

Understanding consumer behavior of purchase intention on OTT streaming services against digital piracy

Bachelor Thesis for Obtaining the Degree

Bachelor of Business Administration in Tourism and
Hospitality Management

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Affidavit

I hereby affirm that this Bachelor's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

The thesis was not submitted in the same or in a substantially similar version, not even partially, to another examination board and was not published elsewhere.

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Abstract

This paper focuses on consumer behavior and its effect on over-the-top (OTT) streaming services and digital piracy. The main research problem is surrounded by the idea of how OTT streaming services can compete against the generation of digital piracy and retain their customers through purchase intention. This paper extends this idea through an extensive literature review where it mentions some consumer behaviors used to measure this research problem which are the theory of consumption values, ethics theory, and the three-component model of commitment. Additionally, there is a quantitative approach for testing the hypothesis through a questionnaire. The results show that there is a significance on purchase intention between OTT streaming services and digital piracy, perceived functional value and ethical behavior. Some recommendations are that OTT streaming services should focus on retaining their customers by attracting more emotional values, improving their functionality and increasing commitment toward the relationship between consumers and the platform. However, there is still further research that needs to be done on how certain OTT streaming services can compete against digital piracy.

Key words: OTT streaming services, digital piracy, purchase intention, behavior intentional scale

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List of Abbreviations

OTT	Over-the-top
TCV	Theory of consumption values
BIS	Behavioral Intention Scale
PFV	Perceived Functional Value
PEV	Personal Emotional Value
MO	Moral Obligation
AC	Affective Commitment
NC	Normative Commitment

1 Introduction

Movies have been around since 1888 and have since evolved following the modern world. In today's modern era of movies, especially during the COVID-19 pandemic, there has been an increasing demand for consumers to stream content from the comfort of their homes due to local cinemas shutting down. This is when over-the-top (OTT) streaming services became hugely popular, with some services pushing their plan to launch because of the pandemic. OTT services, within the context of the film industry, are defined as "video distribution using the Internet Protocol over a public network" (Gonçalves et al., 2014, as cited in Shin et al., 2016). Several OTT services include Netflix, Disney+, Hulu, Amazon Prime Video, HBO Max, etc. (Palomba, 2021).

OTT services have proven that they are doing extremely well throughout the last few years. Chakraborty et al. (2022) state that "The global OTT market is projected to gain further traction, and revenue is likely to reach US\$271, 837m by 2025". According to Hern (2021), he claims that OTT services initially began to prevent consumers from pirating copyrighted music, which can also be applied to the film industry including original movies and television (TV) series. If digital piracy can happen in the music industry, the same will go for movies and TV series. Therefore, despite OTT services doing well in the market, digital piracy will continue to become a threat to the entire entertainment industry.

As mentioned above, digital piracy continues to be a threat, with MUSO, a technology and data company providing anti-piracy market analytics, providing statistics regarding digital piracy in 2022 (Chatterley, 2022). They claimed that out of the 52.5 billion visits to piracy websites in Q1 2022, there was a 42.5% increase in the film media sector (Chatterley, 2022). This shows that digital piracy continues to take over the world due to more content being released for streaming services. Indonesia, in particular, is a country that continues to have digital piracy as a high threat. Based on the most recent statistics from MUSO, Indonesia ranks number 11, for global piracy demand (Van der Sar, 2022).

As Indonesia continues to work towards decreasing its rank, it is important to note that there is a research gap required in explaining how piracy affects OTT streaming services. This can be shown through a consumer's behavior on their preferred method of streaming the content they watch. According to Chakraborty et al. (2022), consumer behavior "is primarily concerned with the values that determine one consumer's intention to consume products and services". As consumers have the freedom to choose what they want to consume, the question is why do they choose to pirate over stream from OTT streaming services? This creates competition between them both, especially within the Indonesian market. Therefore, this paper aims to understand consumer decision-making through customer purchase intention and why it is becoming an issue. This paper will then focus on existing OTT service customers and asks how OTT services can retain existing customers when the customer chooses piracy. It will also help to understand the consumer behavior behind their purchase.

In order to understand how consumer behavior functions in terms of purchase intention, specific terms must be considered. For instance, a consumer's perceived consumption value explains a customer's behavior and reveals their motivation for using a product or service shown through the theory of consumption values (Chakraborty et al., 2022). However, when consumers participate in piracy, several ethics are involved. It shows that people only care about their own pleasure and enjoyment at the expense of someone else's hard work. These ethical behaviors are involved when it comes to choosing to pirate over purchasing an OTT streaming service. This in turn shows their commitment towards whether they are willing to spend and become a loyal customer towards an OTT streaming service or simply go through the trouble of pirating (i.e. download torrents or stream illegally). Therefore, a certain customer purchase intention and commitment are built to ensure that customers remain loyal to the OTT streaming service.

In order to address the gap in the research problem, this paper addresses several research questions:

1. What is the relationship between customers' purchase intention on OTT streaming services and digital piracy?
2. How do perceived consumption values affect a customer's purchase intention on an OTT streaming service?
3. What kind of ethical behavior is involved in consumers pirating movies?
4. How does commitment influence customers to purchase their preferred OTT streaming service?

The paper will continue with a detailed literature review along with a research model explaining the independent and dependent variables based on the research questions mentioned above. Next, the methodology will explain how to collect the data itself. Finally, the data will be analyzed and explained showing what can be done for finding solutions to the problem.

2 Literature Review

2.1 Over-the-top (OTT) streaming services

Defining an over-the-top (OTT) streaming service is not simple. As the OTT market is still fairly new, multiple definitions surface as it depends on the platform or region mentioned (Mulla, 2022). In Indonesia's case, an OTT streaming service is described as an "application services and/or content through the internet" (Sihombing et al., 2021). One example of this application service is Vidio, Indonesia's biggest streaming platform (Wadodkar & Kumar, 2022). Vidio has over 60 million viewers per month and was considered the number one OTT streaming platform "across all of Southeast Asia ... both in new subscriber growth and popularity of original content" (Timmerman, 2022). This shows that Vidio has been doing well in terms of revenue and subscriber growth. However, other OTT streaming services, such as Netflix, Disney+ Hotstar and Amazon Prime (Timmerman, 2022), suffer from maintaining their revenue and subscription count.

Several OTT streaming services, especially Vidio, require users to subscribe to their content in order to access all premium content such as original series or movies and live sports programs. Due to having a paid subscription, this creates a problem on whether consumers want to pay a monthly subscription to their preferred OTT streaming service or pirate it for free instead. Having easy access to free, downloadable or streamable content are factors for consumers that do not want to subscribe to OTT streaming services (Nagaraj et al., 2021). Lack of access to a particular streaming service or financial reasons/high costs serves as other barriers to subscribing. The reason why prices for paid subscriptions are high is that they are dependent on demand rather than supply (Kim et al., 2017). This is due to the fact that a consumer's purchase intention depends on whether the OTT streaming service gives them a reason to remain on their platform with the content they offer. And if OTT streaming services cannot provide what consumers want, such as "offering the content that users demand, access to multiple quality of content, and the option to skip ads", then they will witness subscription cancellation (Mulla,

2022). This shows that consumers want to get the most out of what they are paying to stream the highest available content on the OTT streaming service.

Despite OTT being new to the Indonesian market, these services have a remarkable user base and are projected to grow. According to Kantar (2022), there are around 83 million OTT users within the Indonesian market, with more than 40% of OTT consumption and a total of 3.5 billion hours of content streamed each month. As for the OTT market, Shreyas & Vineet (2022) predict that it will grow from “\$1,108.91 million in 2021 to \$16,386.82 million by 2031” (Shreyas & Vineet, 2022). As of 2021, even if there are over 175.4 million Indonesian people on the internet (Sihombing et al., 2021), this shows that Indonesians are continuing to stream even more content, especially with the spike in numbers due to the COVID-19 pandemic. The future for OTT in Indonesia will continue to grow, with Vidio already thinking forward in terms of how to increase their subscription numbers. In October 2019, they partnered with Fortumo, a mobile technology company, and were able to get over 140 million subscribers to subscribe to their premiere platform, Vidio Premier “and charge payments for the service to their mobile operator invoice” (Shreyas & Vineet, 2022).

When OTT such as Netflix paved the way for online streaming services, other competitors like Vidio, Hooq, Viu, etc. started to emerge that targeted the 250 million population of Indonesia that catered to a more local market share. The surfacing of these OTT players as a whole was meant to reduce piracy using the same platform, the internet, as digital piracy has been doing for years during the 90s and early 2000s. For these reasons, this paper will focus on exploring how OTT streaming services can also be employed to combat digital piracy.

2.2 Digital piracy

The internet has played a great part in everyone’s day-to-day activities. From its original inception in helping the US military find a way to communicate more efficiently to streaming content online. From that time in history, the “information age” would ultimately be born and many innovations would come from it. It also comes with another side to it, and one of them is digital piracy. From the two words,

“digital” and “piracy”, the piracy that is taking place here is in the domain of the internet. Since the internet is a free source for people to attain and use, the idea that obtaining creative content (music, movies, etc.) for free, becomes an appealing concept that people were willing to embrace.

Digital piracy is not to be underestimated, since not only does it provide a legitimate threat to a country’s media industry’s revenue, but it can also become a booming industry of its own, built off of illegal profiteering of legitimate creative works. “Piracy was a thriving and profitable market” in which factories copied and printed copyrighted DVDs and VHS for a cheap price (Jacobs et al., 2012). This shows that digital piracy can become a threat to the OTT streaming service market as an OTT streaming service’s main goal is to gain profits from a customer’s subscription. “Digital piracy has been regarded as the most critical issue to address in the media industry” (Kim et al., 2022). This states that digital piracy can become dangerous if not properly addressed within the market, especially in Indonesia. If left alone, it can legitimately take root and turn into a questionable business model that hurts another, more legitimate media industry.

The effect of digital piracy on developing countries such as Indonesia may be even worse, as the phenomenon can not only be less loosely regulated and prevented but also more pervasive and even socially accepted among more developing societies. According to Koay et al. (2020), they claim that digital piracy lacks “clear legal frameworks in developing countries”. This can be shown especially in Indonesia as over 50% of consumers watch pirated content (Avia, 2022). What this means is that weak legal enforcement results in greater access to pirated content. An average Indonesian believes “that it is legal to buy, but illegal to sell pirated products” (Arli et al., 2014). Not only is it more monetarily devastating to developing countries due to less comprehensive regulations and laws, but it has also become a widespread social norm that sees the broader citizenry accept digital piracy, exacerbating efforts to curb it.

Digital piracy, therefore, becomes affordable for certain types of people. According to Welter (2012), the conclusion to his study on piracy in downloading movies

showed that “piracy might simply be a matter of convenience for those who are time-rich but cash-poor”. This is directly related to Nhan et al. (2019)’s survey results, which show that the respondents “stopped pirating movies due to the availability of inexpensive streaming services”. Both quotes show that a person would only pirate if the OTT streaming service becomes expensive, however, even if both focus on costs, this paper intends to focus on consumer behavior and how cost adds to that factor of why consumers would not purchase an OTT streaming service. On the contrary, as Indonesians continue to pirate, they do not claim it to be unethical or a form of immoral behavior, but rather a norm (Koay et al., 2020). “Piracy, as an illegal act, causes a moral dilemma in a person who decides to buy pirated products or engage in digital piracy because piracy is an unethical act that can affect the decision-making process” (Hati et al., 2019). Due to a lack of punishment for committing digital piracy and an unregulated law on committing digital piracy, more and more people choose to pirate, which is why piracy has become a big deal for Indonesians and becoming a norm (Koay et al., 2020).

H1: Purchase intention influences consumers to digitally pirate.

2.3 Perceived consumption values

When discussing consumer behavior, one factor that is involved is a consumer’s value. “Consumer behavior is primarily concerned with the values that determine one consumer’s intention to consume products and services” (Chakraborty et al., 2022). This can also be explained through a consumer’s perceived value, which “is the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given” (Zeithaml, 1988). A consumer’s perceived value tells them what they expect from the product or service and shows how they can continue purchasing from said product or service. It “depends on the customer’s experience and knowledge and is a critical factor which helps to draw new customers and keep present customers” (Jansri, 2018). Therefore, this can be applied within the context of the paper towards OTT streaming services and piracy websites, in seeing whether consumers continue to purchase from their preferred service or not.

Consumption values have been used in many research papers to describe a consumer's behavior, as done in Jansri (2018)'s study. Additionally, the theory of consumption values (TCV) explains a combination of factors that determine consumer behavior. Based on Sheth et al. (1991)'s *Why We Buy What We Buy: A Theory of Consumption Values*, they mention that there are five consumption values: functional value, social value, emotional value, epistemic value, and conditional value. They also state that "a decision may be influenced by any or all of the five consumption values" (Sheth et al., 1991). By using this theory, it helps explain why consumers choose to use or not use a certain product or service (Sheth et al., 1991) and can help understand the perceived value of why consumers purchase an OTT streaming service instead of pirating online content and vice versa.

Based on a study done by Jansri (2018), they used TCV as the main underlying theory for their conceptual model of perceived value. They also mention that "values are useful predictors of behaviour, because consumers decide to purchase a product after considering multiple consumption values" (Jansri, 2018), showing that TCV and perceived value can be related to each other. Therefore, this research will focus on perceived consumption values.

Perceived consumption values simply show what price the public is willing to pay. According to Chakraborty et al. (2022), the results of their study show that customer purchase intention had a significant relationship with functional, epistemic, emotional, and conditional values, while social value showed no significant relationship with OTT streaming services. This means that all values must be reevaluated and selected to see which of them had a higher significance and is more relevant to the research problem. Therefore, the two chosen consumption values are functional and emotional values as they show a stable significance from Chakraborty et al. (2022)'s study and relate the most to consumer behavior.

By definition, functional value is "the perceived utility and quality that a consumer obtains from any marketable offering" while emotional value is "the favorable emotional experience when using a product or service" (Chakraborty et al., 2022).

What this means is that a consumer's perceived value depends on whether they value a product or service to be functional or emotional.

One factor that explains a consumer's purchase intention is how they value their purchase. Based on the value theory, "values held or perceived by an individual play an important role in determining their attitude and actions in particular situations" (Kwak et al., 2021). This shows that a consumer's perceived value affects their purchasing intention, even through the consumption values. According to Wang et al. (2012), the exchange theory in marketing studies explains that a consumer's perceived value is the prerequisite to purchase intention. A study done by Duatibumi & Setyowardhani (2021) shows that perceived value had a positive and significant impact on consumers' intention to purchase an OTT streaming service. They tested on emotional value, the one "that causes various kinds of feelings when watching the shows that are presented" (Duatibumi & Setyowardhani, 2021). This means that showing strong perceived emotional value will allow consumers to continue purchasing an OTT streaming service. As for functional value, Duatibumi & Setyowardhani (2021) mentions that the external stimuli System Quality had no significance on perceived value for choosing an OTT streaming service. This external stimulus can be used to define the functional value within the context of that study as it determines the quality of digital services (Duatibumi & Setyowardhani, 2021) and can therefore show that perceived functional value can have a negative impact on purchase intention.

If there is a relationship between perceived consumption values and purchase intention, then the same can go for piracy as people would have their own perceived values of why they choose to pirate instead of streaming from a legal service. Wang et al. (2012)'s study resulted that "perceived value has a significant positive influence on purchase intention in the context of online content services", showing that piracy will have a positive effect on perceived value. However, due to opposing sides for perceived functional and emotional value, testing to see whether piracy affects perceived value will further strengthen the conclusion of perceived value on purchase intention. Another study done by Nhan et al. (2019) used open-ended questions in which respondents stated that people pirate due to unavailable content

in OTT streaming services. This shows that availability and accessibility become a question of why consumers may pirate.

H2A: Perceived functional value decreases consumers' decision to purchase an OTT streaming service.

H2B: Perceived functional value increases consumers' decision to digitally pirate.

H3A: Perceived emotional value increases consumers' decision to purchase an OTT streaming service.

H3B: Perceived emotional value decreases consumers' decision to digitally pirate.

2.4 Ethical Behavior

Ethics is defined as moral principles that govern a person's decision or behavior. When there are two sides to the arguments presented, ethics are automatically involved. However, moral and ethical behavior may be subjective and differ from culture to culture in different parts of the world. This subjectivity is not only evident in different cultures geographically, but also in different cultures economically. In Indonesia, pirated DVD stores open in plain sight in malls that cater to people with less financial freedom and nobody bats an eye. This everyday scenario is indicative of what moral principles, or lack thereof, are encouraging improper or undesired consumer behavior. This simple example is what makes digital piracy an ethical issue because, in a country like Indonesia, piracy is talked about, sellers (of DVDs) are penalized occasionally (to almost never) and websites are blocked, however, it still falls on the decision of the consumer on whether or not they will participate in it and to make matters worse, there are no known repercussions for the consumers. Today, ethical behavior can be applied to a corporation, state, country or individual and they base these applications or rules on the moral foundation of any individual or party. For the purpose of this paper, it will delve more into the consumer's ethics that will determine consumer behavior when it comes to digital piracy.

Arli & Tjiptono (2015, as cited in Hati et al., 2019) mention that ethics theory has been used "as a theoretical basis for studying and explaining consumer behavior

related to pirated products”. Since digital piracy relates to unethical and illegal behavior, ethics theory is used to define a consumer’s decision-making process. “The theory proposes that individuals form their ethical evaluation of a specific behavior based on the motivations behind the action (deontological paradigm) and the consequences of the conduct (teleological paradigm)” (Koay et al., 2020). The deontological paradigm relates to the universal understanding of right and wrong while the teleological paradigm relates to the consequences based on an individual’s right and wrong-doings (Arli & Tjiptono, 2015). This paper will refer to the deontological paradigm which explains how a consumer’s decision can be viewed as morally correct or incorrect. One factor of ethics theory characterizes the paradigm and predicts behavioral intention, which is known as moral obligation (Koay et al., 2020; Panas & Ninni, 2011). It is also important to note that several studies tested the effect of attitude and intention on moral obligation, but this paper intends to focus on behavioral intention as it focuses more on a consumer’s decision behind choosing to pirate.

Moral obligation is defined “as the feeling of guilt or the personal obligation to perform or not to perform a behavior” (Cronan & Al-Rafee, 2007). It can relate to the feeling of guilt when an individual performs an action that they consider to be morally wrong (Hodges, 2021). As Arli & Tjiptono (2015) mentions that moral obligation is a factor of ethics theory, this shows that there is a possibility that it can affect the intention to pirate movies and/or television shows.

Several studies looked into moral obligation on intention to pirate, with most of them saying that moral obligation has a negative influence towards piracy (Hati et al., 2019; Cronan & Al-Rafee, 2007; Yoon, 2010). Special cases included attitude mediating moral obligation towards intention to pirate (Arli & Tjiptono, 2015) and the intention to pirate was for music piracy (Panas & Ninni, 2011). Koay et al. (2020)’s study, however, mentioned that moral obligation had a positive effect on the intention to pirate for Indonesians as they may find piracy to be a norm. This means that moral obligation is worth studying deeper into how it affects the intention to piracy if Indonesians consider piracy a norm and do not feel any guilt or morality towards it.

H4: Moral obligation will negatively affect consumers' decision to digitally pirate.

2.5 Commitment

The one thing about commitment is that relationships play a big role; if a relationship develops between the streaming service and the customer, then it is assumed that commitment will automatically come along, only if the partnership goes well (Wetzels et al., 1998). It also plays a key role in ensuring that a long-lasting relationship occurs between both parties and in mediating the attitudes and future intentions of consumers (Sohaib et al., 2016). This means that commitment requires both parties to have the same level of commitment if OTT streaming services want to retain their customers.

In order to see how commitment affects OTT streaming services and piracy, the five-component model will be used to explain the relationship. Expanded from the three-component model, which consists of affective, normative and calculative (also known as continuance) commitment (Allen & Meyer, 1990), the five-component model expands the three-component model to study repurchase intention (Keiningham et al., 2015). It consists of affective, normative, economic, forced and habitual commitment. For the purposes of this paper, economic, forced and habitual commitment will not be included as it all relates to calculative commitment which focuses on the actual relationship between the streaming service and the consumer and the given perceived cost and benefits of using said streaming service (Bloemer, 2002). Therefore, the chosen constructs used for this section are affective and normative commitment.

Affective commitment involves an emotional aspect between the relationship of the provider and the customer (Keiningham et al., 2015). This emotional aspect shows that "consumers are willing to improve and sustain an affective bond with the brand that makes consumers feel warm and enjoyable" (Erciş et al., 2012). Customers feel the need to have some sort of emotional attachment as they lose a sense of loyalty and belonging in them once they let go of the streaming provider. Normative commitment, on the other hand, is "based on an individual's belief about his or her

obligations due to relevant norms (typically socially derived)” (Keiningham et al., 2015). Their obligation towards a streaming provider is important to see if they have to stay with either an OTT streaming service or a piracy website as they are loyal to it.

When it comes to commitment, it can automatically be assumed that OTT streaming services come to mind since consumers are paying to be subscribed to them. This is how the idea of purchase intention comes into hand as it involves a relationship between the provider and the consumer. As OTT streaming services garner subscriptions, they need to show customers that they have a valuable symbiotic relationship, which means subscribers will continue to stay only when the OTT will provide content. Piracy, on the other hand, has no real stake in the issue of commitment.

For instance, an example of how OTT streaming services did not achieve this is by seeing the success of HBO’s original, *Game of Thrones*. Although the finale, aired in 2017, had 16.1 million legal viewers, it does not compare to the “143 million illegal downloads or streams, resulting in the series pirated over a billion times” (Nhan et al., 2019). Additionally, Hulu’s head of content acquisitions, Lisa Holme, mentions that piracy is measured based on how committed the fans are to a TV show (Mcalone, 2016). Holme also adds “... When people care so much about content that they will go out of their way to pirate it, it means they’ll pay to stream it if there’s an easy way” and that they “are passionate enough about it to break the law”. This raises the question of whether or not OTT streaming services can retain their customers as compared to the piracy market. The challenge for OTT services now is to keep the relationship with their customers. The caveat however, commitment can cease once loyalty is breached or when one “partner” (the consumer) feels that they are not treated fairly.

According to several studies, they showed that there was a positive relationship between affective commitment and repurchase intention on branded products (Keiningham et al., 2015; Mbango, 2018; Erciş et al., 2012). As normative commitment is normally omitted from previous research (Keiningham et al., 2015),

one study showed that normative commitment had a positive relationship on repurchase intention (Mbango, 2018). This means that for this research, focusing on purchase intention on the streaming providers for both commitment constructs will see how committed consumers are to their chosen providers.

H5A: Affective commitment has a positive effect on consumers purchasing an OTT streaming service.

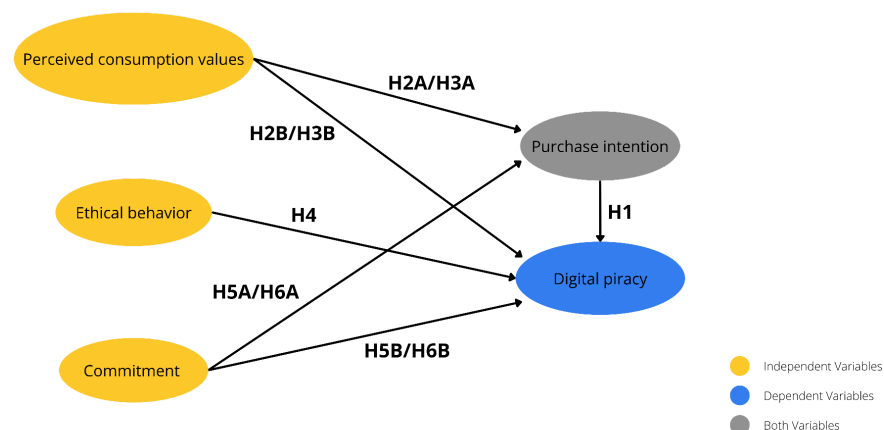
H5B: Affective commitment has a negative effect on consumers to digitally pirate.

H6A: Normative commitment has a positive effect on consumers purchasing an OTT streaming service.

H6B: Normative commitment has a negative effect on consumers to digitally pirate.

Figure 1

Research Model



3 Methodology

In order to find which hypotheses can be accepted or rejected, a research method must be selected to find how the constructs can be measured along with an explanation of the sample size. The following sections will discuss the research design, the questionnaire and how to measure the hypotheses.

3.1 Research design

As this research focuses on consumer behavior, a quantitative approach will be conducted to test the hypotheses mentioned above. Using the quantitative research method will help explain the causal (cause-and-effect) relationship, better known as explanatory research, between the variables. The most commonly used form of collecting data for quantitative research is a questionnaire, which can help explain how the independent variable affects the dependent variable.

In order to understand how to collect the data, the target population, sampling frame, sampling technique and sample size must be defined. The target population that will be collected for this questionnaire is Indonesian citizens that can speak English and live either in Indonesia or are temporarily away for work or study purposes. Although this narrows down to a specific targeted population, the sampling frame will be decreased from 280 million inhabitants to 1.4 million, which is 0.005% representing the targeted population of this specific characteristic of people taking the questionnaire (“Indonesia Population”, 2022). This, in turn, will introduce the target population to be 200 as it will help represent the whole population. Therefore, convenience sampling is chosen as the sampling technique, which is where “the researcher announces the study and participants self-select if they wish to participate” (Stratton, 2021). This comes after convenience sampling is the quickest solution to retrieving as many responses as possible in the simplest way. Overall, a total of $N = 232$ respondents filled out the questionnaire.

To further structure the questionnaire, the constructs have been developed into questions to find the causal relationship between the independent and dependent variables, which is shown in Table 1. Additionally, there are four reflective latent

variables used to help define the unobservable variables through an indicator: perceived functional value, perceived emotional value, affective commitment and normative commitment. Perceived functional value had a special case where three questions asked for quality, accessibility and time to showcase the types of functionality that can be found within the streaming service providers.

Table 1

Measurement items table

Construct name	Question/statement	Citation
Perceived functional value	<p>“OTT platforms offer content of consistently good quality.” (PFV_OTTQ)</p> <p>Piracy websites offer content of consistently good quality. (PFV_PQ)</p> <p>“OTT platforms offer the content they promise.” (PFV_OTTA)</p> <p>Piracy websites platforms offer the content they promise. (PFV_PA)</p>	Chakraborty et al., 2022
	I think purchasing an OTT platform require less effort in comparison to downloading from a piracy website. (PFV_T)	Chakraborty & Paul, 2022
Perceived emotional value	I enjoy watching movies and/or TV shows. (PEV1)	Chakraborty et al., 2022
	I derive pleasure from watching movies and/or TV shows. (PEV2)	
	I feel relaxed when I watch movies and/or TV shows. (PEV3)	
Moral obligation	“I would feel guilty if I pirated digital products.” (MO1)	Yoon, 2010

	<p>“To pirate digital products goes against my principles.” (MO2)</p> <p>“It would be morally wrong for me to pirate digital products.” (MO3)</p>	
Affective commitment	<p>I do feel a strong sense of belonging to streaming service providers. (AC1)</p> <p>I do feel emotionally attached to streaming service providers. (AC2)</p> <p>Streaming service providers have a great deal of personal meaning to me. (AC3)</p>	Mbango, 2018
Normative commitment	<p>I do feel obligated to remain with streaming service providers. (NC1)</p> <p>I would feel guilty if I stop using streaming service providers. (NC2)</p> <p>I would not stop using streaming service providers because I have a sense of obligation to its usage. (NC3)</p>	Mbango, 2018
Customer purchase intention	<p>When streaming movies or TV shows, how likely are you to purchase/use:</p> <ol style="list-style-type: none"> 1. OTT streaming service (BIS_OTT) 2. Piracy websites (BIS_P) 	Hair et al., 2013
Digital piracy		

3.2 Data cleansing

To ensure valid and reliable data, a data cleansing must be done in order to properly count the right number of respondents for the dataset. As the total number of

respondents was $N = 232$, 3 respondents voluntarily answered “No” in the conformed consent, therefore removing them from the dataset. 88 respondents did not pass the attention check question and were therefore also removed from the dataset. Therefore, the new count of respondents is $N = 141$. A “N/A” option was available for all the questions to reduce response errors.

3.3 Measurement description

The questionnaire was split between asking two types of scaled questions: likert scale and behavioral intention scale. The first part of the questionnaire asked respondents whether they were inclined towards purchasing/using OTT streaming services or piracy websites through a behavioral intention scale. This helps to see their behavior on whether they chose to purchase OTT streaming services or download movies/use piracy websites more. The second part of the questionnaire asked respondents to select from strongly disagree, disagree, neither agree nor disagree, agree or strongly agree. An additional scale point was added to allow researchers code of ethics of choosing not to answer the question for voluntary purposes. This scale point was known as not applicable (“N/A”) and was ranked in an interval scale from 0 (“N/A”) to 5 (“Strongly agree”) to allow validity and reliability and avoid further response errors. Toward the end of the questionnaire, respondents were asked for demographic details such as gender, age and occupation. An attention check (“Answer “Disagree” for this question”) was also used “to eliminate spurious data owing to poor levels of attentiveness” (Leung & Seah, 2022).

4 Data Analysis and Results

After the questionnaire was collected, the data was further analyzed to test the hypothesis and see if it can be accepted or rejected. A test for reliability was also done to further check if the hypothesis is valid and reliable or not.

4.1 Descriptive statistics

In order to understand how the data was distributed, descriptive statistics was done to test for normality. Firstly, the demographics were analyzed to see the gender, age and occupation of Indonesians taking the questionnaire. Table 2 shows the descriptive statistics for the demographics of age. It mentions N=141, the mean, standard deviation, skewness, kurtosis and Shapiro-Wilk p -value. The mean showed that most of the respondents taking the questionnaire were aged in their mid-20s. It also shows that the data is not significant as the p -value is <0.001 . This means that age was not normally distributed since the skewness and kurtosis are also off.

Table 2

Demographics: Descriptives table

	Age
N	141
Mean	28.09
Standard deviation	12.03
Skewness	1.36
Kurtosis	0.86

Shapiro-Wilk p -value < .001

Table 3 shows the descriptive statistics for the other two demographics of gender and occupation. It showed that 57.4% of the respondents were female while 42.6% were male. Occupation was subcategorized to allow a better understanding of which industries the respondents worked/studied in. Most of the respondents were categorized under “Education” (which includes students and teachers) as it was 43.3% of the total. “Employee” included workers, staff and private employees (which means they are on a per-hire basis). Another notable thing is that “Business” includes business owners and businessmen and “Manager” includes producers, consultants and project managers.

Table 3

Demographics: Frequency table

Gender	Counts	Percentage of Total (%)	Cumulative (%)
Female	81	57.4	57.4
Male	60	42.6	100.0
Occupation (per industry)			
Entrepreneur	8	5.7	5.7
Employee	32	22.7	28.4
Business	6	4.3	32.6

Housewife	4	2.8	35.5
Finance	7	5.0	40.4
Marketing	5	3.5	44.0
Designer	6	4.3	48.2
Manager	8	5.7	53.9
Education	61	43.3	97.2
Healthcare	2	1.4	98.6
Assistant	2	1.4	100.0

Furthermore, the constructs were also analyzed through descriptive statistics, as shown in Table 4. It shows the mean, standard deviation, skewness, kurtosis, Shapiro-Wilk p -value and Cronbach's α . In order to use Cronbach's α properly, "Likert scale statements that are negatively phrased are essential to minimize response bias, but it is imperative that these statements' scores are reversed; otherwise it would have a negative influence on the Cronbach's α value" (Duffett, 2015). Cronbach's α is used to measure the reliability and consistency of the variables. If it is between 0.6 to 0.8, then it is considered acceptable. Anything below 0.6 is considered bad while above 0.8 is considered good. Cronbach's α is mostly for testing latent variables, and as mentioned above, the COMPVAR (composite variables) were used to test the latent variables on reliability via Cronbach's α . As for the p -value, it shows that all the constructs were <0.001 which means that the data was not significant and is therefore not normally distributed.

Table 4

Constructs: Descriptives table

Variables	N	Mean	Standard deviation	Skewness	Kurtosis	Shapiro-Wilk p-value
PFV_OTTQ	141	4.04	0.823	-0.924	1.170	< .001
PFV_PQ*	141	3.13	1.090	-0.071	-0.335	< .001
PFV_OTTA	141	4.00	0.784	-0.451	-0.181	< .001
PFV_PA*	141	2.96	1.030	0.007	-0.220	< .001
PFV_T	141	4.04	1.110	-1.040	0.083	< .001
PEV1	141	4.44	0.701	-1.240	1.580	< .001
PEV2	141	4.16	0.816	-0.870	0.843	< .001
PEV3	141	4.23	0.743	-0.832	0.636	< .001
MO1	141	2.70	1.210	0.103	-0.928	< .001
MO2	141	2.62	1.170	0.489	-0.472	< .001
MO3	141	3.11	1.210	-0.378	-0.805	< .001
AC1	141	2.97	1.080	-0.363	-0.466	< .001
AC2	141	2.64	1.140	0.008	-0.926	< .001
AC3	141	2.53	1.110	0.124	-0.775	< .001

NC1	141	2.43	1.100	0.192	-0.925	< .001
NC2	141	1.83	1.000	0.958	-0.068	< .001
NC3	141	2.06	1.030	0.707	-0.132	< .001
COMPVAR	Cronbach's α : 0.815					

* Negatively phrased statements were recoded through reverse coding

All of the constructs used a likert scale. It was ranked on a 1 to 5-point scale, where respondents could choose strongly disagree, disagree, neither agree nor disagree, agree and strongly agree. As mentioned previously, an additional scale was added to allow respondents the option to not answer the questionnaire. This rank was known as "N/A" or "not applicable" to allow for less response error and accuracy. For each construct, the mean showed the average responses for each question. For instance, respondents gravitated towards "agree" on all three perceived emotional value questions as they were 4.44, 4.16 and 4.23. Additionally, the skewness and kurtosis in general show that the data looks close to normal, with some outliers such as a negative skewness on PFV_T and PEV1 of over -1 and a positive kurtosis on PEV1. Finally, all the Shapiro-Wilk p -values were <0.001, showing that it is below the 0.05 (5%) significance threshold and is therefore not normally distributed.

4.2 Hypothesis testing

After evaluating the descriptive statistics from Table 4, it is shown that the data is not normally distributed due to the p -value being <0.001. And since it is below the 0.05 (5%) significance threshold, it can be concluded that the significance value should be accepted which leads to the chosen statistical test for analysis. As all the constructs from Table 4 were measured on an interval scale and are not normally distributed, the chosen statistical test is Kruskal-Wallis since the dependent variables were ordinally scaled into four groups. Kruskal-Wallis is a nonparametric test used to test for variance and show whether more than two random and independent samples

belong to the same distribution (Bewick et al., 2004; Ostertagová et al., 2014). This statistical test will help strengthen the paper by ensuring its significance to the hypotheses.

Before moving into the hypothesis testing analysis, it is worth mentioning that hypotheses 2, 3, 5 and 6 all had sub-hypotheses, split into A and B. Both the A and B hypotheses complement each other. The intention is to further analyze and strengthen the results between the two dependent variables properly, proving that rejecting one hypothesis does not automatically mean that the other hypothesis should be accepted.

4.2.1 Hypothesis 1

H1: Purchase intention influences consumers to digitally pirate.

The first hypothesis measures the purchase intention on OTT streaming services and how it can influence a consumer to digitally pirate according to their behavioral intention on both streaming service providers. The constructs in this hypothesis used the behavioral intention scale to measure an Indonesian consumer's behavior on whether they purchase/use OTT or pirate websites more. The scales included 'Definitely would not purchase/use (less than 10% chance)', 'Probably would not purchase/use (10-49% chance)', 'Probably would purchase/use (50-89% chance)' and 'Definitely would purchase/use (90-100% chance)'. However, halfway through the questionnaire, there was a change in the questions to add further clarification, where it was originally 'Definitely would not purchase (less than 10% chance)' to 'Definitely would not purchase/use (less than 10% chance)'. This raised an issue of whether there was a difference between the group before the change in the question happened (BIS_OTT1 & BIS_P1) and after the change happened (BIS_OTT2 & BIS_P2). Therefore, a chi-squared test was done as shown in Table 5, to see if there was a difference in both groups for each construct as they were both ordinally scaled. On the other hand, the *p*-values showed that there was no statistical significance between the two groups of BIS_OTT1 and BIS_OTT2 and between BIS_P1 and BIS_P2. Therefore, this hypothesis can be accepted and the data can be further analyzed as the dependent variables. Due to this hypothesis being accepted, it can

be shown that each construct (BIS_OTT1 & BIS_OTT2 and BIS_P1 & BIS_P2) be combined into a composite variable according to their variable as it shows no difference between the two groups. This was then applied to hypotheses 2-6.

Table 5

Hypothesis 1: Chi-squared test table

	Value	p
χ^2 - BIS_OTT1 & BIS_OTT2	14.5	0.106
χ^2 - BIS_P1* & BIS_P2*	14.8	0.095

* Negatively phrased statements were recoded through reverse coding

4.2.2 Hypothesis 2

For the following two hypotheses, it shows that there is quality (PFV_OTTQ and PFV_PQ), accessibility (PFV_OTTA and PFV_PA) and time (PFV_T). Quality refers to how good (or bad) the quality of the streaming provider in terms of functionality. Accessibility refers to whether the streaming providers have the content consumers want to watch as promised. Time refers to how convenient the streaming provider is for the consumers to stream the content they want to watch, making it easy for them to watch whatever and whenever they want. The reason why this has been broken down is to further introduce the idea of perceived functional value on how it can help explain purchase intention on both streaming platforms.

H2A: Perceived functional value decreases consumers' decision to purchase an OTT streaming service.

Hypothesis 2A looks into the perceived functional value and how purchasing an OTT streaming service decreases consumers' decision to purchase it. If Indonesians find the functionality of OTT streaming services confusing, this will decrease their chances of using the OTT streaming services again. This hypothesis looks into the quality, accessibility and time of an OTT streaming service and how it affects the

purchase intention of OTT services. Therefore, after analyzing that the data is not normally distributed, Kruskal-Wallis became the chosen statistical test. Looking at Table 6, the PFV_OTTQ and PFV_OTTA p -values showed that they are not statistically significant while the PFV_T p -value showed that it is statistically significant. Therefore, the hypothesis must be rejected with caution.

Table 6

Hypothesis 2A: Kruskal-Wallis results

H2A	χ^2	p
PFV_OTTQ	5.74	0.125
PFV_OTTA	6.98	0.073
PFV_T	10.38	0.016

H2B: Perceived functional value increases consumers' decision to digitally pirate.

Hypothesis 2B shows that the perceived functional value of a piracy website can increase Indonesian consumers' decision to digitally pirate instead of streaming from an OTT streaming service. Similar to above, if Indonesians find the functionality of piracy websites to be of good quality, easily accessible and provide good time, then Indonesians are more likely to use piracy websites. Since the data was not statistically significant, Kruskal-Wallis was the chosen statistical test. According to Table 7, the PFV_PA and PFV_T p -values showed that there is statistical significance in this hypothesis and should therefore be accepted. However, the PFV_PQ p -value showed it is not statistically significant, therefore the hypothesis should be rejected. This means that the hypothesis should be accepted under certain circumstances.

Table 7

Hypothesis 2B: Kruskal-Wallis results

H2B	χ^2	p
PFV_PQ*	5.66	0.129

PFV_PA*	8.94	0.030
PFV_T	9.00	0.029

* Negatively phrased statements were recoded through reverse coding

4.2.3 Hypothesis 3

H3A: Perceived emotional value increases consumers' decision to purchase an OTT streaming service.

Hypothesis 3A mentions that an Indonesian's perceived emotional value can increase their decision in purchasing an OTT streaming service. If Indonesian consumers can find any emotional attachment to OTT streaming services, they are more likely to purchase from them. Since this variable did not pass the normality test, Kruskal-Wallis was done to show how the variance affects the p -value. As this variable failed the normality test, Kruskal-Wallis was done to show whether the samples come from the same distribution. Table 8 shows that the PEV1 p -value was the only value that is statistically significant. However, PEV2 and PEV3 showed that the p -values are not statistically significant and the hypothesis should therefore be rejected but under certain conditions.

Table 8

Hypothesis 3A: Kruskal-Wallis results

H3A	X^2	p
PEV1	13.55	0.004
PEV2	5.87	0.118
PEV3	6.94	0.074

H3B: Perceived emotional value decreases consumers' decision to digitally pirate.

Hypothesis 3B shows that based on Indonesian consumers' perceived emotional value, they are less likely to digitally pirate. They may feel less attached to piracy emotionally as compared to OTT services. As the data was not normally distributed,

Kruskal-Wallis was the chosen statistical test. According to Table 9, all the p -values showed no statistical significance. This means the hypothesis should be rejected.

Table 9

Hypothesis 3B: Kruskal-Wallis results

H3B	χ^2	p
PEV1	2.04	0.564
PEV2	3.48	0.323
PEV3	1.51	0.680

4.2.4 Hypothesis 4

H4: Moral obligation will negatively affect consumers' decision to digitally pirate.

The fourth hypothesis shows that Indonesian consumers' moral obligation towards piracy will negatively affect their intention to pirate. If they have a high moral obligation, they will be less likely to pirate from piracy websites. Since the variables did not pass the normality test, Kruskal-Wallis was done to test the two independent samples. Based on Table 10, all the p -values of the constructs showed statistical significance, which can be concluded that the hypothesis can be accepted.

Table 10

Hypothesis 4: Kruskal-Wallis results

H4	χ^2	p
MO1	9.82	0.020
MO2	17.49	< 0.001
MO3	9.66	0.022

4.2.5 Hypothesis 5

H5A: Affective commitment has a positive effect on consumers purchasing an OTT streaming service.

Hypothesis 5A shows that affective commitment will positively affect Indonesian consumers to purchase from an OTT streaming service instead of pirating from a piracy website. As affective commitment involves the idea of emotional attachment, this hypothesis tests whether consumers have that emotional attachment to OTT streaming services. Therefore, the higher their emotional attachment, the more likely they are to stay with the OTT streaming service. Due to the data not being normally distributed, Kruskal-Wallis is done to show whether the samples come from the same distribution. All of the p -values, according to Table 11, showed that they are not statistically significant. Therefore, this hypothesis should be rejected.

Table 11

Hypothesis 5A: Kruskal-Wallis results

H5A	X^2	p
AC1	4.23	0.238
AC2	7.26	0.064
AC3	3.08	0.380

H5B: Affective commitment has a negative effect on consumers to digitally pirate.

Hypothesis 5B shows that affective commitment will have a negative effect on Indonesian consumers who want to digitally pirate instead of purchase from an OTT streaming service. This means that Indonesian consumers do not have an emotional attachment towards piracy websites and are less likely to purchase from these types of websites. As the variables did not pass the normality test, Kruskal-Wallis was the chosen statistical test. Looking at Table 12, the p -values are all not statistically significant and the hypothesis must therefore be rejected.

Table 12

Hypothesis 5B: Kruskal-Wallis results

H5B	χ^2	p
AC1	4.47	0.215
AC2	6.22	0.101
AC3	6.46	0.091

4.2.6 Hypothesis 6

H6A: Normative commitment has a positive effect on consumers purchasing an OTT streaming service.

Hypothesis 6A shows that normative commitment will positively affect Indonesian consumers to purchase an OTT streaming service instead of using a piracy website. What this means is that if Indonesian consumers feel obliged towards an OTT streaming services, they are more likely to purchase said OTT service. Since the data was not normally distributed, Kruskal-Wallis was done to show how the variance affects the p -value. According to the p -values shown in Table 13, they are not statistically significant. Therefore, the hypothesis should be rejected.

Table 13

Hypothesis 6A: Kruskal-Wallis results

H6A	χ^2	p
NC1	6.26	0.099
NC2	1.91	0.591
NC3	2.45	0.484

H6B: Normative commitment has a negative effect on consumers to digitally pirate.

Hypothesis 6B shows that normative commitment will have a negative effect on Indonesian consumers' intention to digitally pirate instead of use an OTT streaming service. If Indonesian consumers feel less obliged towards piracy, they are less likely

to download or stream content from a piracy website. As the data is not normally distributed, Kruskal-Wallis was the chosen statistical test. Based on Table 14, NC2 and NC3 should be rejected due to their p -values being not statistically significant. However, NC1 showed statistical significance on the p -value. Therefore, the hypothesis should be rejected but with caution.

Table 14

Hypothesis 6B: Kruskal-Wallis results

H6B	χ^2	p
NC1	15.25	0.002
NC2	4.47	0.215
NC3	5.99	0.112

5 Conclusion

5.1 Discussion

Once the analysis of the data was done, the hypotheses showed how the conclusion can be drawn. As can be seen from the results section, half of the hypotheses were accepted or rejected with caution, while the rest can be fully accepted or rejected. What this means is that certain factors/aspects from the questionnaire were significant while the rest were insignificant and vice versa. The data given helps to see how OTT streaming services can compete against digital piracy.

The following hypotheses were accepted due to significant p -values: H1, H2B (with caution) and H4. H1 was the only hypothesis that used the chi-squared test, which showed that purchase intention of OTT streaming services influenced digital piracy. As the significance was 10.6% for OTT streaming services and 9.5% for piracy, this means that OTT streaming services have a higher significance than piracy, showing that Indonesians lean more towards the OTT side than the piracy side. H2B used the Kruskal-Wallis test and was accepted with caution as quality was the only factor that did not show significance. This will be further explained in the following section. H4 also used the Kruskal-Wallis test and was accepted, showing that moral obligation has an impact on digital piracy.

The remainder of the hypotheses were rejected as they did not show significance. This means that perceived functional value on OTT streaming services, perceived emotional value, affective commitment and normative commitment did not impact OTT streaming services nor digital piracy. As certain hypotheses were rejected with caution, there are reasons why they should not be fully rejected as some of the factors showed significance. For instance, H2A shows that time was significant, showing that the convenience of content ready to stream on OTT streaming services plays a role in a consumer's purchase intention.

5.2 Significance and recommendations

Based on the results from the questionnaire stated above, this section focuses on how OTT streaming services can retain their consumers from digital piracy based on customer purchase intention. Below are the recommendations for each hypothesis based on the research problem of why they choose to pirate instead of stream from an OTT streaming service.

H1: Purchase intention influences consumers to digitally pirate.

Regarding H1, the results from the chi-squared test showed that the p -values were significant and that the hypothesis should be accepted. This means that purchase intention on OTT streaming services and digital piracy affect each other. As there were two groups due to the clarification halfway through the questionnaire, having significant p -values show that there is no difference between the change of the questions while adding further clarity. This means that OTT streaming services need to understand what influences their consumers to digitally pirate content to retain their consumers stronger. In order to strengthen consumer purchase intention while retaining them, the following hypotheses will give further insight.

H2A: Perceived functional value decreases consumers' decision to purchase an OTT streaming service.

Regarding H2A, the Kruskal-Wallis test results showed that due to 2 out of the 3 p -values were insignificant, the hypothesis has to be rejected. This means that perceived functional value increases consumers' decision to purchase an OTT streaming service. The only one that was significant was PFV_T, which means that time has a significance on perceived functional value on OTT streaming services. With time showing significance, OTT streaming services should use the functionality of their platform to put more content on their platform as piracy websites tend to put out low quality of any content that consumers are looking for. This means that OTT streaming services have to work on making their platforms more easily functional to retain their customers.

H2B: Perceived functional value increases consumers' decision to digitally pirate.

Regarding H2B, the findings from the Kruskal-Wallis test showed that due to 2 out of the 3 p -values being significant, the hypothesis can therefore be accepted. This shows that perceived functional value does increase consumers' decision to digitally pirate, showing that Indonesians prefer piracy websites' functionality over OTT streaming services. This can be shown as the opposite of the previous hypothesis as it further strengthens the point that rejecting one hypothesis means the opposite will happen. As this hypothesis is accepted, what this means is that OTT streaming services need to work on improving their functionality to continue to retain their consumers. However, piracy websites do not have good quality just like OTT streaming services do, showing that both websites should work on their quality. One interesting fact is that accessibility was significant in piracy websites, therefore showing that Indonesians find piracy websites more easily accessible as compared to OTT streaming services. What OTT streaming services can do is work on their accessibility towards gaining more content such as not removing content from the platform to ensure that piracy websites do not take their customers from unsubscribing to them.

H3A: Perceived emotional value increases consumers' decision to purchase an OTT streaming service.

Regarding H3A, the Kruskal-Wallis test results showed that due to 2 out of the 3 p -values being insignificant, the hypothesis should therefore be rejected. This means that perceived emotional value decreases consumers' decision to purchase an OTT streaming service. As this means that Indonesian consumers do not have any emotional attachment towards an OTT streaming service, this will decrease their loyalty and OTT services will lose subscribers. Although it is harder for digital companies to build an emotional value to their product, OTT services can work towards building emotional trust with consumers so that they can keep their subscribers subscribed. As the "enjoy" factor of perceived emotional value showed significance, OTT services can use this to their advantage and bring back more enjoyable content to their platform.

H3B: Perceived emotional value decreases consumers' decision to digitally pirate.

Regarding H3B, the results from the Kruskal-Wallis test showed that all p -values were insignificant, therefore the hypothesis must be rejected. As the hope was for this to be accepted since H3A was rejected, this also means that Indonesian consumers do not have any emotional attachment towards piracy websites or downloading content. As mentioned previously, OTT streaming services can use this to their advantage and ensure an emotional attachment is built with their customers so that they can retain them from using pirated websites.

H4: Moral obligation will negatively affect consumers' decision to digitally pirate.

Regarding H4, the findings from the Kruskal-Wallis test showed that the p -values were all significant and the hypothesis can therefore be accepted. This means that moral obligation negatively affects consumers' decision to digitally pirate, showing that Indonesian consumers have high moral obligations to not pirate the content that they stream. This is good for OTT streaming services as it draws consumers towards retaining their purchase intention and remaining subscribed to their content. OTT streaming services can retain consumers by promoting through an advertisement for their original movie/TV series to not pirate so that consumers do not find ways to change their morals and find the easier way out.

H5A: Affective commitment has a positive effect on consumers purchasing an OTT streaming service.

Regarding H5A, the results from the Kruskal-Wallis test showed that all p -values were insignificant, therefore the hypothesis must be rejected. As affective commitment relates to emotions, this can be correlated back to H3, where it refers to perceived emotional value. As both H3A and H3B were rejected, this helps explain how affective commitment does not affect consumers purchasing an OTT streaming service. In order to further understand that emotional aspect, streaming providers must be able to differentiate whether a customer has an emotional attachment to, identification with, or involvement with them (Meyer et al., 2002). This way, they can see what draws them towards their platform and how they can improve it. This

applies similarly to the hypothesis below. In terms of recommendations, as all three aspects did not reciprocate towards the purchase intention of OTT streaming services, this means that OTT streaming services should focus on building the bond first between the customers and them, and then can they focus on building the emotional aspect of it later once that bond has been established.

H5B: Affective commitment has a negative effect on consumers to digitally pirate.

Regarding H5B, the findings from the Kruskal-Wallis test showed that due to insignificant p -values, this hypothesis must be rejected. As this does not complement H5A, what this means is that piracy websites do not share that emotional bond between their consumers and platform as most consumers switch piracy websites or torrent download sites frequently due to the website being continuously taken down. This is where OTT streaming services can step up and work on building that emotional bond between their consumers to avoid them from unsubscribing to their content. They require a sense of belonging, emotional and personal attachment towards the platform in order to stay loyal to said platform.

H6A: Normative commitment has a positive effect on consumers purchasing an OTT streaming service.

Regarding H6A, the findings from the Kruskal-Wallis test showed that due to insignificant p -values, this hypothesis must be rejected. This means that normative commitment does not affect consumers to purchase an OTT streaming service. It also means that Indonesian consumers do not feel obligated, guilty or feel the obligation to use OTT streaming services, showing that their loyalty lies elsewhere. Consumers purchasing intentions from OTT streaming services need to understand how to retain their customers properly. One idea from Keiningham et al. (2015) shows that they teach managers how to optimize rather than maximize repurchase intention and enhance loyalty. This can effectively work if managers focus their plans on maximizing repurchase intention and increasing loyalty rather than profits as shifting it from a new perspective would allow them to see that profits come along with retaining customers.

H6B: Normative commitment has a negative effect on consumers to digitally pirate.

Regarding H6B, the Kruskal-Wallis test results showed that due to 2 out of the 3 *p*-values were insignificant, the hypothesis has to be rejected. Therefore, normative commitment has a positive effect on consumers to digitally pirate, meaning consumers would rather pirate than purchase from an OTT streaming service. However, as Indonesian consumers feel obligated to remain with piracy websites, this means that OTT streaming services can work their way towards attracting those consumers by showing them that they should feel obligated to have their platform.

In conclusion, all hypotheses show that in order for OTT streaming services to compete against digital piracy, they need to focus on purchase intention of OTT streaming services, accessibility and time of the perceived functional value on piracy and moral obligation on piracy in order to succeed over their competitor, digital piracy.

5.3 Limitations

There were several limitations in this paper that were not discussed due to the irrelevance of the topic along with issues made from the questionnaire that affected the data. As this paper focused on digital piracy, it did not go into the legal aspect such as copyright issues or intellectual property cases to allow the focus to be more on OTT streaming services. As the topic was mostly generalized for both variables, this allows anyone in the industry to use this paper to their advantage.

As for the questionnaire, as aforementioned, the behavioral intention question was changed halfway through the questionnaire to add further clarity after a respondent noted how confusing the term "purchase" meant on digital piracy. This then made the data split into two to see whether there was a difference between the two groups. This then raises the question of whether respondents understood the questions by checking whether they passed the attention check or answered N/A to give the option to chose not to answer the question. 88 respondents did not pass the attention check and several respondents answered N/A, which then lowered the survey count from N = 232 to N = 141. Another aspect was that several of the

respondents that answered the question were either not from Indonesia, are half-Indonesian or permanently live outside of Indonesia but are Indonesian citizens by ethnicity or race. As there was a demographic aspect in the questionnaire, it was not used as it was more for research purposes to show who the respondents were and their ages. This paper does not focus in detail on demographics but rather on a general basis.

Bibliography

- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63(1), 1–18.
<https://doi.org/10.1111/j.2044-8325.1990.tb00506.x>
- Arlı, D., & Tjiptono, F. (2016). Consumer digital piracy behaviour among youths: Insights from Indonesia. *Asia Pacific Journal of Marketing and Logistics*, 28(5), 898–922. <https://doi.org/10.1108/apjml-11-2015-0163>
- Arlı, D., Tjiptono, F., & Porto, R. (2014). The impact of moral equity, relativism and attitude on individuals' digital piracy behaviour in a developing country. *Marketing Intelligence & Planning*, 33(3), 348–365.
<https://doi.org/10.1108/mip-09-2013-0149>
- Avia. (2022). (rep.). The Asia Video Industry Report 2023. Retrieved from <https://avia.org/wp-content/uploads/2022/10/Asia-Video-Industry-Report-2023.pdf>.
- Bewick, V., Cheek, L., & Ball, J. (2004). Statistics review 10: Further nonparametric methods. *Critical Care*, 8(3), 196–199. <https://doi.org/10.1186/cc2857>
- Bloemer, J. M. M., Odekerken-Schröder, G. J., & Martens, H. (2002). The Psychology Behind Commitment And Loyalty: An Empirical Study In A Bank Setting, (058), 1–29. <https://doi.org/10.26481/umamet.2002058>
- Chakraborty, D., & Paul, J. (2022). Healthcare apps' purchase intention: A consumption values perspective. *Technovation*, 120.
<https://doi.org/10.1016/j.technovation.2022.102481>
- Chakraborty, D., Siddiqui, M., Siddiqui, A., Paul, J., Dash, G., & Mas, F. D. (2022). Watching is valuable: Consumer views – Content consumption on OTT platforms. *Journal of Retailing and Consumer Services*, 70.
<https://doi.org/10.1016/j.jretconser.2022.103148>
- Chakraborty, D., Siddiqui, M., Siddiqui, A., Paul, J., Dash, G., & Mas, F. D. (2022). Watching is valuable: Consumer views – Content consumption on OTT platforms. *Journal of Retailing and Consumer Services*, 70.
<https://doi.org/10.1016/j.jretconser.2022.103148>
- Chatterley, A. (2022). MUSO Discover Q1 2022 Digital Piracy Data Insights. MUSO.
<https://www.muso.com/magazine/muso-discover-q1-2022-digital-piracy-data-insights>

- Cronan, T. P., & Al-Rafee, S. (2007). Factors that Influence the Intention to Pirate Software and Media. *Journal of Business Ethics*, 78(4), 527–545.
<https://doi.org/10.1007/s10551-007-9366-8>
- Duatibumi, N., & Setyowardhani, H. (2021). The Antecedents of Customers Intention Towards Over the Top (OTT) Video Streaming Based Services: The Stimulus-Organism-Response Model Approach. In *The 6th ICMEM 2021*. essay.
- Duffett, R. G. (2015). The influence of Mxit advertising on purchase intentions and purchase amid Generation Y (1st ed., Vol. 12, pp. 336–359). essay, *Journal of Contemporary Management*.
<https://journals.co.za/doi/epdf/10.10520/EJC173866>.
- Erciş, A., Ünal, S., Candan, F. B., & Yıldırım, H. (2012). The effect of brand satisfaction, trust and brand commitment on loyalty and repurchase intentions. 8th International Strategic Management Conference, 58, 1395–1404.
<https://doi.org/10.1016/j.sbspro.2012.09.1124>
- Hair, J. F., Celsi, M. W., Ortinau, D. J., & Bush, R. P. (2013). *Essentials of Marketing Research: Third Edition (Vol. 3)*. McGraw-Hill.
- Hati, S. R., Fitriasih, R., & Safira, A. (2019). E-textbook piracy behavior: An integration of ethics theory, deterrence theory, and theory of planned behavior. *Journal of Information, Communication and Ethics in Society*, 18(1), 105–123.
<https://doi.org/10.1108/jices-11-2018-0081>
- Hern, A. (2021). Streaming was supposed to stop piracy. Now it is easier than ever. *The Guardian*.
<https://www.theguardian.com/film/2021/oct/02/streaming-was-supposed-to-stop-piracy-now-it-is-easier-than-ever>
- Hodges, A. (2021). The Ethics of Digital Piracy and Copyright. LinkedIn.
<https://www.linkedin.com/pulse/ethics-digital-piracy-copyright-alexander-hodges/>
- Indonesia Population (Live). Worldometer. (2022).
<https://www.worldometers.info/world-population/indonesia-population/>
- Jacobs, R. S., Heuvelman, A., Tan, M., & Peters, O. (2012). Digital movie piracy: A perspective on downloading behavior through social cognitive theory. *Computers in Human Behavior*, 28(3), 958–967.
<https://doi.org/10.1016/j.chb.2011.12.017>
- Jansri, W. (2018). Consumer Perceived Value: A Systematic Review of the Research.
https://www.worldresearchlibrary.org/up_proc/pdf/1760-15355194681-6.pdf.

- Kantar. (2022). (rep.). The Future Of TV 2022: The state of OTT in Indonesia.
<https://pages.thetradedesk.com/rs/527-INM-364/images/The-Future-of-TV-In-donesia-2022.pdf>.
- Keiningham, T. L., Frennea, C. M., Aksoy, L., Buoye, A., & Mittal, V. (2015). A Five-Component Customer Commitment Model: Implications for Repurchase Intentions in Goods and Services Industries. *Journal of Service Research*, 18(4), 433–450. <https://doi.org/10.1177/1094670515578823>
- Kim, D., Park, K., & Bang, Y. (2022). The effect of TV drama piracy: An analysis of digital piracy users, internet buzz, and TV drama viewership. *Information & Management*, 59(2). <https://doi.org/10.1016/j.im.2022.103599>
- Kim, M. S., Kim, E., Hwang, S. Y., Kim, J., & Kim, S. (2017). Willingness to pay for over-the-top services in China and Korea. *Telecommunications Policy*, 41(3), 197–207. <https://doi.org/10.1016/j.telpol.2016.12.011>
- Koay, K. Y., Tjiptono, F., & Sandhu, M. S. (2020). Digital piracy among consumers in a developing economy: A comparison of multiple theory-based models. *Journal of Retailing and Consumer Services*, 55. <https://doi.org/10.1016/j.jretconser.2020.102075>
- Kwak, K. T., Oh, C. J., & Lee, S. W. (2021). Who uses paid over-the-top services and why? Cross-national comparisons of consumer demographics and values. *Telecommunications Policy*, 45(7). <https://doi.org/10.1016/j.telpol.2021.102168>
- Leung, D., & Seah, C. (2022). The impact of crisis-induced changes in refund policy on consumers' brand trust and repurchase intention. *International Journal of Hospitality Management*, 105. <https://doi.org/10.1016/j.ijhm.2022.103272>
- Mbango, P. (2018). Examining the effects of customer satisfaction on commitment and repurchase intentions of branded products. *Cogent Social Sciences*, 4(1). <https://doi.org/10.1080/23311886.2018.1521056>
- Mcalone, N. (2016). How piracy actually helps Hulu make a lot of great decisions. *Business Insider*.
<https://www.businessinsider.in/How-piracy-actually-helps-Hulu-make-a-lot-of-great-decisions/articleshow/51797032.cms>
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, Continuance, and Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates, and Consequences. *Journal of Vocational Behavior*, 61(1), 20–52. <https://doi.org/10.1006/jvbe.2001.1842>

- Mulla, T. (2022). Assessing the factors influencing the adoption of over-the-top streaming platforms: A literature review from 2007 to 2021. *Telematics and Informatics*, 69. <https://doi.org/10.1016/j.tele.2022.101797>
- Nagaraj, S., Singh, S., & Yasa, V. R. (2021). Factors affecting consumers' willingness to subscribe to over-the-top (OTT) video streaming services in India. *Technology in Society*, 65. <https://doi.org/10.1016/j.techsoc.2021.101534>
- Nhan, J., Bowen, K., & Bartula, A. (2019). A comparison of a public and private university of the effects of low-cost streaming services and income on movie piracy. *Technology in Society*, 60. <https://doi.org/10.1016/j.techsoc.2019.101213>
- Ostertagová, E., Ostertag, O., & Kováč, J. (2014). Methodology and Application of the Kruskal-Wallis Test. *Applied Mechanics and Materials*, 611, 115–120. <https://doi.org/10.4028/www.scientific.net/amm.611.115>
- Palomba, A. (2021). Building OTT brand loyalty and brand equity: Impact of original series on OTT services. *Telematics and Informatics*, 66. <https://doi.org/10.1016/j.tele.2021.101733>
- Panas, E. E., & Ninni, V. E. (2011). Ethical Decision Making in Electronic Piracy: An Explanatory Model based on the Diffusion of Innovation Theory and Theory of Planned Behavior (2nd ed., Vol. 5, pp. 836–859). essay, *International Journal of Cyber Criminology*.
- Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why We Buy What We Buy: A Theory of Consumption Values. *Journal of Business Research*, 22(2), 159–170. [https://doi.org/10.1016/0148-2963\(91\)90050-8](https://doi.org/10.1016/0148-2963(91)90050-8)
- Shin, J., Park, Y., & Lee, D. (2016). Strategic management of over-the-top services: Focusing on Korean consumer adoption behavior. *Technological Forecasting and Social Change*, 112, 329–337. <https://doi.org/10.1016/j.techfore.2016.08.004>
- Sihombing, A. K., Permata, R. R., & Ramli, T. S. (2021). Comparison of Digital Copyright Protection on Over the Top (OTT) Streaming Content Media in Indonesia and the United States. *PADJADJARAN Jurnal Ilmu Hukum (Journal of Law)*, 8(2), 183–212. <https://doi.org/10.22304/pjih.v8n2.a2>
- Sohaib, M., Rehman, M. A. U., & Akram, U. (2016). Underlying Effect of Customer Satisfaction on Repurchase Intentions: Mediating role of Trust and Commitment. *European Journal of Business and Management*, 8(10). Retrieved from <https://core.ac.uk/download/pdf/234627202.pdf>.

- Stratton, S. J. (2021). Population Research: Convenience Sampling Strategies. *Prehospital and Disaster Medicine*, 36(4), 373–374.
<https://doi.org/10.1017/s1049023x21000649>
- Timmerman, A. (2022). Forget Netflix and Disney: A local streaming service is king in Indonesia. *Rest of World*.
<https://restofworld.org/2022/vidio-the-netflix-killer-of-indonesia/>
- Van der Sar, E. (2022). Online Piracy Continues to Rise With the US Firmly in the Lead.
<https://torrentfreak.com/online-piracy-continues-to-rise-with-the-us-firmly-in-the-lead-221011/>
- Wadodkar, S., & Kumar, V. (2022, May). Indonesia over-the-top market size, share and analysis: Forecast- 2021-2030. Allied Market Research.
<https://www.alliedmarketresearch.com/indonesia-over-the-top-market>
- Wang, Y.-S., Yeh, C.-H., & Liao, Y.-W. (2012). What drives purchase intention in the context of online content services? The moderating role of ethical self-efficacy for online piracy. *International Journal of Information Management*, 33(1), 199–208. <https://doi.org/10.1016/j.ijinfomgt.2012.09.004>
- Welter, B. S. (2012). *The Netflix Effect: Product Availability and Piracy in the Film Industry* (thesis). Athens.
- Wetzels, M., de Ruyter, K., & van Birgelen, M. (1998). Marketing service relationships: The role of commitment. *Journal of Business & Industrial Marketing*, 13(4/5), 406–423. <https://doi.org/10.1108/08858629810226708>
- Yoon, C. (2010). Theory of Planned Behavior and Ethics Theory in Digital Piracy: An Integrated Model. *Journal of Business Ethics*, 100(3), 405–417.
<https://doi.org/10.1007/s10551-010-0687-7>
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, 52(3), 2–22. <https://doi.org/10.2307/1251446>

Appendix

Bachelor Thesis Questionnaire

Thank you for taking the time to fill in this questionnaire!

As a Bachelor student, I require responses for my thesis in the form of a questionnaire. My objective is to ask Indonesian citizens (whether currently living in Indonesia or temporarily away for studies or work) on their consumer behavior towards OTT (over-the-top) streaming services (such as Netflix or Disney+ Hotstar) and digital piracy.

Some things worth mentioning:

- This questionnaire will remain anonymous. You will not be asked to provide your name or email.
- This questionnaire will be open until **January 5, 2023 at 22:00 WIB**.
- You are not required to participate if you do not feel like answering any of the questions.

* Required

1. I agree to voluntarily complete this questionnaire *

Mark only one oval.

Yes

No

OTT Streaming Service & Digital Piracy

2. When streaming movies or TV shows, how likely are you to purchase/use: *

Please check one response for each type.

Examples of:

- OTT streaming service -> Netflix or Disney+ Hotstar
- Piracy websites -> ThePirateBay or GoMovies

Mark only one oval per row.

	Definitely would not purchase/use (less than 10% chance)	Probably would not purchase/use (10-49% chance)	Probably would purchase/use (50-89% chance)	Definitely would purchase/use (90-100% chance)
OTT streaming service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Piracy websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Perceived consumption values

3. OTT platforms offer content of consistently good quality. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

4. Piracy websites offer content of consistently good quality. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

5. OTT platforms offer the content they promise. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

6. Piracy websites platforms offer the content they promise. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

7. I think purchasing an OTT platform require less effort in comparison to downloading from a piracy website. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

8. Answer "Disagree" for this question *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

9. I enjoy watching movies and/or TV shows. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

10. I derive pleasure from watching movies and/or TV shows. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

11. I feel relaxed when I watch movies and/or TV shows. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

Ethical behavior

12. I would feel guilty if I pirated digital products. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

13. To pirate digital products goes against my principles. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

14. It would be morally wrong for me to pirate digital products. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

Commitment

15. I do feel a strong sense of belonging to streaming service providers. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

16. I do feel emotionally attached to streaming service providers. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

17. Streaming service providers have a great deal of personal meaning to me. *
0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

18. I do feel obligated to remain with streaming service providers. *
0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

19. I would feel guilty if I stop using streaming service providers. *

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

20. I would not stop using streaming service providers because I have a sense of obligation *
to its usage.

0. Not applicable (N/A), 1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Mark only one oval.

N/A

0

1

2

3

4

5

Strongly agree

Demographics

21. Gender *

Mark only one oval.

Male

Female

22. Age *

Please only put numbers

23. Occupation *

Thank you!