Saunders et al, 2012, p.145). First of all, one characteristic is that the deductive approach tries to explain relationships between concepts and variables (Saunders et al, 2012, p.145). The second characteristic is that a deductive approach needs to be enabled in a way that makes it possible for facts to be measured (Saunders et.al, 2012, pp.145), thus it is most common to use this approach when collecting quantitative data. A third characteristic is the importance of selecting the sample for the study very carefully in order to generalize the population (Saunders et al, 2012, p.145).

An inductive approach can be referred to as a study which is developed from the observation of empirical reality (Aliyu, et al 2015, p.8). The purpose of using the inductive approach is for researchers to better understand the nature of the problem (Saunders et al, 2012, p.146). Some key takeaways when comparing the detective approach to the inductive approach is firstly that deductive thoughts start with making assumptions and then test these assumptions in relation to theory which can be connected to a quantitative study. Inductive thoughts on the other hand begins with making observations in order to reach wider statements, which can be connected to a qualitative study (Aliyu, et al 2015, p.8). Another key takeaway is that researchers working with an inductive approach may want to use smaller sample sizes then researchers working with a deductive approach because of concerns with context in which such events will be taking place (Saunders et al, 2012, p.146).

Finally, an abductive approach can be explained as a combination of the two previous discussed approaches (Saunders et al, 2012, p.147). This is a common approach when it comes to business and management studies and allows the researchers to both move from data to theory (induction) and from theory to data (deduction) (Saunders et al, 2012, p.147).

In this study we will be using the inductive approach in order to investigate our research question. The reason why we have chosen to use the inductive approach is because this study is not based on any hypotheses we have, instead its purpose is to investigate a phenomenon. We also believe that an inductive approach will give us a better understanding about the individuals and their perception towards Cloud gaming.

4.0 Research Methodology

In this part we will present our general plan on how we proceeded in order to answer our research question. We will present our choice of research design, specified information about how the data was collected, how the data was analyzed as well as what ethical considerations were made.

4.1 Research design

When choosing upon research methods, there are two main domains of research methods, which are quantitative research and qualitative research (Adams, et al, 2014, p.6). Which of these methods to use must be decided on what you want to get out of your research question and the underlying purposes of the study. Quantitative research can be referred to as a type of research method that is based on collecting numeric data (Saunders et al, 2012, pp.161) and is common in studies in all fields, from business studies to biological and social studies (Adams, et al, 2014, p.6). Qualitative research can be explained as non-quantitative and is based on non numeric data such as images, words and videoclips to mention a few (Saunders et al, 2012, p.161). Quantitative variables can be explained as variables that vary in amount compared to qualitative variables can be explained as variables that vary in kind (Marczyk, et al 2010, p.49). An example of a quantitative variable could be how many times a certain event has occurred during a certain period of time, while if we compare with qualitative variables, an example could be how a particular event was perceived by the environment that experienced the event.

Based on our chosen question and the purpose of the study and in the context of consumer behavior and decision making process , we do not consider it particularly relevant to use quantitative variables. We believe that the best way for us to reliably collect the data is through a qualitative method. In this way, we let the respondents evaluate the answers to our questions in detail, which we consider to be the method that best suits our study. When designing a qualitative study, the aim is to study the participants' opinions and the relationships between them by using a variety of different strategies to collect the data and various analytic procedures (Saunders et al, 2012, p.163).

When deciding upon the nature of our study it is necessary to have your research question in mind and what purposes you have with your study. Based upon our purposes with the study, we want our study to be exploratory qualitative which means that we will ask open questions in order to gain insights about our topic of interest (Saunders et al, 2012, p.171). When conducting an exploratory study there are several ways to go, some of these ways are interviewing experts, conducting focus groups and in-depth personal interviews (Saunders et al, 2012, p.171). One recognition factor with exploratory studies is that they may appear to have a broad focus, but as long as the research goes on, it will become more narrow (Saunders et al, 2012, p.171). Returning back to our topic of interest, which is cloud gaming, we seek to get an insight both from the industry and from the consumers in order to investigate our research purposes.

4.2 Data collection

In this part we will further evaluate why we chose to study online focus groups and how we have constructed our discussion guide for the focus groups. We will also present and discuss the interview we will conduct in order to gain industry insight.

4.2.1 Online focus groups

Our choice to collect data through qualitative methods has opened many doors for us when it comes to how to proceed. In this study we have chosen to adopt online focus groups as a method for primary data collection. Studying focus groups emerged in the 1940's and was at that time mostly connected with studies about propaganda or new media effects (Kamberelis & Dimitriadis, 2013, p.3). Online focus groups is a newer phenomenon that started to take place in recent years due to the increased availability of electronics and network opportunities to conduct interviews remotely (Stewart & Shamdasani, 2017, p.49). There are several types of online focus groups which are presented by Stewart & Shamdasani (2017, p.51), the types are Asynchronous, Synchronous and Virtual world online Focus Groups. In this study we will make use of Synchronous online focus groups that are the closest you can get to a face-to-face interview and are designed to conduct real-time discussions with the respondents. The most important thing about using this type of online focus group is that all respondents must have access to the internet at the time of the interview and have a working device (Stewart & Shamdasani, 2017, p.51). It is something we will keep in mind and be prepared for.

As we continue to explain the choice of method, it is important to go through some advantages, disadvantages and challenges of using online focus groups as the main method to collect data for our study. Some advantages with using online focus groups is explained by Hooley et al (2012) and their main argument is that it increases flexibility both for the interviewer and for the respondent (Hooley et al 2012, p.56). The authors also believe that an online interview increases the quality of the collected data because indicators show that many respondents find it easier to open up and find disclosure in an online environment compared to a traditional face-to-face interview (Hooley et al 2012, p.56). Others have also argued that the balance of power between interviewers and respondents has been equalized more in an online environment where respondents feel that they have more influence over the interview and also that they feel that they can withdraw from the interview in an easier way without feeling guilty (Hooley et al 2012, p.56). Oringderff (2004) also presents advantages of using online focus groups as a data collection method, the author points out that the online environment is not affected by the number of participants and is accessible for a wide geographical region (Oringderff, 2004, p 70). Furthermore, when conducting interviews in an online environment the software captures real time discussions, that means that there is no need for the interviewers to manually transcribe the session, which in turn leads to more time saving and better quality at a later stage when the discussions have to be decoded (Oringderff, 2004, p 70).

Disadvantages of online focus groups are also present and have been discussed in scholarly research, when conducting an online interview is it important that the respondents have the technical knowledge required to be able to participate. Researchers also believe that there is a risk of distractions in the respondents' surroundings which can lead to the discussion within the focus group being affected by distractions from one of the respondents that inhibit the

conversation. Another disadvantage is that, compared to a physical interview, a lot is lost when it comes to contextual and visual communication (Hooley et al 2012, p.57).

Some challenges which we must take into account when conducting focus groups are in the beginning to find the right respondents. It is important that we investigate and ensure that none of the respondents know each other from before. It is important because they can create groupings and lead to not all respondents being involved in the way we want. There is also a risk that people will not dare to be as transparent if they are familiar with the other respondents. Another challenge we need to be aware of is that we have to make sure that everybody that will take part in the interview has a stable internet connection and possess the technical knowledge to be able to carry out an interview remotely.

Online focus groups	Advantages	Disadvantages	Challenges
	<ul style="list-style-type: none"> -Increased flexibility -Increased balance of power between moderator and respondents. -Accessible for a wide geographical region -Time saving 	<ul style="list-style-type: none"> -Risk of distractions -Loss of contextual and visual communication 	<ul style="list-style-type: none"> -Careful background check on the selected respondents -Ensure that respondents have stable internet connection

Table 3. Strengths, weaknesses and challenges with conducting online focus groups.

4.2.2 Industry insight

In order to gain industry insight we have chosen to conduct an interview with a person from the video game industry who has one or more games available on a cloud gaming service. The reason we want to conduct this interview is to get a greater insight into the industry and how they view the relatively new technology that cloud gaming is and what impact it has had on the industry from their point of view.

Our choice to use both online focus groups and conducting an interview can be seen as a triangulation strategy. Triangulation can be explained as two or more data sources within the same study with the purpose of strengthening the research design (Thurmond 2001, p.253). Some advantages of using triangulation is that it can increase confidence in the research data, you can break new ground when it comes to understanding a phenomenon as well as creating a greater understanding of the problem itself (Thurmond 2001, p.254). Some disadvantages of using triangulation may be that they are more time-consuming if we compare to the traditional way of only using one data source. Another disadvantage is that it may be difficult to decide what to do

with the vast amount of data (Thurmond 2001, p.256). In this case, as we aim to gather additional data by conducting an interview from a person within the video game industry, it can be referred to as a data source triangulation. The purpose of data source triangulation is to identify similarities and variance in findings when it comes to the sources of people, time and space (Thurmond 2001, p.254). When looking into the video game industry and more specific video game developers in Sweden that have games on Cloud gaming services we found a few developers that we decided to reach out to.

Since we are students, getting a company/representative from a company to agree to take their time to participate in an interview may be difficult and for this reason, we have decided to contact numerous indie developers within Sweden which fulfill the prerequisites of having games available on cloud gaming services in order to ensure the best chance of securing an interview. The initial request for an interview was sent via the companies' official emails and the companies we had contacted were: Coffee Stain Studios, Paradox Interactive, Hazelight Studios, in addition to a possible contact within Coldwood Interactive, an email was also sent to EA DICE despite being a much larger company compared to the previous ones listed. In the end however, only one of the companies we had contacted (Hazelight) got back to us and unfortunately declined due to not having time, we did not hear back from the rest.

As for the interview guide for the industry insight interview, due to the lack of a participant, we did not develop it past the early phase of question formulation, however, we will still provide it in Appendix 4, take in mind that the questions are in no particular order. Questions we planned on asking had been formulated in reference to our research question and purposes, with questions aimed towards asking how the respondent thinks cloud gaming could affect consumers as well as the possible effects on the respondent's company and industry as a whole.

4.3 Data sampling

In this chapter we will present and discuss our chosen sampling size and sampling technique.

4.3.1 Sample size

When deciding sample size, there were many factors which had to be taken into consideration. When conducting online focus groups as our main data collection method, we need to evaluate what number of focus groups we should use and how many respondents should be in each group.

In an article from Guest et.al (2016) an empirical study was conducted in order to determine how many focus groups were necessary for a research study. The study showed that 80 % of the research themes are discoverable within 2-3 focus groups and 90% was discoverable within 3-6 focus groups (Guest et.al, 2016, p.18). Another study from Carlsen & Glenton (2011) suggests that pointed out in their article that previous studies have shown that the number of focus groups often varies between 3-4, but according to their study it turned out to be an even larger range than that (Carlsen & Glenton, 2011, p.7). The results from the study showed that the number of focus groups varies from 2 to 13 focus groups (Carlsen & Glenton, 2011, p.7).

In order for us to feel confident that we will have a large enough sample to answer our question, we will use 4 focus groups in this study. The article from Guest et al (2016) as mentioned earlier,

concluded that 90 % of the questions could be answered by using 3-6 focus groups and therefore we will place ourselves in that range.

When conducting a focus group where participants will have a discussion together it is important for the study that everybody within the focus group gets room to elaborate and be a part of the discussion, therefore it will be of great importance to decide upon a reasonable sample size. Previous researchers have had divided opinions about how many respondents there should be in each individual focus group. In an article from Abrams & Gaiser (2017) recommends that an synchronously online focus group should consist of minimum 3 respondents up to maximum 8 respondents with the reason that if a focus group is too big the respondents can feel that their contributions are insignificant which can lead to reduced interaction (Abrams & Gaiser, 2017, p. 436). Another study from Casey & Krueger (2009) discuss the fact that traditional focus groups is recommended to have between 10-12 participants, the author argues that 10-12 participants in too big for a noncommercial topic and therefore recommend using 5-8 participants in order to from an moderators point of view have better control over the discussion and let every participant be able to share their opinion and observations (Casey & Krueger, 2009, p.67).

In our assessment, we believe that our respondents should be able to get the opportunity to elaborate and discuss, which we believe they get if we use relatively small focus groups. We ended up with 3 focus groups and a total of 11 respondents.

4.3.2 Sampling technique

Deciding upon sampling technique we have to have in mind that we don't have the time or resources to collect data that gives us an overview of the entire population. Therefore a fitting sampling technique is important in order to reduce the number of cases (Taherdoost, 2016, p.18). We have chosen to use purposive sampling which refers to selecting a sample that will be most useful to the purpose of the research (McCombes, 2022). We believe that the sampling technique we have chosen is best suited for this type of study where we want participants who possess different levels of knowledge in gaming.

We have decided based on our purposive sampling technique to conduct 3 different focus groups where we will divide the respondents according to how much they consume video games. In order to divide the respondents into focus groups in a specific way where they possess a similar degree of knowledge, preferences and habits when it comes to gaming we will use definitions of gamers that have been presented by Manero et al (2016). These definitions are Hardcore gamers, Well-rounded gamers, casual gamers and Non gamers (Manero et al 2016, p. 354).

Our first focus group will consist of Hardcore gamers and that kind of gamer is often niched towards one type of game and spends a lot of time and money on their gaming. The Hardcore gamers will be merged with Well-rounded gamers that can be referred to gamers that play all kinds of games with a high frequency (Manero et al 2016, p. 354). The reason why we merged these two groups of gamers is due to the fact that both consume a high level of gaming but with the difference on what types of games they prefer to play.

The sample for our second focus group will be casual gamers. With casual gamers we will reach out to consumers that play at a moderate level and often strive for games that fit their everyday

life and that can be played between everyday activities (Manero et al 2016, p. 354). Non gamers are our third and last focus group we will have a discussion with. Non gamers refers to people who almost never play games no matter what kind of game. When they play, they are mainly about social games and educational games (Manero et al 2016, p. 354).

To show in a clearer way what the difference between these groups is, we thought of comparing them to each other and we begin by explaining the differences between hardcore gamers and casual gamers. Both of these groups belong to the crowd of gamers who consume video games, the difference is that hardcore gamers can be described as people that have chosen gaming as their lifestyle preference. Hardcore gamers tend to be drawn to challenges in gaming and to achieving certain goals. It is a factor in the fact that they consume a lot of games and money in their gaming habits. When comparing this group with the casual group one difference is the amount of video gaming they consume, one similarity on the other hand is that casual gamers also strive for challenges in their gaming. If we look at important factors for casual gamers these are usability and compatibility (Juul, 2010, p.33). The usability factor in the term of casual gamers refers to the need of a game to be easy to use. However, this should not be confused with the fact that the game itself should have a low level of difficulty, on the other hand, the controls and the interface should be easy to use.

Moving on to the group we call well-rounded gamers these are the people that position themselves in between the hardcore gamers and the casual gamers. They consume many types of different games and spend a lot of time on them. Although, if we compare this group to hardcore gamers, they consume a wide variety of games and see it more as a hobby than a lifestyle. Finally we have the non-gamer group which as mentioned previously consume video games at a very low level and when they do play they are often socially based games.

If we go into more specifically about how we reached out to the respondents, they were mainly contacted through social media. We believe that using social media would make it easier for us to find respondents who fit into the groups of gamers discussed above rather than contact via email or in person, this way we could also easily find out which focus group they would fit into. This was carried out by both using our own personal network, but also using social media as a search tool to reach out to suitable respondents and ask if they were willing to participate in a focus group discussion.

4.3.3 Focus group script design

With that said, a script for the focus group discussions will have to be designed. The overall format of the focus group discussions will be divided into three parts, the first of which is going to consist of questions geared towards the current gaming habits of the respondents, second, an introduction to cloud gaming, and thirdly, questions specifically about their thoughts on cloud gaming. One script will be used for all the focus groups, with follow up and alternative questions in the case where a question might not be relevant for a specific focus group, which would be the case for non-gamers and the first part. Furthermore, to make the experience more visually appealing and interesting for the respondents, a slide show presentation will be made, as well as the inclusion of a video highlighting the basic concepts behind cloud gaming.

The questions should be based on what we have previously established in our theory chapter and the answers should provide us with insights for the respondents motivations for gaming in general, possible motivations for engaging in cloud gaming, the perceived value of cloud gaming as well as perceptions on the subscription model and finally, technology acceptance. With this in mind, we can formulate the questions which we want to ask the respondents. As briefly mentioned before, the first part of the discussion will be questions on current gaming habits, the purpose of this is so that a background of the respondent is formed and with this information, we can get a basic idea of what type of gamer the respondent is. By doing this, it will make it easier to recognize any possible patterns in their behavior as well as possibly allowing us to identify underlying reasons for their perceptions of cloud gaming. Just before the second part, we will also ask the respondents if they have heard of cloud gaming before, or if they have previously engaged in it, this is so that we can get a vague idea of the awareness the respondents have on the topic.

The second part of the presentation will be an introduction and explanation of the concept of cloud gaming, and in order to ensure that a pretty wide understanding of it is achieved, we will display a one minute excerpt from a video (courtesy of Linus Tech Tips), explaining the very basics of cloud gaming, as well as a couple of advantages and disadvantages. After the video, just to solidify the respondent's understanding further so that more concrete impressions can be made, we will also provide an explanation of our own, as well as a brief overview on some of the key players within the industry and their business models, it is especially important that we get the business models across as it will be important in the respondents forming impressions on the subscription model as well as the overall assessment of cloud gaming.

Finally, the third part will be questions on cloud gaming specifically and in order to ensure a more open and free flowing discussion, questions about the more specific aspects of cloud gaming should be avoided (eg. how do you think the input latency will affect your experience... etc.). Instead, there will be more general questions about the respondent's thoughts on cloud gaming, simply, why they might think it's attractive, both for themselves and possibly others as well as what they think could turn people away from the concept. In addition to these two, there will also be a question on the subscription model as it's a drastically different way to acquire and play games as opposed to more traditional means and in order to get an idea of how they value this model, we will also be asking how much they would be willing to pay and provide some examples of current pricing as reference. This will be followed by questions regarding technology acceptance, how they would approach not only cloud gaming but technology in general as well as the perceived ease of use, even if it may be difficult to answer due to a lack of experience, however, images of the UI will be displayed on the presentation. The final question, simply put, is whether or not they will be willing to engage in cloud gaming and what the reasons for it may be, and in connection with this as well as the previous answers they gave, there will hopefully be identifiable patterns between their habits as hardcore, casual, and non gamers and their motivations/perceived value of cloud gaming.

The focus group discussion script, guide and presentation can be found in appendix 1 through 3.

4.3.3 Presentation on focus group participants

Below are the fictional names of the respondents who partook in our focus group discussions. There were 11 respondents total, grouped together depending on their gaming habits ranging from non-gamers to hardcore/well rounded gamers.

Fictional names	Age
Focus group A (<i>Hardcore/well rounded gamers</i>)	41:58 min
Erik	23
Peter	21
Karl	20
Johan	22
Focus group B (<i>Casual gamers</i>)	37:07 min
Daniel	22
Thomas	23
Oskar	23
Focus group C (<i>Non-gamers</i>)	38:56 min
David	22
Anna	21
Eva	21
Sara	22

Table 4. Presentation on focus group participants

4.4 Analysis of collected data

In this chapter, we will present and discuss how we have proceeded to analyze our data. Thematic analysis will be introduced as our technique when analyzing the data from our conducted online focus groups and for the interview with an industry representative

4.4.1 Thematic analysis

Thematic analysis is a method that is used for analyzing qualitative data (Braun et al, 2017, p.17). Thematic analysis is used with the purpose of analyzing classifications and present themes that can be related to the collected data (Alhojailan, 2012, p.40) and it allows the researcher to in a determined way, being able to see the relationship between the replicated data and the concepts (Alhojailan, 2012, p.40).

Researchers (Braun et al, 2017, p.23) have presented a process with 6 phases when using a thematic analysis when analyzing qualitative data. The first phase is familiarization which refers to providing the researcher with an entry point into analysis and is important in order for the researcher to get to know the dataset, being observant and noticing patterns (Braun et al, 2017, p.23). The second phase is coding, and that phase begins after the researcher is familiar with the dataset. Generating codes comes with the purpose of identifying relevant data by marking a few words or phrases in order to capture the most important meaning of the data. The third phase in a thematic analysis is theme development. Theme development is based on the understanding of the first two phases and is the method of combining the generated codes in order to create themes to build meaningful and more expanded patterns of the codes (Braun et al, 2017, p.27). The fourth phase is reviewing and is a process where the researchers ensure that the constructed themes match well with the research question and the coded data (Braun et al, 2017, p.29). Furthermore, when the themes have been reviewed, the researchers move towards the fifth phase which is defining themes (Braun et al, 2017, p.30). In this phase, the researcher names the themes with the aim of ensuring clarity and quality when developing the thematic analysis. The last phase presented by the authors (Braun et al, 2017, p.31) is to produce the report.

When using thematic analysis when analyzing qualitative data, we need to be aware of the advantages and disadvantages with the chosen analysis tool. Guest, et al (2012) presents advantages and limitations with conducting a thematic analysis. Advantages is that it is well suited for large data sets and can be used when studying topics which deal with other factors than individual experience (Guest, et al 2012, p.17). The main limitation with thematic analysis is that it is a risk that the researcher may miss more nuanced data (Guest, et al 2012, p.17), in other words, data that do not fit into the chosen theoretical framework. Kiger & Varpio (2020) presents more disadvantages and limitations with thematic analysis. Firstly, thematic analysis can be seen as a tool that is applied broadly and never consistently, if not the manuscripts in a clear way explain the orientation of the work and the role of theory (Kiger & Varpio, 2020, p.853).

4.4.2 The process in analyzing the results

When analyzing the results from our collected data we used thematic analysis and the 6 phases presented by Braun, et al (2017). Down below, we will go through our approach where we use thematic analysis and in this way we want to be as transparent as possible to increase the credibility of our study.

First phase, which is familiarization, is approached by recording our focus group discussions and the industry interview (both the audio and video) and then transcribe the final recordings using Microsoft Word's free transcription tool. After the transcriptions we had to make some adjustments because the transcriptions from the tool were not 100% accurate compared to the audio file.

Second phase, when entering the second phase and the coding of the transcriptions, we first of all read through the transcriptions and marked the parts that we found most interesting. The parts we considered interesting was when noticing that several participants mentioned the same thoughts or gaming terms that we found interesting.

Third phase, the coding was done and we started to generate themes based on the codes. When creating the themes, we wanted to build meaningful and more expanded patterns in order to get a clearer and more structured overview of our collected data.

Fourth phase, which is about reviewing the themes. We proceeded by building a thematic map of the themes we chose. That way we could find the most valuable themes and later find quotes to connect to them.

Fifth phase, naming the themes, we proceeded through combining themes that were similar or overlapping. We also chose to give the themes names in order for us to easily sort them out.

Sixth phase, when presenting our themes in the final report. We used our named themes as headlines in the *thematic analysis* chapter (see chapter 5.1). We also wanted to find the best order to present the themes so it would be easy for the reader to follow the text.

Phase	Description of our approach
1.Familiarization	Transcription using Microsoft Word
2.Coding	Reading through transcriptions and marking words.
3. Generate themes	Generate themes based on our coding.
4.Reviewing themes	Creating a thematic map
5.Naming the themes	Combining and naming themes
6. Producing our report	Presentation of our final themes in section 5.2

Table 5. Brief explanation of the process in analyzing our data.

4.5 Ethical considerations

When designing and planning a research design, ethical concerns will arise (Saunders et al, 2012, p. 226). Ethics within business research can be explained as standards of behavior which acts as a guide when it comes to the rights of those who will be affected by your research and or becomes a subject of the work (Saunders et al, 2012, p.226). When conducting a qualitative data collection method, there are several ethical considerations that have to be kept in mind.

First of all, in our case when conducting both online focus groups and an interview, it is important that we inform our respondents about consent (Wiles, 2012, p.25). For social scientists, informed consent is one of the most central concepts in ethical research practice (Wiles, 2012, p.25). To inform about consent gives the respondents a chance to decide whether they want to participate in the research study or not (Wiles, 2012, p.25) and a request for consent always gives the respondent an option of not participating (Dooley, et.al, p. 353). In an online environment, there may arise some difficulties (Wiles, 2012, p.35). One difficulty is that it is impossible to know if a participant in the virtual world really is the person they say they are

(Wiles, 2012, p.35). When gaining consent in an online environment, one way to go is to use a consent form which is either electronic or a hard copy (Wiles, 2012, p.35). In our study, we informed our participants about their choice to participate in the survey and also that they have the right to refrain from answering certain questions or leave the conversation altogether. We also put much emphasis on explaining to our respondents what our purposes with the study are as well as we explained what type of questions within the topic that we would ask in the focus groups discussions and the in the interview.

The second ethical consideration we had in mind were anonymity and confidentiality, which refers to the participants right to be anonymous and that information given from the respondents will not be disclosed without permission (Wiles, 2012, p.41). When ensuring anonymity when storing the data it is important for us to anonymize so the respondents are not recognizable and it happens by removing names, adjusting information and blurring pictures if requested (Dooley, et al, p. 358). To ensure that we don't disclose any personal information about the respondents we informed them that their names will be anonymized. We also informed that the focus groups discussions will be recorded, the recordings will be stored in a safe place in order to minimize risk of disclosure.

A third ethical consideration in a qualitative study is risk and safety and refers to that all kinds of activities possess some level of risk (Wiles, 2012, p.55). Therefore, it is important for researchers to inform about both the risks and the benefits of participating in the study (Wiles, 2012, p.55). The types of risks that are occurring within qualitative studies are for example, participants feeling like they are being used by the researchers which can lead to participants feeling devalued, another potential risk is that the topic of study may be a sensitive topic for some of the respondents which can lead to them feeling upset (Wiles, 2012, p.55).

4.6 Truth criteria

Truth in qualitative research can be explained by using means in order to be able to get a deep understanding of the participants' world and how they perceive it (Court, 2013, p13). All researchers strive for quality and take on several measures in order for the study to be trustworthy (Saunders et al, 2012, p.161). Previous research has shown different truth criterias which are important to have in mind when conducting a research.

The first truth criteria is credibility and refers to asking yourself as a researcher if the findings in your study are consistent compared to the reality (Stahl & King 2020, p.26). Credibility as a truth criteria is based on a subjective question and depends much on the researcher's judgment (Stahl & King 2020, p.26). To promote credibility in a study, triangulation is a very common method to use. The method of triangulation refers to the process of making observations based upon at least two different data sources (Flick, 2004, p. 178). A common way of using triangulation in qualitative research is to combine data from different data sources and from different times from different people (Flick, 2004, p. 178). Another method to ensure credibility in a research project is to use member checking which means that the results from the study are sent back to the respondents to ensure that their experiences are accurate with the results gathered (Birt, et al, 2016, p. 1802). When it comes to credibility in our study we made the choice to record both the

focus groups discussions and the interview in order to be able to listen through them several times to ensure that we have received the correct information.

Another truth criteria in qualitative research is transferability. Transferability means that descriptions or patterns from one study can be applicable to another study (Stahl & King 2020, p.27). This is a criteria that may not have such great importance on our study because we are conducting an exploratory qualitative study which means we are not aiming for replicability.

The next truth criteria in qualitative research is dependability and dependability can be seen as a third party perspective on trustworthiness (Stahl & King 2020, p.27). Ensuring dependability can be made in several ways, the most common are to let another researcher to read through the study and share their opinions and reflections about the study project (Stahl & King 2020, p.27). The fact that we as researchers are aware that our project will be reviewed by other researchers has a positive impact on trust. That will force us to be more careful about how we handle our data collection among other things (Stahl & King 2020, p.27).

The last truth criteria in qualitative research is confirmability. Confirmability is the effort to get as close to objective reality as possible (Stahl & King 2020, p.27) and can be explained as to which extent the researchers are able to explain how the studies conclusions are conducted.

4.7 Concluding remarks on methodological approach

Now it's time to highlight the most important ones we've gone over in the two sections scientific methodology and the research methodology. To begin with, in our scientific methodology, there are a few concluding remarks that have to be remembered. Firstly, in our research philosophy, our ontological position is founded through relativism and the thought that the view of truth and false and right or wrong are subjective and therefore applicable in our qualitative study. In our study we have adopted an inductive research approach in order to investigate the nature of the problem. This also means that the data we collected during the study will be used to formulate theories but not assume that the results from the data generate knowledge about how the general population views cloud gaming.

Now on to our research methodology. In this study, we have chosen to adopt a qualitative research design and more specifically an exploratory qualitative research design. Our data collection method is to primarily use synchronous online focus groups, but also a semi-structured interview with a representative from the gaming industry. The respondents in our focus groups were gathered through a purposive sampling method and the size of the groups were determined by us with support from previous studies around online focus groups. In order for us to investigate our research purposes we conducted a discussion guide (appendix 1) and an interview guide (appendix 4).

When analyzing our results from the data collection we used thematic analysis and all the 6 phases within it in order to place our answers in fitting themes. Another important concluding remark are the ethical considerations we had in mind where the purpose is to make respondents feel safe and that personal information about them will not leak. To ensure that our study is considered trustworthy, we took several truth criteria into account.

5.0 Empirical findings

In this chapter we will present our empirical findings that were collected through our online focus groups. First of all, we will present a brief description of the focus group results where we summarize our findings in order to provide a clear overview of our generated themes and their implications. After that section, we will delve deeper and present our generated themes from our thematic analysis in detail. We will draw parallels between our results and our theoretical framework/previous research in the next part, chapter 6.

5.1 Thematic analysis

Below are the themes which we have identified based on the commonly discussed topics which the respondents brought up during the focus group discussions.

Themes	Description
Current motivations	Consumer's willingness to try cloud gaming will depend on what type of gamer they are/what they play
Cloud gaming as a service <ul style="list-style-type: none"> - Accessibility in terms of hardware - Availability of games - Economic factors (<i>money saved as opposed to buying individual games as well as hardware</i>) - Uncertainty (<i>games being taken off the service, games having to be approved by the developer to be on the service etc...</i>) - Misc. Aspects (<i>Latency, Ownership concerns, game age</i>) 	Perceptions of the benefits/disadvantages which cloud gaming as a service brings to the consumer
Subscription model	Consumer's perception of the subscription model of cloud gaming
Current use case	Consumer's willingness to try cloud gaming will depend on what their current circumstances are and possible circumstances they could encounter (e.g. current hardware, gaming while traveling, work etc.)
Cloud gaming as a new technology	Consumers' acceptance towards cloud gaming

Table 6. Overview and description of identified themes.

5.1.1 Current Motivations

One of the main goals when using a purposive sampling method was to see how different types of consumers within gamings motivation towards cloud gaming could possibly differ from each other. Therefore, we constructed focus groups consisting only of consumers from the same group based on gaming consumption. In our initial part of the discussion, we figured out the gaming habits for the respondents. When it comes to gaming habits in FG A, all the respondents were between a span of one hour up to several hours per day gaming. In FG B, one respondent stated that he currently plays every day while the other played on between two or three days every week. In FG C, our respondents stated that they play very rarely and the main reason that they sometimes play games is when they play together with their partner or friend. When it comes to what kind of games they play and what factors are important for them when playing, we saw a spread among the answers in FG A. Karl (FG A) and Peter (FG A) told us that playing video games is a way for them to relax and forget about all things around you as well as Peter (FG A) likes the competitive side of gaming also. Erik (FG A) is looking more for the exploratory feeling when gaming and desire to reach an end goal. For Johan (FG A) is replayability the most important factor since it brings more value into the game. In FG B, the important characteristics for the respondent were more similar. Neither of the respondents in FG B played video games to be competitive. Oskar (FG B) stated that he would just be angry if he took his gaming too seriously. He continued by telling us that characteristics he seeks for are challenges that keep him captivated. Most important characteristic for Daniel (FG B) is to have a hobby where no brain activity or physical needs are required. Thomas (FG B) expressed that according to him, having fun and a story to follow is the most important. In FG C, all respondents agreed that the main reason they sometimes play is because they believe it's fun. Anna (FG C) wants a game where you get the chance to explore the environment whilst David (FG C) wants a more straight line with constant progress.

After conducting these focus group discussions, we found out information about how the respondents current motivations to engage in cloud gaming differ between groups. If we start with FG A and the Hardcore gamers there were some respondents who would currently be interested in using cloud gaming and some that were not as interested. Karl (FG A) mentioned that he definitely would try to experience it, especially for games with high resolution. Erik (FG A) and Johan (FG A) expressed that they don't see any benefits in using the service currently. Peter (FG A) said that he wants to give it a try, but not at the moment.

“I'd say, I'd be down to giving it a try. It's just that I don't really have the use for it currently. So it'd be more of a get to try it on somebody else's like on a laptop or something like that in the future”. - Peter (FG A)

Moving on to FG B and the casual gamers, every participant in the group during the discussion disclosed current motivations to engage in cloud gaming. Some of the respondents in this group expressed that they only play games during certain periods of the year, because they believe there are few games that are released every year that they are actually interested in buying. Daniel (FG B) expressed that this time of the year, there aren't any interesting games coming out which is a motivator for him to engage in Cloud gaming. Oskar (FG B) also expressed similar thoughts, he mentioned how the supply of games on these cloud gaming services could open up new possibilities in his gaming habits.

“It can also be a good way to explore other games that you normally wouldn't play” - Oskar (FG B)

Thomas (FG B) mentioned that he is motivated to engage in the service, as long as current supply is appealing to him.

Finally in FG C and the non-gamers we could see that their current motivation in wanting to try a cloud gaming service was surprisingly high considering they so rarely play. Eva (FG C) said that it sounds smooth and fun while Anna (FG C) stated that she would want to try it out for a month before deciding to continue with it. David (FG C) said that in case he gets the urge to play sometime, cloud gaming would be a good option since he has so few games himself. In summary, we can conclude that our respondents in FG B and FG C are more willing to try using Cloud gaming as it currently stands and compared to FG A that don't see the benefits of using it for themselves right now.

5.1.2 Cloud gaming as a service

5.1.2.1 Accessibility in terms of hardware

Throughout our focus group discussions, a number of respondents recognized the accessibility which cloud gaming can bring in terms of not requiring any expensive or special hardware in order to be able to run the latest games. This is to come as expected as this is one of the selling points of cloud gaming services as the games are run remotely, therefore, the system requirements one needs in order to engage in cloud gaming is similar to that of watching a high definition video on youtube or a live stream, which also means that even mobile devices can be able to play the latest big title games smoothly (in theory), however, the possibility of playing games on mobile devices through cloud gaming was not acknowledged by any of the respondents. The accessibility which cloud gaming provides also means that money can be saved through not requiring any expensive hardware, as one of the respondents in the casual focus group Thomas pointed out that all you would need in order to play games would be a good internet connection, it would not matter if your device itself is incapable, a person also would not have to spend thousands of SEK on a device. In addition to this, the hardcore gamers, despite mostly having capable computers, recognized the potential of someone using cloud gaming in order to get around the system requirements of the game with Peter stating that he thinks cloud gaming would be most useful if a person is stuck with a computer that can't run the game that they are trying to play. This prompted a reaction from Karl, another respondent within the hardcore group, who recognized a situation where he could see himself using a cloud gaming service and stated as follows:

“I travel a lot and obviously have a desktop, can't bring that with me. But I do have a laptop. So if I feel the need to play games. I can stream using a cloud software to my laptop, which actually can't run any games because it's not strong enough. So that's why I [would] use it” - Karl (FG A)

This brings into light another issue which could potentially be seen with traditional means. Since games are normally run on someone's own device, in order to game while traveling or moving, one would also have to bring said device with them, which could sometimes be bulky and

require extra components such as a monitor to display on and in the case of Karl, a desktop would not only mean having to bring the computer itself with him while traveling, but also a monitor, keyboard, mouse and cables in order to game somewhere which isn't his place of residence. But due to the potential accessibility perceived by him, he recognized that cloud gaming would allow him to play his games on his laptop, which is much more portable, while traveling.

When explaining the increased accessibility and ability to be more flexible on what device you are playing on when streaming the game instead of running it on your own device, a few participants in FG C expressed some concerns.

‘I think you might feel that you almost become a bit like this gaming addict that all your time is spent playing because you have such good availability to be able to play’- Sara (FG C)

Sara (FG C) furthermore stated that if you have too good availability, it can happen to you to procrastinate other things in your life to instead put that time on playing games. Anna (FG C) then turned the argument around and addressed that having the availability to be more flexible in your gaming may lead to lost interest in gaming because there is a risk that you consume too much.

Another issue which was brought into light by the hardcore group was that of storage space, as discussed briefly before, video games are becoming bigger and more difficult to store for some people as they simply do not have the required storage space on their devices. Johan pointed out that back when he had a gaming laptop, it was quite inconvenient for him that half of the storage space on it was being taken up by just games stating that:

“Games have gotten so big lately that you don’t really want to have a quarter of your hard drive just for a game and I personally, I have my laptop full of a lot of other things that are mostly work related, and having my hard drive taken up, like almost half of it back when I had a more gaming oriented laptop, it’s a bit inconvenient. So that’s another benefit that I can see for myself” - Johan (FG A)

Peter agreed to this statement and gave the example of the new Call of Duty games, which are up to 90 gigabytes in storage space just for one game. However, through cloud gaming, since the game is being run remotely, it also means that the game is stored remotely, which can alleviate a lot of concerns that the hardcore gamers can have regarding storage space on their personal devices.

Throughout the focus groups, it's clear that gamers recognize the accessibility which cloud gaming can provide. This is especially important when taking into account that most of the respondents are currently students and a commonly discussed theme at least within the casual group was that of saving money, as Thomas previously mentioned, with cloud gaming, a person would not have to spend thousands of SEK in order to be able to experience gaming. Whilst the hardcore gamers focused more on how cloud gaming can enhance their current experiences since

most of them already have capable devices, talking about storage space and envisioning situations where the accessibility can work in their favor, such as traveling.

5.1.2.2 Availability of games

Another commonly discussed theme throughout the focus group discussions was that of the availability of games which cloud gaming services offered. Since most cloud gaming services will grant the user access to a library of games after subscription, with the exception of GeForce Now, Oskar from the casual focus group, mentioned the economic incentives one could have when considering subscription to a cloud gaming service, that being that a subscribing to a cloud gaming service and gaining access to 100+ games will be cheaper than buying all those games individually, of course with the downside of not being able to play them again if the subscription is canceled and runs out. This was elaborated upon by Daniel who stated that he usually will play games for a couple months before getting bored of said game and appreciated the large library which cloud gaming provides, as it provides you with the ability to always having something to choose from besides going through the store and deciding on what to buy next.

“When big companies release their games, like FIFA, NHL, and COD, you only play from October to January before getting bored. Then you don’t have much to play[...] I thought that if you have cloud gaming, you always have many games to choose from, besides just buying individual games” - Daniel (FG B)

In addition to this, Daniel also mentioned a noteworthy hypothetical stating that if one were to buy a new game for 700-800 SEK and it turns out not to be to their liking, they’ll be left disappointed, however with cloud gaming, that would not be an issue since the only payment made was to the cloud gaming service itself and one could simply just try another game, this of course could still be an issue with GeForce Now but with the others, not so much. Furthermore, Daniel also appreciated the possibility of playing and trying out not only just big title games but also ones developed by smaller indie studios, games which do not have the same marketing budget or exposure as the bigger titles with Oskar also saying that it could be a good opportunity to explore games that one would usually not consider. In contrast to this, Thomas mentioned that he thought the selection of games is too small, at least on Playstation Premium, which is what he is personally accustomed to. Daniel also expanded upon this saying that the games offered on playstation premium plus are often older games, usually around a year old, which can easily be bought when they are cheap during a sale. The non-gamers and specifically Sara (FG C) discussed the amount of games that are available on these services. She argued that the amount of games that are available on these services will have an impact on the consumer's decision making process.

“Depends on the supply and what is available. If there are 10 games overall on the platform every month. Then maybe people don't feel it's worth it if they know they're going to find two games funny. Compared if there are 100 games, where people find twenty games funny.” - Sara (FG C)

With this statement, she argues that the more games the service has to offer, the more likely it is for the consumers to find more games they like which in turn will lead to more people wanting to

engage in it. On the other hand, David (FG C) argued the other way around by saying that many people have niche gaming preferences and would therefore not benefit by having a wide range of options when it comes to supply of games.

With that being said, the hardcore focus group mentioned some possible concerns with this model, specifically concerning the ownership of games. When one subscribes to a cloud gaming service, be it Xbox cloud gaming or Playstation premium plus or others, Johan mentioned that it concerns him that you are in principle renting the games instead of buying them, stating that GeForce Now is the exception to this and allows you to play the games that you own, provided that it is available on the platform. It was also further elaborated upon that due to this, publishers/developers will have to approve of their game being on GeForce Now, which brings some limitations to the availability of games on GeForce Now specifically. This was also in comparison to traditional means of acquiring and playing video games.

“What concerns me is ownership of games and availability, like you said in the introduction, that Geforce now is one of the few exceptions that you play the games that you own. But also, on the topic of availability of games, they have only games that were approved by the companies to be on GeForce Now and for the other platforms, you have to buy the game on their platform, and you don't really own it. As opposed to when you have your own computer and you buy a game you own it.” - Johan (FG A)

Johan also mentioned that this is the reason that GeForce Now seems more attractive to him, not only because of the ownership issues, but also because since he is a well rounded/hardcore gamer, he already has a large variety of games on Steam, and GeForce Now allows him to play those with the only extra fee being subscribing to the service.

5.1.2.3 Economic factors

When running the focus groups, the economic factors when comparing cloud gaming to traditional gaming was something that was brought up by most of the participants. The traditional way of playing games is to pay separately for each game you buy, while cloud gaming is built as a subscription based model with a monthly or yearly charge. Many of our participants expressed how the price of the games influences their decision-making process, for example, Oskar (FG B) stated that he usually waits for the game to be on sale before buying. Because he knows that almost every game is on sale at some time. Karl in FG A talked about the price of individual games when living on a student budget at the same time.

“I usually look at the price. Being a student, it's difficult to put, you know, 60 euros on a game every week or so. So I will make sure it's a good game. Make sure all my buddies have played it. Wait for it to be on sale. That's a big factor for me”. - Karl (FG A)

When subscribing to a cloud gaming service you will get access to a library full of games that can be played without needing to download them. Peter (FG A) argues that paying a monthly cost to access this library can be seen as a bonus for the gaming experience. Some respondents also mentioned how using a cloud gaming service can save you money because you don't need to upgrade your hardware but can continue playing on your new device. One example, Johan (FG A) mentioned how the economic benefits of using cloud gaming depends on how much you

game and on what device you play on. He stated that people with less optimal devices can save money on using a cloud gaming service instead of buying new hardware. Other respondents argued that paying for a cloud gaming service may be more expensive in the long run, depending on how you plan to use it.

I mean, it really depends on what kind of game selection they have. And then also, if they have an amazing selection of games and it costs 300 kronor a month, people still might not want to pay for it then. I don't know. Maybe it would take me four months to finish Red Dead Redemption, so it would feel unnecessary to pay that much. In that case, you might as well buy it for 500 kronor and have it forever. - Thomas (FG B)

Here we can see how Thomas (FG B) turns the discussion into that he believes that certain games that are time consuming to finish can be more costly to play on a subscription-based service than to buy the game separately. When discussing how much our respondents are willing to pay for a cloud gaming service, Daniel (FG B) stated that he believes that people will not pay for the service if it's more expensive than a subscription on a streaming service like Netflix or similar. He also developed Thomas' (FG B) argument and argued that some games you might want to replay several times and drew an example of his own gaming habits, and that it would involve higher costs in the long run compared to purchasing one game and then replay it several times.

Further discussion when comparing the economic aspect when comparing cloud gaming with traditional gaming was made in FG C. Anna (FG C) argues that for people that play a lot of video games will benefit economically from using a cloud gaming service

‘If I can only have a fixed amount every month or so, it will probably be cheaper if you are one of those who play a lot’- Anna (FG C)

Anna (FG C) argues that people that are spending much time playing different kinds of games will benefit from paying a fixed fee every month instead of buying games one by one, the traditional way.

5.1.2.4 Uncertainty

Uncertainty was a concept that was mentioned by several respondents during our focus group discussion sessions. In the context when it was mentioned, there were mainly uncertainty regarding games that may be removed from the service and uncertainty regarding developers approving their own games to appear on the service or not. A cloud gaming service normally consists of a library with games that are available to play, but to add more value to the consumers, these services tend to change their supply by replacing games every month. One respondent that expressed a concern about this was Oskar (FG B).

‘There is also an uncertainty in how long you can play a game. At any time, the owner of the service can simply remove the game from the service, and then you can no longer play it [...] So I think people may feel that they want to own the games and be able to play them.’- Oskar (FG B)

Oskar also further elaborated on this thought by bringing up an example, he stated that it would be problematic if you play one game on a regular basis and next time you want to play it has been removed from the service. That was a feeling of uncertainty that also Eva (FG C) expressed.

“There is a risk that you start playing a game and then it disappears if you kind of are in the middle of, it might also be a decisive factor in that case”- Eva (FG C)

Furthermore, Sara (FG C) stated a worry about all the progress in the games and the uncertainty in not getting saved for when you want to revisit the game. Another uncertainty that was brought up by one of our respondents was about games having to be approved by its developers before ending up on a cloud gaming service. Johan (FG A) stated that there is a concern with ownerships of the games and their availability. He continues by saying that there is an uncertainty regarding paying for the ability to play games, but not owning them.

In our focus group discussion we showed our participants some pictures of the services UI (User Interface) with the following question if it looks easy to use in comparison to traditional means. To our surprise, none of the participants in our focus groups felt any sort of uncertainty towards how easy to use the service would be.

“All of these platforms seem to have adopted a kind of universal language that's very recognizable. So as a new customer, he would me feel pretty comfortable with using it right away.”- Johan (FG A)

Johan (FG A) expressed based on the pictures shown of the UI that it has been designed in a way that all types of consumers perceive the service as easy to use. Erik (FG A) continued the discussion by saying that consumers that never played a game before would feel safe with this kind of UI because it is very similar to other streaming services like netflix. Thomas (FG B) compared cloud gamings easy to use perspective to ordering games online, he stated that he perceives that ordering online is both more time consuming and less easy than logging into a streaming service.

5.1.2.5 Misc aspects

Under this identified theme, Cloud gaming as a service, we had some interesting inputs from our respondents which was mentioned only a few times but which we still want to bring up in this chapter. One of these inputs is latency which means the time it takes is the time interval from when something is triggered or activated until they actually occur. Latency was raised by one of the participants in FG A who earlier in the discussion session told us that he mostly plays fast-paced games such as CSGO.

“One other thing I can see is possibly latency. So if you're playing, for example, I don't know, CSGO, or some game that's very high paced and competitive, you may struggle a bit more using, for example, GeForce Now than running it on your own system, since you're having to actually stream the game.”- Peter (FG A)

Possible latency when using a cloud gaming service was a potential factor that Peter (FG A) thought would make people turn away from using it. Johan (FG A) also brought up latency with his own experience using a cloud gaming service, he stated that when playing, there is such low latency that you barely don't know that you are actually streaming the game. These responses can be interpreted as consumers having preconceptions about how the latency will be compared to traditional gaming before deciding to use the service or not. Another interesting input we got from our respondents that might turn people away from using a Cloud gaming service was game age.

“The games offered are often quite old, like from last year, which I may have already tried or bought on a cheap sale”- Daniel (FG B)

In this case, Daniel (FG B) expressed that games that are available on a Cloud gaming service often are quite old. New games wouldn't be allowed to be on the service, in general it can be compared to movie streaming services where new movies often are not available right away but instead may be available after one year or two. Another misc aspect, as our respondent Peter (FG A) brought up, was that it is frustrating that you cannot move games from one cloud gaming service to another. That means that you may have to subscribe to multiple cloud gaming platforms in order to get access to all the games you are interested in trying.

“So you can't really transfer games between the different cloud platforms? Which is kind of frustrating.” - Peter (FG A)

This aspect was also something that David (FG C) mentioned, he said that he knows that there are certain games that are exclusive on certain devices. So he argued that using cloud gaming may not be suitable for consumers that play on multiple devices, for example people that play both games on PC and on playstation. Just because there are certain games that are only available on Playstation but not on PC and vice versa.

5.1.3 Subscription model

The subscription model that Cloud gaming services use to a large extent was a topic that was discussed frequently. Many of the respondents made parables to some of the famous movie/tv-series subscription services such as Netflix and while some found it exciting, others questioned this type of payment option when it comes to gaming. As we noticed the discussions leaning more towards cloud gaming being compared to Netflix, we raised the question of whether cloud gaming could add the same value to its consumers as Netflix does. The answers we got from Karl (FG A) and Peter (FG A) gave us an insight into their thoughts.

“I don't know. I think cloud gaming is pretty niche. I mean, Netflix has a much larger, larger audience than cloud gaming”. - Karl (FG A)

“Compared to Netflix, again, gaming itself is a relatively niche thing to do, at least compared to watching movies and series and stuff like that. So like, it's never going to become as big as Netflix”. - Peter (FG A)

From these insights it can be concluded that our respondents in FGA don't believe that a subscription based gaming service can bring the same value to the consumers as the movie/tv-series streaming services can. Their argument was that gaming was a niche activity compared to watching movies. In FG A, Peter continued and stated that it would induce anger if you lost access to all your games if you stopped subscribing to the cloud gaming service and again made a comparison towards Netflix with the frustration you feel when losing access to movies and tv-series when canceling subscription. If you instead chose to pay a one time cost for a game, you would not worry about losing it after a while. Although, a few of our participants saw a subscription based gaming service as something positive.

‘I think it's difficult to say, it depends a lot on the selection of games. But, it's nice that you can cancel at any time. Maybe the service has really good games right now, but after six months, it might not be worth it anymore’.- Oskar (FG B)

Oskar (FG B) had a positive attitude to the model and through his statement he means that it is good to be able to cancel the service during periods where the games on the service are perceived to be weaker than before. Furthermore, Thomas (FG B) agreed that this type of payment model was beneficial and referred to his own gaming habits when he mentioned that during parts of the year, especially the summer, he does not play much. Therefore, he could just cancel the service during these parts of the year and then start it up during the periods when he is playing video games. From these responses, it can be seen that there is a motivation to engage in a subscription based gaming service among some of our respondents. Overall, FG B seemed to be more positive and willing to engage in a subscription based service while the respondents in FG A were more skeptical about paying a monthly subscription fee for playing games. We can conclude that a subscription based gaming service may not be for every gamer. Although it might be fitting for gamers with certain gaming habits and preferences for example if you only play during certain periods per year.

‘I think for those who play a lot and test different amounts of games [can benefit from subscription based services] [...] But for those of us who play so rarely, that's not worth it.’- Eva (FG C)

In FG C, there were some respondents that did not see any benefits for them to pay a subscription fee when relating to their own gaming habits. Eva (FG C) argued that a subscription based model would be beneficial for those who like to try out many different kinds of games, but would not be beneficial for those who play very rarely. David (FG C) were on the same track and discussed if it is worth paying a subscription fee when he plays so rarely.

5.1.4 Current use case

When discussing whether or not the respondents would consider engaging in cloud gaming, the answers varied depending on the focus group, which also had a lot to do with their current circumstances. The casual focus group and the non-gamer focus group were generally more willing to give it a try while the hardcore focus group was more reserved when talking about whether or not they would be willing to adopt cloud gaming. To start off, most participants in the

hardcore focus group, as mentioned previously, already have capable gaming PC's, it is for this reason why more reservations existed within the group. To summarize the hardcore group's sentiments in brief, they did recognize the benefits of cloud gaming and what that could possibly mean for other people, but they could not see themselves adopting it in the foreseeable future, perceiving it as a niche. Erik mentioned a hypothetical where if he had a less capable laptop, he would definitely consider adopting cloud gaming, but as of right now, due to his current circumstances in having a capable gaming PC, he could not see cloud gaming as being beneficial for him, this sentiment was also shared by Peter. As for Karl, he could only see himself using it for specific situations such as traveling as mentioned before but that is the only situation he could see himself using it in, and described cloud gaming as being a niche in his eyes. Johan was the outlier within the hardcore group, the only respondent within the group to have tried cloud gaming first hand due to him no longer having a capable computer, he did however mention that he does not use cloud gaming (GeForce Now specifically) as much anymore but attributed it to him not having as much time as he used to.

"I'd say, I'd be down to giving it a try. It's just that I don't really have the use for it currently. So it'd be more of a get to try it on somebody else's like on a laptop or something like that in the future." - Peter (FG A)

"Now, if I had a laptop, I would definitely use a cloud gaming [service] as to try it out. But as it currently stands, I have a PC and for me, I don't see a benefit to use this program yet." - Erik (FG A)

As mentioned previously, the casual group has a slightly more open sentiment towards cloud gaming. Due to the most of them being console gamers, specifically playstation, their focus was more directed towards the gamepass model which comes alongside Playstation's cloud gaming service. Daniel mentioned that he can see cloud gaming as being a good way of finding something to play while waiting for the next big game without having to buy them individually, which could cost a lot. Thomas also implied that he could see it as being beneficial to him, however, it depends on what sort of games are available on the service, while Oskar saw it as being useful for looking into games that he is unsure about, or on the fence of buying, however did also mention that if it's a game he has been waiting for, he would rather buy it individually.

"Also, let's say Bloodborne 2 comes out, then I want to have it on disc because I want to own that game. But for games that I'm maybe more unsure about whether I'll like or not, then Cloud gaming is a better option if they're available." - Oskar (FG B)

The non-gamers as mentioned earlier played games very rarely and none of the participants except for David (FG C) owned their own device to play on. Despite this, there were many positive feelings about engaging in cloud gaming. Everyone in the group agreed upon wanting to at least test out the service out of curiosity just to see what it's like. Anna (FG C) stated that she wants to just test it out for a month to see if she can find a game she likes and Eva (FG C) agrees by saying that it sounds very fun. To summarize, the casual focus group and the non-gamers saw more potential use out of cloud gaming when compared to the hardcore group, the reason being

that most of the hardcore gamer's could not see as many situations where they would use it compared to the casual group.

5.1.5 Cloud gaming as a new technology

Throughout the focus group discussions, it was also of interest to ask what the participants thought of cloud gaming as a "new" technology as well as how they approach and use new technology in general. Across the different focus groups there were different reactions when asked how they approach new technologies. To start with the casual group, Daniel expressed that he sees that most people around his generation will approach new technologies fast and are usually quite optimistic about new technology, a statement which Oskar and Thomas agreed with. However, when it was regarding cloud gaming specifically, Oskar voiced some concern over it's readiness to be on the market, citing the failure of Google Stadia, mentioning that nobody had used it. This made him slightly skeptical, going on to question whether or not cloud gaming is ready for the market.

"No one had Google Stadia? An Example that Cloud gaming might not be ready just yet" - Oskar (FG B)

When it came to the perceived ease of using cloud gaming, a lot of comparisons were made with netflix from the casual focus group. Daniel compared cloud gaming with Netflix, stating that he would imagine that it would have the same effect as choosing what to watch on Netflix, due to the absence of download times as well as the similarities between the UI which most cloud gaming services have adopted with the UI of Netflix. Thomas stated that he saw it as being easier than going through the process of ordering physical game copies, where you wouldn't need to fill in your personal information and go physically pick up the CD.

The non-gamers in FG C were generally positive towards accepting new technology. David (FG C) stated that as long as a technology is easy to use, he has no problem approaching it. Sara (FG C) agreed and commented that we are currently in an IT society where new technologies arise all the time and that may lead to people being more accepting towards it. On the other hand, Eva (FG C) expressed how certain new technologies made her feel skeptical, she mentioned for example the growth of AI services. But she had a positive attitude towards cloud gaming as a new technology.

"I'm kind of skeptical about AI and technology like that, which I think is a bit unpleasant. But like this, a streaming service for games feels normal. Feels strange that it hasn't been around for longer".- Eva (FG C)

Regarding the hardcore focus group, there was slightly more skepticism present when talking about approaching new technologies, and that was made even more apparent when talking about cloud gaming specifically. As mentioned before, most of the participants from the hardcore group already have powerful gaming devices, and as such, saw little use for themselves personally. Peter mentioned that he isn't usually the first to try new technologies, but instead waits for it to be slightly established first before trying it himself, he also goes on to state that

cloud gaming is a special case for him, since he can't see a situation where cloud gaming would come in useful for him. However, he also mentioned that if cloud gaming were to become much bigger in the future, more benefits might reveal themselves and he could consider using it. Karl mentioned the low risk he saw in 'just trying it out', due to the low cost (in his opinion) for the subscription, and thinks that people should at least try the free tier (referring to GeForce Now) and basing their opinions on their experience. Out of the hardcore group however, Johan had the most optimistic of outlooks regarding the future of cloud gaming, citing established ideas which people have about gaming in general.

"I think because it's such a new thing. And that this idea that you need a good gaming laptop is so deeply ingrained and already established. And so many people already have that, like, they have a mindset, oh, if I want to do gaming, I got to get a gaming laptop. But I think with a right promotion and exposure of these services, this mindset could change. And I don't think it's, I don't think that the way we're doing it now is gonna remain for all that much longer, probably. But it's just my opinion." - Johan (FG A)

Therefore, in Johan's view, there would be a more optimistic outlook on the prospect of cloud gaming if it were to have more exposure in the market. It is also noteworthy to mention that Johan was one of the participants to have actively and regularly used cloud gaming in the past. Regarding the perceived ease of use for cloud gaming services from the hardcore group, there were many similarities with the casual group, where comparisons to Netflix were made. Erik mentioned the possible attractiveness he thinks the UI design could have with more casual gamers or even non gamers due to its similarity with netflix's tile-like design, mentioning that people could instantly recognize the format and easily browse what games to play, similar to browsing which movie to watch on Netflix.

"you also have experience with this type of UI with Netflix and other streaming services. And then you decide to want to play games. And then you go to these and you recognize that immediately, oh this pattern of that I... the format that I'm used to in a streaming service also kind of look similar to what the gaming experience is. So it's also very easy accessible for new players." - Erik (FG A)

6.0 Discussion

In this chapter, we will discuss and analyze the empirical material which we have gathered through the focus group discussions. This chapter will follow the main aspects of our conceptual framework.

6.1 Motivations for gaming

Before we start discussing and analyzing the motivations of our respondents for cloud gaming, we also have to take a dive into their motivations for gaming in general. Throughout the focus group discussions, along with questions geared towards the respondents' opinions on cloud gaming, we also asked about their current habits and why they game in general.

6.1.2 Hedonic

To start off with the obvious, since gaming is considered to be a type of entertainment media, we observed plenty of hedonistic motivations which the respondents had to partake in the activity of gaming. Linking this back to the literature, Hoffman & Nadelson (2010) mentioned 3 main reasons an individual might consider when deciding to engage in gaming, these being: escapism/fun, achievement of task related goals, and social connectivity. During our focus groups, there was plenty of evidence to show the first two, however, social connectivity was rarely discussed, this however could be due to there being no questions about it specifically.

Regarding the first of these reasons “escapism/fun”, according to Hoffman & Nadelson (2010), gaming to many is a method of escaping from daily routines such as school or work and can have the effect of relieving stress and resulting in a feeling of well-being as well as a sense of accomplishment (Hoffman & Nadelson, 2010, p.257) In our focus groups, there is plenty of evidence to support this, Karl and Peter from focus group A for example, told us that for them, gaming is a way to relax and to forget about things. Similarly, in focus group B, Daniel described gaming as being a “chill” hobby which does not take much mental or physical effort to engage in. It is also interesting to take into account that according to the findings in Hoffman & Nadelson (2010), the extent to which individuals find gaming as being able to relieve feelings of anxiety and depression depends on the amount of time they spend playing, with it being much more apparent in people who spend more than 5 hours per week playing games, with this information taken into account, we can assume that playing games as a method of stress reducing is possibly much more important for focus group A than B. With all this said, it is clear that throughout the focus group discussions, there is a clear emphasis put on hedonistic gratifications which are associated with the aspects of enjoyment, fun as well as relaxation.

While there was less dialogue regarding the sense of accomplishment and/or achievement, it was mentioned nonetheless during our focus group discussions. This aspect however is not as simple as it may seem, as Hoffman & Nadelson (2010) emphasize the “control” aspect which exists in regard to accomplishing goals in games, and since individuals are in control of the game, the satisfaction achieved by achieving said goals is greater. The goals themselves may also differ, ranging from beating the game itself, beating online opponents as well as completing specific tasks. Back to the focus groups, starting with focus group A, Erik mentioned that one of the reasons he engages in gaming is the desire to reach an end goal, he uses the game “Elden Ring”

as an example and specifies in that game, you are presented with a goal, a boss (powerful opponent) in this case, and the game gives you the freedom to achieve that goal in any way that you can using the tools that are provided to the player, and because of the feeling of control that is achieved by this, the feeling of accomplishment is great for Erik. In addition to this, there is also the satisfaction gained from competitiveness, where the goal is to beat online opponents, and while Erik stated that this is not what he necessarily looks for, Peter however stated that competitiveness is one of the aspects he looks for when looking to game and that he prefers the feeling of winning a competitive game over spending hours on a single player game. Furthermore in focus group B, the desire for achievement was not talked about in as much detail compared to focus group A, however, Oskar mentioned that one of the things he looks for in a game are challenges to keep himself captivated.

To summarize, it is safe to say that when considering to engage in gaming in general, consumers are seeking the fulfillment of hedonic needs, be it through the ability to accomplish goals and challenges through control or more generally just as a way to have fun or relax, being able to escape from the stresses of life. Regarding the differences between the focus groups, there does not seem to be that many besides from the amount of time that each of the respondents play during a given time frame, which as discussed previously, may affect the significance that some of the aspects have on the respondents, however there was no evidence suggesting this. Linking this back to cloud gaming, this is important to gain an understanding of since to get an insight into how consumers will perceive cloud gaming, we need to understand whether or not the technology will impede on any of these aspects discussed. However, before that, some of the utilitarian aspects of gaming in general should be discussed as well.

6.1.3 Utilitarian

Regarding the utilitarian aspects, the motivations for the activity of gaming itself were not discussed as much, however, some utilitarian motivations were discussed in regards to when it comes to purchasing a game. It can also be argued that since consumers play games in order to have fun and or relax, or for any other hedonistic reason, when bored or stressed, they will perceive games as having the ability to assist them in these matters, therefore, providing them with utilitarian value. Therefore, a game's ability to fulfill the consumer's hedonistic needs can also be seen as utilitarian. For example, Peter who has stated that he looks for a competitive experience will know that counter strike, a team-based multiplayer shooter, will be able to fulfill his needs for competition, therefore he will perceive the game as being more valuable for himself.

Concerning what our respondents consider when buying a game, price was the main factor across all the focus group discussions. As mentioned previously in our introduction, the industry standard (in most cases) for a triple A game at release is 60 euros, with some going as high as 70, and since most of our respondents were students in their early 20's, this was expressed as something that they were not willing to spend regularly. Thomas from focus group B, mentioned that he will usually wait a month or so after release before buying a game, waiting for it to either decrease in price or go on sale. In addition to this, Johan expressed that replayability is one of the factors he considers when looking to buy a game as he thinks this adds more value to the game, not only since it gives him something to play, but also for economic reasons, since the game is giving you more value for your money.

To summarize the utilitarian motivations, there were not too many discussed, as mentioned previously, however, in terms of looking at what to buy or what to play, there are a number of utilitarian aspects which consumers will take into account, not to mention that, as established previously, consumers play games for a number of hedonistic reasons, and a game's ability to fulfill those desires can be seen as having utilitarian value.

6.2 Motivations for Cloud gaming

Now that the motivations for gaming in general have been mentioned, we can now look into the hedonistic and utilitarian motivations which consumers may have for cloud gaming specifically. We have already mentioned some aspects which consumers may possibly be conscious of according to past literature and while the works of Cai et al (2016) and Chen et al. (2017) lists both possible strengths and shortcomings of cloud gaming, the connection to consumer behavior and how consumers perceive these factors is rarely made.

6.2.1 Hardware

During our focus group discussions, we observed that the respondents had a lot of possible utilitarian motivations in engaging with cloud gaming. One of the main aspects of cloud gaming is that the required hardware to engage in it is much less demanding compared to more traditional methods (Cai et al, 2016, p.687), the performance requirements of cloud gaming is comparable to that of high quality youtube videos and or live streams, as well as a stable internet connection. During the focus group discussions, the hardware aspect of cloud gaming was one of the first points to be highlighted by the respondents, Peter from the hardcore focus group mentioned that although he isn't in this situation himself, he could imagine that for people stuck with a computer or device that cannot usually run games, cloud gaming can help in this regard. Therefore, if one does not possess a powerful enough device, cloud gaming may possibly be the only choice one could have in order to be able to game. Additionally, there is also the case of one not being willing to spend at least a couple thousand SEK on a device which will be able to run a video game, as highlighted by Thomas from the casual focus group, therefore, there are also clear economic motivations one might have when considering to engage in cloud gaming. All of this goes back to the increased accessibility as mentioned by Cai et al (2016), and not only would this mean a lower barrier of entry into gaming for people who are considering picking up gaming, but also allow already established gamers to game under circumstances where they usually would not be able to. This was mentioned in the hardcore discussion group by Karl, as he mentioned that when traveling, he cannot bring his regular home PC with him, and that cloud gaming could allow him to run his games on his more portable laptop, which also happens to be a macbook. This brings us to another possible issue which our hardcore respondents could see cloud gaming fixing, the issue being game compatibility. Johan had stated that his personal computer is currently a mac, which does not support as many games compared to a windows computer, since cloud gaming renders the game remotely, and most cloud gaming services are available for mac, Johan mentioned that because of this, he gets access to many more games which he wouldn't otherwise be able to play, this once again goes back to the aspect of accessibility. Another interesting point which was brought up in regards to hardware was the issue of storage space, we have touched upon this briefly, mentioning that newer games are becoming much more demanding on a user's device storage, we used the example of Red Dead

Redemption 2 being 150 GB (Walton, 2019) and for people like Johan, who can no longer afford to have a large portion of his hard drive filled with games, he could see cloud gaming as possibly alleviating this, since if the games are being run and processed remotely, the games are also being stored remotely.

6.2.2 Availability/variety of games

Another common theme we saw the focus groups discuss was the availability of games which could be made possible with cloud gaming. Interestingly, most of the discourse involving the availability of games took place in the casual focus group, which could be due to a number of reasons, hardcore gamers being more invested and willing to spend money on individual games for example, however, there were some financial concerns over buying individual games as opposed to subscribing to a cloud gaming service in the hardcore group as well, however, it was not as big of a topic when compared to the casual group.

The common train of thought which was observed in the casual group when it comes to the variety of games is that when one does not have a specific game in mind that they want to play, cloud gaming can provide the player with a large library of games which one can browse through. Daniel brought up that instead of buying individual games, one could simply subscribe to a cloud gaming service and browse their selection, with Oskar expanding on this point, saying that it's a good opportunity to explore new games which one did not initially consider buying individually. This aspect of cloud gaming could possibly be attractive to more casual or non gamers who perhaps don't have as many games or are less willing to spend a large amount of money on individual games, which could explain why this topic came up less during the hardcore discussion group. Despite this however, there were also some concerns voiced during the casual group about the selection of games as Thomas pointed out, who is familiar with playstation's service specifically, that the selection of games is too small and for him, there were no games which interested him personally. Daniel also mentioned that the games that are usually available on playstation's service are usually around a year old, which takes away some of the motivation to engage.

Regarding the hardcore group specifically, as previously mentioned, there was not as much said on this topic in comparison to the casual group, however concerns were raised regarding the ownership of games which is sacrificed because of the library subscription model (Game pass model). Johan brought up that for the services such as playstation and xbox cloud gaming, since you are only subscribing to gain access to the games and service, you do not own those games, and will not be able to keep them after the subscription runs out. He also stated that because of this, GeForce Now is more attractive to him in this regard due to it being the exception to the game pass model, and due to him being a more well rounded gamer, already has ownership of a large library of games, which GeForce Now would allow him to play. This however, as he also mentioned, is a double edged sword of sorts, because due to technicalities with licensing, the availability and variety of games on GeForce Now is based on the game publishers/developers approval to be there, possibly limiting the amount of games.

6.2.3 Economic/Subscription model

As mentioned previously, most of our respondents are students in their early 20s and when asked about what factors they take into account when buying a game, price was usually the first and most prevalent topic to come up. Regarding cloud gaming, economic motivations were also observed during the discussion groups, this was also commonly discussed in tandem with the subscription model which most cloud gaming services have adopted and interesting points were brought up during the discussion of the subscription model of cloud gaming in particular. In order to gain a better insight into our respondents possible motivations of paying a subscription to play games, we can draw from the work of Baek & Kim (2022), where they look into services which were previously bought on a one time basis, which later transitioned into a subscription based service, this is of course applicable to the case of cloud gaming as mentioned previously.

We have already mentioned the attractiveness of paying a subscription to gain access to a library of games as opposed to singular purchases, and this seems to be a somewhat recurring topic of conversation throughout all of the focus groups. According to Baek & Kim (2022), services which are perceived to have utilitarian attributes are more suitable to adopt the subscription model, with purchase intentions increasing after a subscription was introduced to utilitarian based services (Baek & Kim, 2022, p.20). Linking this to cloud gaming, it is clear that the respondents in all 3 focus groups noticed a number of possible utilitarian benefits which it might bring to them, namely the availability of games which is provided with the subscription, the undemanding hardware required amongst other things, this is of course on top of the preexisting hedonic motivations of gaming in general. To further solidify this point, it was made apparent, at least in focus group A, that due to the number utilitarian benefits which cloud gaming could bring, the respondents perceived the subscription as paying for the service factor of cloud gaming as opposed to the library of games, it was however stated that the access to many games was of course seen as a positive. This has the implication that hardcore gamers see cloud gaming as more of a complement to traditional gaming rather than a substitute. Subscription services are also easily adaptable to customer needs (Baek & Kim, 2022, p.2) and in the case of cloud gaming, this could mean new games depending on what is currently popular for example, this ease of adaptability however can also be a disadvantage from the consumer's perspective since some concerns were voiced about the uncertainty around the game's availability as this was brought up in both in focus group B as well as focus group C.

One issue which was brought up in regards to the subscription model, was concerns about the amount of time played relative to the amount of money spent on the subscription. For a subscription based service to be viable, a long term relationship has to be established between the service and the customer (Baek & Kim, 2022, p.1), which is possible through engaging in gaming. However, in both focus group B and C, who don't spend as many hours a day/week playing games compared to focus group A, it was highlighted that it might take a rather long time to finish a game, Thomas from focus group B stated that it could take him up to 4 months to finish red dead redemption 2, therefore, it could cost the same, if not more, paying for the subscription for months and not being able to keep the game after, compared to buying the game individually while also being able to own that game forever. This is of course assuming that little to no other games are played during this period. This brings into light an interesting dilemma concerning cloud gaming's subscription model, if the technology is more geared towards attracting casual/non gamers, who do not have as powerful gaming devices, but at the same time

do not spend as many hours playing games for whatever reason, the monetary sacrifice relative to the time using the service might seem unattractive as opposed to more traditional means, also when taking into account game ownership concerns. While at the same time, if the service were to market towards more hardcore gamers, who spend more time playing games, but have access to more powerful devices, the usefulness aspect of the service is minimized, therefore making the premise less attractive. Comparisons to Netflix were made, however, unlike cloud gaming, a movie or series on Netflix can be watched in a matter of hours, while with cloud gaming, as pointed out previously, games might take considerably longer to complete.

6.2.4 Perceived value

When going through the discussion groups, it was clear that most respondents have at least heard or have been exposed to the concept, whether it be through word of mouth or just seeing it offered on the playstation store, however, only 1 respondent, who was from the hardcore group, had actually actively used cloud gaming in the past. Despite this, there was still a good amount of curiosity surrounding the topic as well as possible intentions to see how it might work for them.

If a product or service is to be deemed as valuable by the consumer, then the sacrifices of money and time have to be worth the experience which is gained in return, as described by Zeithaml (1988, p.14), hence the perceptions of what is received and what is given. When conducting the focus groups, it was clear that, as mentioned previously, there is a considerable time sacrifice which, depending on the type of consumer/gamer, might or might not be significant, it was also observed that the sacrifice of time is also compared to the monetary sacrifice which the consumer's will have to make. In order to look deeper into the perceived value of cloud gaming by our respondents, we will take a multidimensional approach which Sheth et al (1991) described, consisting of 5 dimensions, these are: functional, conditional, social, emotional and epistemic value. As mentioned earlier in the theoretical chapter, we have excluded social value due to both having insufficient data on it specifically, as well as it not being as relevant in the case of cloud gaming, as it is often associated with conspicuous consumption (Sheth et al, 1991, p.161).

Firstly, there is plenty of evidence from the respondents that there seems to be a high level of functional value perceived. The main selling point of cloud gaming is that it does not require demanding hardware, this also ties in with any economic motivations which consumers may have, as it was highlighted during the discussions that with cloud gaming, thousands of SEK do not have to be spent on either acquiring or maintaining a device which would be able to run games by itself. However, while talking about alternatives it should also be taken into account that some consumers simply do not have any and the accessibility which cloud gaming provides might be their only way to play more demanding games, which was a consideration which was taken a couple times during the discussion groups. Functional value also includes any monetary value which an alternative might bring to the consumer (Sheth et al, 1991, p.161), and in the case of cloud gaming, for the services which offer a collection of games on subscription, it may seem more economically valuable to a consumer to spend a monthly subscription on 100+ games, rather than buying said games individually. The variation and quantity of games offered may also be seen as having functional value. In addition to this, there was functional value seen in the on-demand nature of cloud gaming as Johan described, games do not need to be downloaded and

can be started up within a couple clicks, the absence of download times were also mentioned in the other causal and non gamer focus groups.

Regarding the perceived emotional value in relation to cloud gaming, a lot of the potential emotional value which can be had is mainly derived from the hedonistic motivations for gaming in general. Focus groups A through C all mentioned that gaming can have the effect of alleviating negative emotions such as stress, as well as generally being relaxing and fun all while requiring little effort. However, one possible detriment to emotional value that cloud gaming can have is that due to it being a subscription service, the games you acquire will no longer be available to you if the subscription is not paid. Daniel from focus group B mentioned his desire to be able to keep his games, citing nostalgia as his main reason behind this.

In the case of epistemic value and of arousing curiosity, an interesting point was brought up in focus groups B and C which was not mentioned as much in previous literature, and that was the potential for finding new games through cloud gaming. Sara, from focus group C mentioned the potential cloud gaming could have on making it easier to find new games with Eva furthering the point by comparing it to streaming services such as netflix, where you can browse until you find something which looks appealing, a similar comparison was made by Daniel in focus group B. Oskar from focus group B also mentioned something similar, stating that it can be a good way of exploring games one would usually not consider. Interestingly, the ability to arouse curiosity was not brought up at all during the hardcore group discussion, this could be due to them already having established what they want to play and what they don't want to play. To summarize, there seems to be a large amount of potential epistemic value which cloud gaming could bring at least with casual and non gamers.

Finally, concerning conditional value, a common circumstance which was discussed during the discussions was that of an individual not having a capable enough device in order to be able to run games, a situation which cloud gaming can potentially solve. Additionally, some more specific situations were mentioned, such as traveling, where the usually bulky devices cannot be easily transported as Karl mentioned, however, through cloud gaming, it could give him the ability to game as normal on his less capable but more portable laptop. There is also the case of simply being bored as highlighted by Daniel from focus group B, who mentioned that cloud gaming can help alleviate this by granting instant access to many games without waiting for their next anticipated game to release.

In conclusion, concerning perceived value, the value perceived depends on which type of gamer you are talking about, as they will perceive different advantages and disadvantages depending on their situation. While the hardcore gamers focused more on the possible functional values and conditional values which could benefit them, the casual and non gamer focus groups saw a much higher epistemic value.

6.2.5 Perceived ease of use and perceived usefulness

Perceived ease of use is a concept that refers to personal expectations on how easy it will be to use a certain technology or system (Ghobadi, et al, 2022, p. 5). The higher level of perceived ease of use among individuals, the more likely they are to be accepting towards a technology or system (Ghobadi, et al, 2022, p. 5). Since Cloud gaming is a relatively new technology and a

new way to play games we wanted to look into how consumers perceived ease of use could influence their behavior and decision making process. When discussing perceived ease of use with our focus group participants, our findings showed how our participants found the services UI to be easy to understand and our participants that already tried cloud gaming stated that it was perceived as easy as traditional gaming.

Perceived usefulness can be defined as to what degree a person believes that using a certain technology or system can improve their performance (Davis, 1989, p. 320). A technology or service that is perceived as useful will most likely be used by that individual (Ghobadi, et.al, 2022, pp. 6). When discussing perceived usefulness with our focus group participants regarding using a cloud gaming service there were some who saw it as useful for them, but some did not think it would lead to any benefits. The participants that found cloud gaming useful stated that the service could help them save time compared to downloading a game or ordering it online. The main reason why some respondents found cloud gaming less useful was because they already have capable hardware and therefore don't see any benefits with streaming the game.

According to Davis (1989) the models ease of use and perceived usefulness as two foundation stones in user behavior (Davis, 1989, p. 321) and Sheppard & Vibert (2019) expresses how previous technology acceptance literature have proposed an direct connection between perceived usefulness and ease of use (Sheppard & Vibert, 2019, pp.8) But we could see in our study that there was no definite correlation between the two models and our respondents behavior. We found how in the context of Cloud gaming, perceived ease of use will not affect the hardcore gamers consumer behavior. On the other hand, perceived usefulness was an important factor for the hardcore gamers where several participants expressed how cloud gaming needed to be beneficial to their gaming habits in order to start using it. In a study made by Davis (1993 cited by Kranz, et al, 2011) the author expresses how people's perceived usefulness can have a direct impact on these people's attitudes which they develop regarding the product. In this case, the respondents with the most capable hardware and storage saw least benefit from using cloud gaming (Kranz, et al, 2011, p.43).

From our respondents that were willing to try a cloud gaming service, we saw a connection between ease of use and perceived usefulness in their statements were the ones that were positive towards cloud gaming as a service, also perceived as easy to use and useful according to their own gaming habits.

7.0 Conclusions

In this chapter we will present the conclusions we have arrived at after the discussion and analysis of the focus group discussions. A summarized description of the results will be presented as well as some practical, theoretical and societal implications.

To conclude, we will look back at the research question which we had intended to answer, that being: ‘How does cloud gaming affect traditional game purchase and engagement behavior?’ In order to answer this research question, three focus groups had been conducted, consisting of 11 respondents with different gaming backgrounds ranging from non-gamers to hardcore and through our thematic analysis and theoretical framework, some significant patterns can be identified.

To generalize the final impressions from all three focus groups, the intent and curiosity which we had observed during the focus group discussions surrounding cloud gaming was rather high, however, there are quite a few caveats and nuances which should be taken into account, as good initial impressions do not necessarily translate to prolonged engagement. The motivations which the respondents had towards cloud gaming varied, however, it is safe to say that a high level of utilitarian value was perceived by the consumers. To start with the hardcore group, although also mentioned in the two other groups, the absence of download times and undemanding hardware required was brought into focus, some of the hardcore respondents came up with possible circumstances where this may be useful for them, suggesting a high level of both functional and conditional value, however, due to them already having capable hardware, the usefulness in their everyday activities was minimal and prolonged engagement is doubtful outside of some previously mentioned circumstances. Ease of use was perceived to be high not only for the hardcore gamers but also the other two focus groups, with similarities to other streaming services such as netflix being made, where one can browse games as if they are browsing movies, and due to the remote nature of cloud gaming, gain on-demand access to a game. Regarding the subscription model, the hardcore gamers did not perceive it to be much of a hindrance, as it was mostly perceived as paying for the service of being able to play games on-demand and with increased accessibility, which is in line with Baek & Kim’s (2022) findings that subscription services focused on more utilitarian aspects are more viable.

As for the casual and non gamer groups, the observed impressions were similar where the perceived value and possible motivations were more varied in comparison to the hardcore group and while a high level of functional value was likewise observed, more light was brought onto the possible economic benefits which cloud gaming could bring, especially in reference to the gamepass model, but also the less demanding hardware would require much less spending compared to traditional means. Interestingly, casual and non gamers repeatedly valued cloud gaming’s ability to arouse curiosity through being able to browse games which they wouldn’t have considered before, resulting in a high degree of epistemic value which was absent during the hardcore group, there may be multiple reasons for this, one of them being that hardcore gamers already have established preferences when it comes to choosing what to play. In terms of concerns of the technology, there was some indication of uncertainty regarding the availability of games, games being possibly taken off the service as well as with ownership concerns. One noteworthy concern was regarding the subscription service and was highlighted during the casual

group discussion and it was in regards to money spent relative to time played. This could be problematic for both casual gamers and non gamers who do not spend as much time playing games, and could take much longer to complete games, making multiple monthly payments a requirement if they were to play through cloud gaming, in which case, assuming they have the hardware, buying said game individually, while also being able to own it forever could be seen as more attractive.

Overall, this creates an awkward situation which could possibly result in a marketing challenge for cloud gaming services. Whereas if the technology were to be marketed towards casual gamers and/or non gamers, who do not have the hardware and are not willing to spend as much money on games but at the same time not as much time willing to spend playing games, it could make a continuous subscription seem less attractive in their eyes. However, at the same time, if cloud gaming were to be marketed towards hardcore gamers, who do have the time but also the hardware as well as more willingness to spend on their hobby, the utilitarian aspect of cloud gaming could be minimized and overall seem not as useful or worth it. The situation created here is one where cloud gaming is most attractive to either hardcore gamers who do not currently have sufficient enough hardware or casual and non gamers who are willing to spend more time gaming, both of which are possibly niches in the market. This is of course ignoring the possibility that cloud gaming might introduce gaming to more casual and non gamers through its numerous perceived utilitarian benefits and shifting them towards being more well rounded.

Finally, despite this it was noted that motivations and intentions to engage were generally positive throughout all focus groups and when answering the final question on whether or not they would consider picking up cloud gaming, there was at very least newfound curiosity to try it out with a lot if not most of the respondents saying that they would consider using it. So in conclusion, what this means for our research question: “How does cloud gaming affect traditional game purchase and engagement behavior?” It depends on numerous factors as well as on the person, and while there was a high degree of optimism surrounding the increased accessibility and possible economic benefits of cloud gaming, there are also some issues which might suggest that the shift from traditional gaming to cloud gaming might not come as soon. As mentioned in the hardcore focus group, it is great for people who have no other choice due to hardware limitations or perhaps even economic concerns, however, the size of this specific group of people is not exactly known and in the foreseeable future, cloud gaming can be seen as a complement to traditional gaming, which can prove useful under numerous specific circumstances, as opposed to a full substitute. With this said, it is however difficult to deny that cloud gaming lowers the barrier to entry for more casual and non gamers to pick up the hobby and has the potential to make gaming more popular, as we observed that the individuals who spent the least time and money with games, showed the greatest motivation in engaging in cloud gaming.

7.1 Practical implications

Being able to manage your consumer is an important art for businesses around the world in order to be successful. In this section we will provide suggestions on how marketing practitioners could better target their customers and enhance the customer experience in the context of Cloud gaming.

An increased understanding of your consumers will open up possibilities to create a Cloud gaming service that is compatible with the consumers gaming preferences and in line with what they are willing to pay. From our focus group research, we found how the casual gamers and the non-gamers found the pricing model attractive. A common argument was the ability to cancel the service at any time which means that you can subscribe to the service only during the periods you feel motivated towards gaming. In that case, a possible suggestion is to focus on enhancing the customer experience in order to keep customers on the service and make sure they want to come back during the periods when they are motivated to play. We also found how all of the respondents that showed the most motivations to engage in Cloud gaming, used consoles like Playstation or XBOX as their primary device when gaming. These consoles already charge a fixed cost every month to access online gaming. And if you pay an additional monthly cost, you will get the premium membership and through that access the Cloud gaming library. Therefore we would suggest other Cloud gaming services to take route on these consoles and offer Cloud gaming grouped with a premium membership as opposed to stand alone service to increase the perceived value among the consumers.

When it comes to awareness, we found how the hardcore gamers were those that had the most awareness towards Cloud gaming, but at the same time, the group that had least motivation to engage in it. Therefore, one suggestion to marketing practitioners is to increase visibility in order to increase awareness to a wider audience. This can be done by developing effective advertising campaigns in channels where casual gamers and non-gamers are located.

Streaming services have during the last twenty years taken over the market in many categories. A few examples are Netflix when it comes to streaming movies/tv-series, Spotify when it comes to music and so on. The advent of 5G networks and eventually the 6G network are factors that are possibly going to make streaming grow even bigger. Therefore, we recommend that Cloud gaming companies will have to keep up with the development of the service because there are many indications that Cloud gaming will be an important part of gaming in the future

7.2 Theoretical implications

With this research that has been implemented we have created a basis for more studies regarding consumer behavior within the subject of cloud gaming. When in the process of reviewing previous literature, we found how most studies leaned more towards cloud gaming as a business model with a lack of focus on consumers. We also found how most studies were based upon quantitative data such as questionnaires. As mentioned in our research design (see chapter 4.1) we believed that in order to fully investigate consumers' motivations and beliefs in the topic of cloud gaming, a qualitative study would be the most suitable. Instead of formulating hypotheses to investigate our purpose we chose to have a more exploratory research design in order to get a holistic view on the topic of consumer behavior towards Cloud gaming and to our knowledge, this is the only study that applies focus groups in order to investigate consumers in the topic of Cloud gaming.

We also believe that this study has contributed to MSI (Marketing Science Institute 2022) and their stated research priorities. Research priorities such as subscription marketing and consumer

experience were two subjects that our respondents frequently discussed which gave us plenty of valuable insights. We feel satisfied to have been involved and contributed to marketing practice.

The phenomena of Cloud gaming is a relatively new technology which also was shown among several of our focus group participants who had not heard about the technology. Therefore, we hope that our research can be a contributing factor to more research within the topic.

7.3 Societal Implications

As we delved deeper in our research, it became apparent that an increased use of Cloud gaming would not just lead to a new way of consuming games through a cloud instead of running games on your hardware, it would also lead to a more flexible way to access gaming and a new way of purchasing games.

As discussed earlier, our findings show how our respondents who were less engaged in traditional gaming, expressed a more positive attitude towards cloud gaming compared to our respondents that were more engaged in traditional gaming. With that said, there is a possibility that cloud gaming can be a factor that makes gaming reach a wider audience. If Cloud gaming would reach out to a larger part of the population, it would to some extent change the way we consume and purchase games.

When it comes to consumption, Cloud gaming would allow the consumers to be more flexible with their gaming habits. As mentioned by several participants in our focus group, it would open up possibilities to play on devices that which in traditional cases would not be able to. That would lead to people being able to play their favorite games for example when traveling or at their lunch break at the office. This more flexible way of gaming can be seen from several different points of view that our respondents also raised. One point of view regarding increased flexibility was that it would have been convenient not to have to take your hardware with you when you travel and that it is positive to have the choice of being able to play in more different situations. Another point of view that emerged was the risk of people getting more addicted to playing games when it is more accessible. A growing addiction to playing games could turn into a societal problem if we come to a situation where people choose to play video games instead of focusing on other important moments in everyday life. It would be problematic for society if for example people start playing at work, or in the classroom, which cloud gaming provides the opportunity for.

When it comes to purchasing games, Cloud gaming offers the possibility to pay a fixed monthly cost in order to play all available games on the service. An increased use of Cloud gaming would therefore have an impact on people's spending patterns when it comes to purchasing games. Several participants in our research expressed how this payment method would be beneficial for them in comparison to the amount of time they put on gaming. This way of purchasing games may have a further impact on physical game stores that in recent years already have been forced to close multiple stores in several countries which leave people unemployed. This is due to increased orders in the online environment.

To conclude this field of discussion, the societal implications that an increased use of cloud gaming could have are rather speculative. But we believe that these implications may help companies learn about the phenomenon and its impact on our society.

8.0 Limitations and further research

In this upcoming chapter we will present these limitations that have occurred during our work. We will also introduce potential areas which need further research within this research topic.

8.1 Limitations

In all forms of research papers, there are a certain amount of weaknesses which often are out of the researchers control, often related to the chosen research design or other factors (Theofanidis & Fountouki, 2018, p. 156). When constructing our research design and specifically our sample size, we wanted to use four focus groups with respondents from the four identified types of gamers (hardcore gamers, well-rounded gamers, casual gamers, non-gamers). But then we had a hard time distinguishing between who were considered hard core gamers and who were considered as well-rounded as well as we missed additional research around the group of gamers in order to be able to categorize them in a truthful way. Therefore we chose to include both hardcore and well-rounded gamers in the same focus group (FG A). Furthermore, we wanted to perform a semi-structured interview with a game developer from a company that has one or multiple games available on a cloud gaming service. Unfortunately, all the Swedish game developers we reached out to chose either not to respond to our messages or to decline to participate. Thus, we believe that the insights generated by our study would have benefited from the incorporating industry perspective - a limitation that will certainly be remedied in the future work.

Another limitation that has to be kept in mind is the possibility that conducting more or larger focus groups might have given us additional empirical evidence that would have been valuable for our study. But taking the time restriction into account, we realize that conducting more or larger focus groups would be difficult in terms of time because it is logistically demanding to find a time that suits all respondents at the same time. Another challenge for us was the purpose of sampling when putting together the focus groups. Since we have limited social networks, it was difficult to find respondents who are not familiar with each other. In chapter 4.2.1 we argued having participants in the focus groups that are familiar with each other will have a negative impact on the discussion, but that was something we could not notice in our case, rather the opposite. We found that in these particular cases, the participants were willing to be more open when being familiar with one and other. But something we cannot be certain about is if some respondents held back their own thoughts and just agreed with the majority's opinions.

8.2 Further research

When writing this thesis, we discovered a few topics that we believe need further investigation. So in this section we will suggest some research areas within the topic of Cloud gaming that we found interesting, but did not have the time to investigate ourselves.

Based on the results we got from our online focus groups, we suggest that an interesting topic for further research would be to investigate consumer perception on game ownership issues in regards to subscription based services, thus extending the research stream on subscription services (ref to subscription articles) to the context of cloud gaming. This area was commonly

mentioned in the focus groups and is about owning a game in comparison to subscribing for the rights to play it. Many respondents raised the uncertainty of not owning the games they play and the risk of the game being removed from the service. We believe that a study that examines consumers' perception towards not owning the games they play would be of potential interest in the topic of Cloud gaming.

The respondents in our study didn't have much experience using a cloud gaming service. Therefore it would have been interesting to investigate consumers who are actually engaged in cloud gaming. It can be conducted as either qualitative or quantitative and with the purpose of investigating perceived value and motivations to engage in cloud gaming. In our study, we did not expect that any of our respondents had any prior experience of using a Cloud gaming service, so we believe that a study on consumers that are using the service would be valuable.

Another study of potential interest in the topic of cloud gaming that we recommend as further research is a quantitative study that is based on time played versus money spent on games in order to gain better understanding of potential attractiveness of cloud gaming to more casual gamers.

In conclusion, we would like to point out that Cloud gaming is a topic that can be examined from different research directions. Therefore, we would like to urge researchers from other faculties to investigate the phenomena for other research purposes.

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Appendix 1: Focus Group Presentation/Discussion Script

Introduction

1. Hi everyone, welcome to our focus group presentation and discussion. My name is _____ with me is _____. First off, we appreciate you taking your time in order to participate in our focus group discussion and hope it will be interesting and fun as we make our way through our presentation
2. As you may already know, we are conducting this focus group for our degree project related to cloud gaming and consumer behavior. The purpose for the focus groups and our study is to investigate how consumer's form their attitudes towards cloud gaming technology as well as how they form possible intentions to make use of a cloud gaming service. So hopefully, you guys can share some of your insights and/or first impressions of the technology.
Don't worry if you do not have any prior experience with cloud gaming (or gaming at all for the matter) as we do not expect any of you to provide a full expert analysis of cloud gaming, your first impressions would be good enough in most cases.
3. The format of today's presentation will start off with some general questions about your gaming habits, then we will give a more detailed introduction into what cloud gaming actually is and after that, we will ask that you discuss some of your ideas that you might have gotten from your impressions of the technology specifically.
4. Before we get started we will go through some things you should know. Firstly, the discussions we will have are open ended so feel free to speak your mind, all opinions are welcome and will certainly help us with our research. To add onto that, there are no right or wrong answers and if you feel that anything is unclear to you, don't hesitate to ask questions.
 - Also keep in mind that everything we say will be recorded for the purposes of transcription but names will be anonymized

If there are no further questions, we can continue to our first couple of questions.

Questions about general habits

5. First, lets get some introductions out of the way, introduce yourselves, name, age, where you're from and what you do for a living (introduce ourselves as well)
 - With introductions out of the way, we can discuss your current gaming habits, firstly, how often do you play games? What kind do you usually play and on what platform?
 - (Possible Follow up: If you don't play, do you have any experiences with games whatsoever? Is it something you might consider picking up? Why? Why not?)

6. Let's continue to the next question, what factors do you consider when deciding which games to purchase and play?
 - (If discussion stagnates: It could be anything from the genre, price, system requirements etc.)
 - Possible follow up (For non-gamers): If you don't play, what makes the premise seem possibly attractive to you?
7. Next question might seem similar to the previous but what characteristics are important for you when playing games?
 - As in, how fun a game is for you, maybe you are looking for competitiveness, or how a particular game can relieve stress
 - Possible follow up: Why do you think gaming has become popular these past years?

Intro to cloud gaming

8. With those first questions done, we will now introduce you to the concept of cloud gaming, but first, how many of you have heard of this term? (Or other terms, game streaming, gaming on demand, gaming as a service)
 - To get some initial definitions out of the way, lets have a little look at this video: (show 1:09 - 2:18 <https://www.youtube.com/watch?v=J1z4XqEkSEU>)
 - So to summarize, in the simplest of terms, instead of running a game on your own device, cloud gaming services will run the game in a data center and stream the video back to your own device, while still being able to control your game. Think of it this way, when you are watching a video or live stream of someone else playing a video game, your computer isn't actually impacted by displaying the game that are playing since it's just a video, now ignore the person you're watching and imagine you are instead controlling the character on screen, that is what cloud gaming basically is.
 - As a proof of concept, we can demonstrate to you how one of these services, called geforce now, works (Screenshare geforce now, launch a game, walk around, close it, maybe exemplify the point, launch cyberpunk on macbook air)
9. We have already demonstrated GeForce Now, however, there are a number of platforms offering similar services which you might have heard of, these other platforms are Playstation cloud gaming (part of Playstation Premium Plus subscription), Xbox cloud gaming (also part of their premium membership subscription), and Amazon Luna, which is still in its infancy as a service. Additionally, you may also have heard of Google stadia, which has since completely closed down a couple months ago (mostly attributed to its business model)
 - To run through the business models of each briefly: Nvidia Geforce now is available for free (however, it is preferable to pay the monthly or yearly subscription) an you can play

games you already own or decide to buy on steam, Origin, Ubisoft connect, Epic games store and is available on PC, mac, android, iOS and select smart TVs

- Playstation's offering is part of it's highest tier of subscription and will grant you access to a library of games after you have subscribed and is available on Playstation, PC and Mac
- Xbox's offering is also similar to playstation's, that it grants you access to a library of games and is also available on similar platforms
- And amazon Luna is also the same and is available on PC, mac, iOS, android and select smart TVs

Questions about cloud gaming

10. Now that you have a brief understanding of the concept of cloud gaming, lets discuss why you think people might consider cloud gaming over traditional means and if you have your own experiences, please by all means, share your reasons.
11. Now that we've discussed why people might choose to play through a cloud gaming service, let's discuss what you think might turn people away from it. How major do you think these reasons are? And again, if you have your own experiences, feel free to share.
12. Let's discuss the subscription aspect that all the services we've mentioned, how would you feel about paying a subscription fee for the ability to play games?
 - Follow up: How much would you be willing to pay?
 - Follow up: Do you think cloud gaming can add the same value to gaming as services like Netflix/Prime video etc. adds to movies/series?
13. How do you usually approach new technologies such as cloud gaming?
 - If stagnates: Are you optimistic or skeptical about the technology? Why?
14. Does it look easy to use in comparison to normally playing a game?
 - Follow up: If you were to use a cloud gaming service, how much effort do you think it'll take from your side? (Anything from the signing up process to actually playing)
15. If you haven't experienced cloud gaming before, would you consider it now? Why?
 - And for the people who have: Are you still using it? If not, what circumstances would make you go back?

End

16. Thank you for participation in this discussion, your insights will certainly come to be very valuable to us and our research
 - Before we end, are there any questions or closing remarks you would like to express?
 - If not, thank you again for your participation, if you are curious about our final research, please feel free to contact us.

Appendix 2: Focus Group Discussion Guide and Theoretical Areas

Question	Link to theory
Part 1	
<p>How often do you play games? What kind do you usually play?</p> <p>Possible Follow up: If you don't play, do you have any experiences with games whatsoever? Is it something you might consider picking up? <i>Why? Why not?</i></p>	Traditional motivations
<p>What factors do you consider when deciding which games to purchase and play?</p> <p>Possible follow up: If you don't play, what makes the premise seem possibly attractive to you?</p>	Traditional motivations
<p>What characteristics are important for you when playing games?</p> <p>Possible follow up: Why do you think gaming has become popular these past years?</p>	Traditional motivations
Part 2	
<p>Why do you think people might consider cloud gaming over traditional means?</p> <p>Follow up: If you have your own experiences share your reasons</p>	Cloud gaming motivations/perceived value
<p>What do you think might turn people away from cloud gaming currently? <i>And how major do you think these reasons are</i></p> <p>Possible follow up: If you have any own experiences share some of the issues you had and how major were they to you?</p>	Cloud gaming motivations/Perceived value

<p>How do you feel about paying a subscription fee for the ability to play? <i>How much would you be willing to pay?</i></p> <p>Possible follow up: Do you think cloud gaming can add the same value to gaming as services like Netflix/Prime video etc. adds to movies/series</p>	<p>Subscription model/perceived value</p>
<p>How do you usually approach new technologies such as cloud gaming?</p>	<p>Technology acceptance</p>
<p>Does it look easy to use in comparison to traditional means?</p> <p>Possible follow up: If you were to use a cloud gaming service, how much effort do you think it'll take from your side?</p>	<p>Technology acceptance</p>
<p>If you haven't experienced cloud gaming before, would you consider it now? Why?</p> <p>For people who have: Are you still using it? If not, what circumstances would make you go back?</p>	<p>Adoption/perceived value</p>

Appendix 3: Focus Group Powerpoint Presentation Slides

Cloud Gaming

Alexander Kokkonen & Josef Holmlund
Focus Group

Format

- Slides will follow a discussion guide showing questions we would like you to discuss
- Starting with some general questions about gaming
- Intro to cloud gaming
- Questions about cloud gaming specifically

Our Study

The Future of Gaming?: How does technology such as cloud gaming affect the traditional consumer decision making process?

The purpose of our study is to investigate the possible effects cloud gaming can have on consumer behaviour, the perceived value it has from consumers as well as to gain an insight on how consumers perceive a new subscription-based business model for gaming

Some things to know before

- Feel free to speak your mind, all opinions welcome
- No right or wrong answers
- Open ended discussion with guidelines
- Ask away if anything is unclear



Introductions

Who are you?

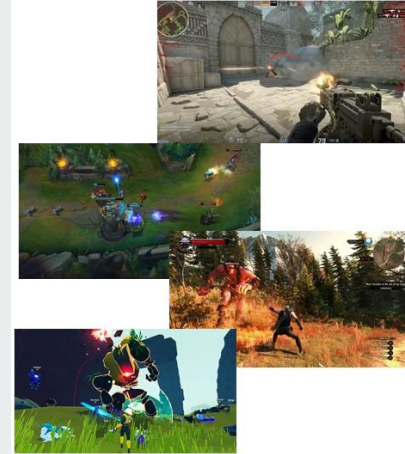
What factors do you consider when deciding which games to purchase and play?



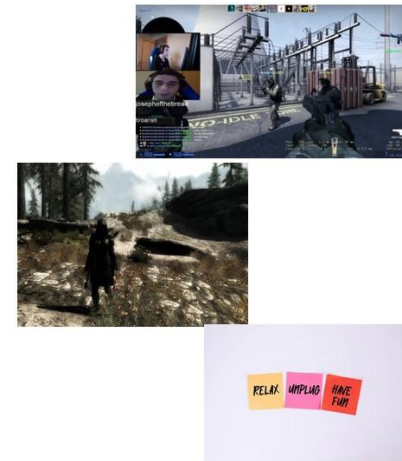
Storage: 125 GB available space



How often do you play games? What kind do you usually play?



What characteristics are important for you when playing games?



Intro to cloud gaming

Have you heard of it?

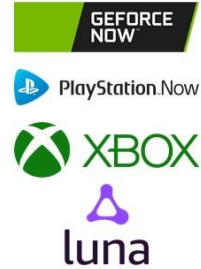


Some demonstrations



Some of the biggest platforms

- Nvidia GeForce Now
- Playstation cloud gaming (Playstation Premium Plus)
- Xbox cloud gaming
- Amazon Luna



Why do you think people might consider cloud gaming over traditional means?

If you have your own experiences, share your reasons



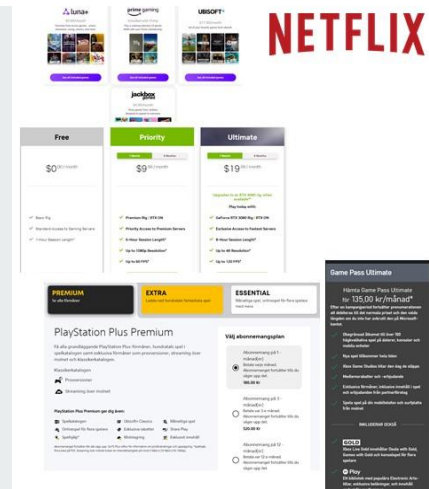
What do you think might turn people away from cloud gaming?

And how major do you think these reasons are?

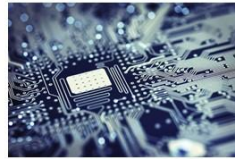


How do you feel about paying a subscription fee for the ability to play?

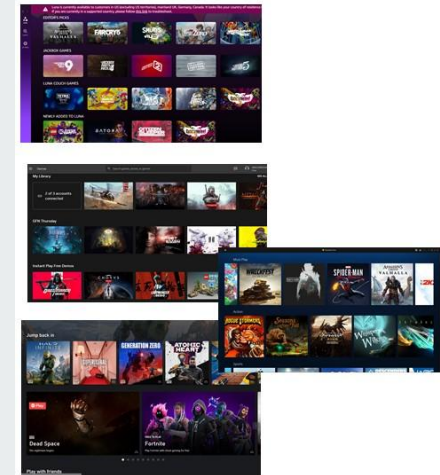
How much would you be willing to pay?



How do you usually approach new technologies such as cloud gaming?



Does it look easy to use in comparison to traditional means?





**If you haven't
experienced cloud
gaming before, would
you consider it now?**

Why?



Thank you!

Questions?

Appendix 4: Industry Insight Interview Guide

Interview Questions (Industry Insight, participant still unknown as of writing, questions not in any particular order)

General Questions

- Introduce yourself, where you work
- How are you involved with cloud gaming?

Purpose 1: Examine possible effects cloud gaming can have on consumer behavior and what consequences that may have for the industry

- In your opinion, who do you think cloud gaming is most popular for? Can you envision a shift in gamer demographics?
- How do you see the advent of cloud gaming affecting your work/company?
- If possible, do you know if there is a difference in game sales after becoming available on a cloud gaming service in comparison to before?
- If cloud gaming usage were to increase, what possible opportunities/risks will it have for the industry?
- Do you believe cloud gaming will lead to a shift in consumer preferences towards subscription-based gaming models? If so, how does this affect you and the industry?
- How do you think cloud gaming can change the way consumers approach gaming experiences?
- Are there any concerns you have with the advent of cloud gaming? Either for your company or the industry in general
- How do you see cloud gaming affecting the relationship between game developers and publishers, and between publishers and consumers?
- How do you see the future of cloud gaming evolving and what implications might that have for you?

Purpose 2: Investigate which factors can influence the customer's decision-making process in path to purchase

- To your knowledge, why do you think people choose to play through the cloud?
- What do you think are the biggest turn offs for people considering to game on the cloud?
- Do you see cloud gaming as a complement or substitute in relation to more traditional methods? Could it be possible that cloud gaming becomes a new norm? - Elaborate on your answer
- Do you think cloud gaming will impact consumer decision making in terms of choosing gaming devices/platforms? If so, why?



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Business Administration SE-901 87 Umeå www.usbe.umu.se