Impact of enjoyment on the usage continuance intention of video-ondemand services

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Abstract

Understanding how video-on-demand (VoD) technology evolves and what outcomes can be expected from the continued use of VoD has a greater impact on the long-term viability of an information system. This study examines the behavioural intentions of VoD consumers to continue using the service and further examines the influence of enjoyment on the intention to continue to use. To explore the usage continuance, we adopt the expectation confirmation model (ECM) for information technology and integrate it with the hedonic system adoption model. Our aim is to address the lack of literature around the ECM-IT model extended with hedonic variables and to contribute to the small but growing body of research of VoD services. The partial least squares (PLS) method was used to analyse an online survey of 205 individuals. The results suggest that satisfaction is the greatest predictor of the usage continuance intention and enjoyment strongly impacts satisfaction. Enjoyment in a hedonic system context is a manifestation of positive emotions that are translated into satisfaction. Our model explains 48.1% of the variance of the usage continuance and 53.8% of the satisfaction. The findings of this study offer an opportunity to better understand the long-term viability of VoD Services.

Keywords: Video-on-Demand; Information System Continuance; Expectation-Confirmation Model; Hedonic System Adoption Model; Intrinsic Motivation; Enjoyment;

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1. Introduction

The evolution of technology – mainly the information and communications technology (ICT) – during the last decade has shifted the TV paradigm toward a convergent blend with internet, creating new ways of consuming media content. The increasing rates of internet penetration all over the globe and the escalating market competition between cable and OTT (over-the-top) services will create a demand for video-on-demand (VoD) services by 2021 twice the size of what we are seeing today (Cisco, 2015). Recent investments in emerging markets such as India, Japan, Mexico, and Brazil from international OTT service providers like Netflix, show how this technology will grow in the years ahead (Grand View Research, 2017). However, by looking at the European statistics (Eurostat, 2017a) and comparing the consumption of those types of services in 2016, there are substantial differences. While the average percentage of EU individuals who use VoD is 17%, Norway has the highest score with 52% and Portugal scores below the average with 6%. Consequently, there may be different behaviours toward the VoD platforms, not only in the adoption process but, most importantly for this study, in the usage continuance. Furthermore, this difference may have different sources; it can be caused by social, economic or political variables that influence individuals' choices. Inevitably, it is important for companies to understand the differences of each market because it will shape their business. It influences how they acquire new consumers and how they retain the ones that exist. Specifically, the subscription-based ICT business relies heavily on consumers' monthly fees (Hong et al., 2006). According to a study on web loyalty, increase in customer retention by 5% could result in an increase of 25% - 95% in profits (Reicheld and Schefter, 2000; Sharma & Sharma, 2019). "*For the subscription based businesses, the primary source of future cash flows is customers*" (McCarthy et al., 2017,p. 17). In summary, the continued use of technology benefits companies by cutting costs on acquiring new customers and by providing a constant revenue important for the survival of the business. Furthermore, continuance use is linked with loyalty and high levels of satisfaction (Nascimento, Oliveira, & Tam, 2018).

Nevertheless, there is a lack of research about VoD services and its consumers, namely in the stage of post-adoption. For example, Wang et al. (2017) studied how to predict users' viewing behaviour and preferences by applying machine learning methods. Dogruel (2018) studied the cross-cultural differences in movie selection in different countries. Chuah et al. (2016) studied the drivers of smartwatch adoption, and Ha and Yook, (2009), Chae, (2010), and Lin, et al., (2012) investigated the continuance intention of Internet Protocol Television (IPTV). To add to the literature, we created a model that joins two of the most used theories in consumer behaviour research: the technology expectation confirmation model of information systems continuance (ECM-IT) (Bhattacherjee, 2001), based on the expectation confirmation theory (ECT) (Oliver, 1980) and the hedonic system adoption model (Heijden, 2004).

Each approach has strengths and weaknesses, and these are offset and complemented by combining the various models and it is not our goal to discuss the generalisability versus context specificity in theorising (Bacharach, 1989). In this article, we are choosing both approaches, which complement each other, meaning that their combination is useful for understanding the impact of continuance intention and IS discipline as a basis for identifying broadly applicable interventions that can fuel future research. By focusing on the post acceptance variable, ECM-IT assumes that satisfied IS (information system) users are more prone to continue using the technology, which is a success factor for the long-term viability of the IS provider. The hedonic system adoption model postulates that for hedonic IS, perceived enjoyment (PE) plays a prominent role in the usage intention. Conversely, for a utilitarian IS, perceived ease of use has a greater effect on the usage intention. The convergent constructs of both models improve our understanding of continuance intention of VoD platforms.

According to Nabavi et al. (2016), 52% of the papers analysed in their study employ ECM-IT theory in the context of continuance intention, but when looking at their findings about internet and online categories such as IPTV, there is a lack of consensus when it comes to combining the ECM-IT model with intention/motivation theories. The same study also indicates PE in the context of hedonic IS, such as social media, as one of the most researched variables. Moreover, for the continuous usage of mobile information systems domain, Shaikh and Karjaluoto (2015) identified only two studies that extend the ECM-IT model with post-adoption beliefs such as PE.

Although the concept of VoD services is not new, over the past few years it has seen an acceleration in the distribution channels, including a growing number of providers, leading to increased attention amongst the population. Those services have become so popular that they have started to become part of peoples' lives that they can carry with them in their mobile devices. The popularity has changed consumers' behaviour regarding viewing content, such that "binge-watching" is now a popular term used to describe a practice of watching content for a long period of time (Rubenking et al., 2018). The more time consumers spend on the platform watching their favourite content, the more time they are willing to spend in the future. In summary, consumer enjoyment of the service is translated into even more time spent using that service (Rubenking & Bracken, 2018). That is why it is important to understand the main drivers that make the consumer continue using the services.

The contribution of this work is threefold. First, to the best of our knowledge there are no studies that analyse the usage continuance intention of the VoD services. Despite growing research about the consumer post-adoption behaviour on Information System technology, none of them explore the VoD technology specifically. Second, we expect that by adding the variable enjoyment and exploring its direct impact on continuance intention, we will shed light on why users intend to continue using the VoD services and how the VoD providers can enhance user experience and increase user retention.

Third, this study helps VoD providers to understand the determinant factors that influence the usage continuance intention and to possibly develop a platform that provides the most value to retain customers.

The remainder of the paper proceeds as follows. The second section explains what a VoD platform is and how this type of service is being consumed in Europe. It also describes the expectation confirmation model, followed by the importance of the technology acceptance model (TAM) to influence the hedonic motivation systems theory. The third section describes the research model and hypotheses. The fourth section describes the methodology used to test the research model. The fifth section presents the results of the analysis. Finally, the results are discussed that include the implications, limitations, and possible further research directions.

2. Literature Review

2.1 Definition of video-on-demand (VoD)

The VoD concept arose in the media industry and is related with how video content is delivered. It is a technology that stores all the content that can be accessed at any time. It can be paused, rewound, skipped, or even downloaded. It is a very different approach when compared with traditional TV, in which the content is available only during the streaming time of a particular programme (Nielsen, 2016; Abreu et al., 2017) . A very common and early example of VoD services is the video services in a hotel, whereby guests pay to have access to a range of channels from which they can pick (Lee, 2002).

With the evolution of the internet and its increasing importance in the world, leading media companies had to rethink their approach regarding their delivery channels. In fact, media companies all around the globe whose core business is delivering content through cable or satellite (e.g., Comcast (USA), MEO (Portugal), and Sky (UK), or video rentals like Netflix) saw the benefits of implementing this technology (Yu et al. 2006). Others saw the opportunity to build successful business models exclusively based on providing VoD services like TiVo or even Netflix after 2007 (Allen et al. 2014).

To access a VoD platform, it is necessary to have a device with internet connection or a media set-top box. In the first scenario, to have access to the content, one needs a device with internet connection such as smart TV, computer/laptops, or mobile devices such as smartphone or tablet, and in addition, one must pay a fee or a subscription, which can be a monthly fee or a one-off fee for specific content such as movies, like Amazon with Prime TV and Amazon Video (Amazon, 2018).

Another way to have access to VoD services is via the set-top box, which can be acquired from a media company (Sky, Roku and Amazon). In Portugal, most of the media companies still rely on the set-top box to provide the service, as is the case with MEO and NOS (ANACOM, 2016), for example. Choosing this option, the costs can be higher when compared with the first option. With a set-top box, there are two other main options. The first is acquiring the set-top box (e.g., Roku), and thereafter, subscribing to one or several media

providers from their partners (Amazon, Hulu, etc.). Another option (and the most common in Portugal) is that the consumer pays for a "regular" media monthly package with a set of channels in which the box is included in the final price. The Portuguese communications authority, ANACOM (2017), reports 3.72 million consumers who subscribe to a monthly TV package in the second semester of 2017.

With regard to the consumption of VoD services, there are some differences between countries. When comparing the percentage of individuals who watch VoD content, Norway leads with 52%, the UK scores 32%, and Portugal has 6%, which is against the 17% EU average (Eurostat, 2017a). Another important indicator to consider is the level of internet access by households. While the Euro Area stands at 87%, the Netherlands and Denmark have 98%, the UK 94%, and Portugal 77% (Eurostat, 2017b).

In summary, the VoD platform is a technology that has been developed by different media players all around the globe and room for further development exists (Nielsen, 2016). The evolution of the technology, particularly the IS, during the last decade has shifted the TV paradigm toward a convergent blend with internet, creating new ways of consuming media content. Traffic on the VoD services platforms will double by 2021 in the EU region (Cisco, 2015). Furthermore, the same report forecasts a twofold increase in traffic, equivalent to a 14% compound annual growth until 2021 for the UK and a threefold increase in traffic, equivalent to a 25% compound annual growth for the remainder of the western European countries until 2021.

2.2 Expectation confirmation model (ECM)

The expectation confirmation or disconfirmation model is a framework used in studies related with consumer behaviour. It is based on the notion that a repurchase intention relies strongly on consumer satisfaction. The original model, ECT (Oliver, 1980), establishes five variables for the repurchase behaviour based on expectations. It is important to distinguish between acceptance and continuance processes. They differ both conceptually and temporally, as the second can happen only after the first (Bhattacherjee and Lin, 2014). While a repurchase behaviour is highly dependent on satisfaction and on the confirmation (disconfirmation) of the initial expectations, the acceptance relies on perceived usefulness and perceived ease of use.

Hence, in the post-adoption stage, behavioural usage continuance intention is determined by the sum of previous judgements of outcomes, or in other words, the previous experience shapes satisfaction and the future expectations (Lu et al., 2018). Bhattacherjee and Lin (2014) capture this effect through the satisfaction and expected benefits derived from the perceived usefulness of future usage. In this context, the variable confirmation (or disconfirmation) accommodates the changes of the initial expectations that occur after the first interaction with the IS.

In this model, expectation plays an important part because it determines the future repurchase intention or the usage continuance. Oliver (1980) identified three factors that can influence expectations. The product

itself and its characteristics include brand connotations and symbolic elements and previous experience; the second concerns the communication of the product and lastly, the individual characteristic. However, in a post-adoption stage, the initial expectations are replaced by the confirmation (or disconfirmation) of the initial expectations. In other words, following Oliver (1980) and Bhattacharjee (2001), the confirmation is the result of the difference between the real performance of the IS and the initial perceived performance.

Moreover, the initial expectations work as a baseline to which the real performance is compared, and several outcomes can arise from this assessment. Oliver (1980) and Bhattacherjee and Lin (2014) reported that there can be a positive confirmation or a negative confirmation (disconfirmation). The first happens when the initial expectation is exceeded with the interaction/use of the technology. The disconfirmation is the opposite and occurs when the actual performance fails to rise to the initial expectation.

The assessment of the confirmation (disconfirmation) will directly impact satisfaction or affective response. Citing Bhattacharjee (2001, p.354)*, "Both definitions underscore a psychological or affective state related to and resulting from a cognitive appraisal of the expectation performance discrepancy (confirmation)."* Although there are many definitions of satisfaction, for the continuance intention behaviour analysis, Bhattacherjee (2001) and Bhattacherjee and Lin (2014) contextualise satisfaction as the result of the confirmation of the expectations from prior technology usage. In spite of some lack of clarity about how satisfaction influences usage continuance, Bhattacherjee and Lin (2014) and Lu et al. (2018) assume that satisfaction is an emotion that can directly drive intention.

Besides the impact of confirmation, perceived usefulness is also reported to impact satisfaction (Hong et al., 2006). In fact, with IS interaction, the expectations are shaped in accordance with the interactions, which will also impact the future expectations about the IS performance (Bhattacherjee, 2001; Lu et al., 2018). If a user is accustomed to interact with a system in a certain way and if for some reason the system changes the interaction, it will have an impact on satisfaction (positively or negatively).

The ECM perceived usefulness, based on TAM, is the strongest predictor of the usage continuance intention (Davis et al., 1989). Following Bhattacherjee (2001) and Hong et al. (2006)*,* it consistently influences the user intentions across temporal stages. However, the original theory had some limitations that Bhattacherjee (2001) contemplates in his model. The first is that it ignores the change of expectations during the usage process. Secondly, it does not show how those changes can impact the subsequent cognitive processes (Bhattacherjee, 2001; Hong et al. 2006). This model has some vulnerabilities. The first is that in the pre-acceptance stage, in which the initial expectations are based mainly on the exterior stimulus, one of the risks is being influenced by another's opinions (as Oliver (1980) pointed out), which can result in biased expectations. The other is during and after the adoption stage, when the user has had the first experience with the IS. The interactions or experience with the IS will adjust the initial expectations. As a result, the initial expectations will be replaced by the adjusted expectations. It is the notions of time and experience that the original expectation-confirmation theory did not accommodate (Bhattacherjee, 2001).

The main changes made by Bhattacherjee (2001) to the original model are: (1) the effects of pre-acceptance on expectations are measured by the confirmation and satisfaction constructs; (2) it includes only post-consumption variables (the reason to include them is because pre-acceptance expectations can change over time and with the level of experience) and (3) post-expectations are represented by perceived usefulness. Because perceived usefulness is a cognitive belief that influences technology usage, it is also consistent with the ECM's original definition (Zhihuan and Scheepers, 2012).

In a broader context, ECM assumes that expectations – initial expectations and/or the post-expectations (future benefits) measured by perceived usefulness about the technology – have a strong influence on satisfaction. In summary, ECM postulates that satisfied users are more likely to continue using the technology.

Although this perspective is widely accepted, it is restricted to the confirmation/disconfirmation of expectations and future expected benefits from the IS use. Most models focus on the performance aspect, leaving behind other aspects (Venkatesh et al., 2011), like motivations, which will be discussed in the next section.

2.3 Hedonic information system (HIS) and Technology acceptance model (TAM)

One of the most important models with regards to consumer adoption behaviour – widely used across different industries – is TAM. It stipulates that intention to adopt a technology is a good predictor of its actual usage (Davis et al., 1989; Hong et al., 2006). The initial model from Davis et al. (1989) hypothesised two major variables that influence intention to adopt a technology. Those variables are perceived ease of use and perceived usefulness. Following the authors' definitions, perceived ease of use is the extent to which users believe that learning how to use a technology will be relatively free of effort; and perceived usefulness is the extent to which individuals believe that using a technology will enhance their job performance.

Years after the introduction of the first TAM model, the same authors developed a new model with a new variable, PE (Davis et al., 1992). Following the authors' definition, enjoyment *"refers to the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated…"* (Davis et al., 1992 p.1113). They demonstrated the importance of enjoyment on the user acceptance of a computer in a workplace. Consequently, this new variable brought clarification to why in some studies related with the World Wide Web (WWW), perceived usefulness and usage intention show a weaker association when compared with perceived ease of use (Heijden, 2004). Moreover, Heijden (2004) studied the determinants of the usage intention of different types of IS. The results show that in certain cases in which the IS is more pleasure-oriented (hedonic), the variable perceived

usefulness loses its predictive power *vis-à-vis* other variables, such as enjoyment. This is also noted by Davis et al. (1992), Zhihuan and Scheepers (2012), Lowry et al. (2013), and Wu and Lu (2013).

It is important to note that many authors use TAM to explain adoption behaviour (Chuah et al., 2016; Ha and Yook, 2009). Others show the potential of TAM to predict consumers' usage continuance behaviour. In particular, Hong et al. (2006) identify several studies that adopt TAM to study post-adoption behaviour. This is because, according to Davis et al. (1989), perceived usefulness is the only cognitive belief that consistently influences user intention across temporal stages. If the user does not perceive the IS as useful, he/she will discontinue its use.

Heijden (2004) demonstrated the need to have different approaches when studying user behaviour for different types of IS. He differentiates two types of IS, hedonic and utilitarian. He draws the line that separates these two types of technologies based on behavioural motivations to use, and the goals that users want to achieve by interaction with the system. Regarding the goals, they can be related with increasing task performance (utilitarian tasks), for example, using software to run a report for the company or hedonic when seeking a self-fulfilling experience such as watching a film on a VoD platform. In the first case, we can associate the motivation with the achievement of an external goal, and in the second case, the goal is simply to satisfy an internal necessity to be entertained through an interaction with the system (Heijden, 2004; Lin and Lu, 2011; Wu and Lu, 2013). That is, for hedonic IS, PE is the greatest predictor on the usage intention. While for a utilitarian IS, perceived ease of use has a greater effect on the usage intention.

Wu and Lu (2013) mention an additional type of IS, the dual-purposed IS. It is hard to give a precise definition because it is hard to measure the utilitarian and the hedonic component of an IS. The authors give an explanation on how to determine if an IS is hedonic or utilitarian. They apply a rule of thumb whereby if 80 percent of the time users interact with the system to have a relaxed and fun experience, then the IS is classified as hedonic, otherwise the IS is utilitarian. A system is classified as dual when the above conditions are not met. Because this definition is not precise, it may not be suitable for every IS that does not fit in the two main categories. For example, an email can be used for both utilitarian (i.e. send a work report) and hedonic purposes (i.e. send an invitation to a party), and the same occurs with half of the WWW (e.g. Google Search).

Another argument from Heijden (2004) is that technology acceptance is determined by motivations. It assumes that individuals actively initiate behaviours to satisfy their needs (Lu et al., 2018). Essentially, the behaviour is driven by motivations and can have different sources: internal (intrinsic) or external (extrinsic) (Wu and Lu, 2013; Lin and Lu, 2011). Following Wu and Lu (2013), Lin and Lu (2011), and Heijden (2004), extrinsic motivation is a behaviour guided by goal-driven reasons and depends upon the external environment. With this type of motivation, the behaviour is not the goal itself, e.g. performing a task to achieve monetary goals. Conversely, intrinsic motivations are those whose goal is the behaviour itself. This type of behaviour is related with satisfaction that arises from the experience itself and is tied to the

individual's interests (Wu and Lu 2013). For example, most people watch TV and listen to music for leisure purposes.

In this respect, and following the results of Wu and Lu (2013) and Heijden (2004), extrinsic motivations are related with utilitarian IS and intrinsic motivations are related with hedonic IS. By looking at the first study's results and considering the definitions of perceived usefulness and perceived ease of use, both from TAM, one is related with increasing job performance and the other with the job efficiency, respectively. That is, the motivations that increase job performance and efficiency are related with the achievement of external goals (Wu and Lu, 2013; Lu et al., 2018). Heijden (2004) and Lin and Lu (2011) also identified several success factors for the utilitarian system. The utilitarian IS should have the right functionalities that can perform specific tasks with different levels of requirements, provide the least distraction as possible, and focus on productivity.

Intrinsic motivations are driven by reactions that arise from the experience and are highly associated with the activity itself, which fits with the goals of hedonic IS (Heijden, 2004; Wu and Lu, 2013; Lu et al., 2018). Recalling what was said about PE, it measures the degree of fun derived from using a system. Therefore, intrinsic motivations are related with hedonic IS (Heijden, 2004). Hong et al. (2006) show that users' perceptions over instrumental goals, such as gaining productivity or recognition (perceived usefulness), explain only part of satisfaction. For hedonic IS, Heijden (2004) and Lin and Lu (2011) suggest that the system should focus on the ability to offer a pleasant experience at the same time as encouraging users to prolong the experience by focusing on the visual appeal. The studies around the role of PE on explaining continuance intention are not very conclusive due to the nature of the hedonic IS under study. Although there are studies in which PE is a factor in explaining continuance intention , PU also emerges as statistically significant (Barnes, 2011; Nabavi et al., 2016). This might suggest that even though the system is classified as hedonic, the underlying motivations are more task driven.

Considering the VoD providers, it is easy to understand that each of them has their own unique way to deliver the content. It can be related with the use of the platform – layout of the webpage, colours, sounds, images, how the content is shown (most popular content, similar content or unusual content), search functionality in the main page or in the content. For example, Amazon Prime x-ray feature gives users information about actors, characters, a great deal of information about the movie and in some scenes, it is even possible to have an explanation about a specific dialogue between characters.

Consequently, it is a more complex environment when compared with watching traditional TV. The users are not only watching the content, but are searching it at the same time, and possibly they are doing this on different platforms like TV and smartphone (Abreu et al., 2018). As such, we need a model that can accommodate a more complex behaviour and explain the influence of the motivations, and by conceptualising the difference between utilitarian and hedonic IS, we can infer the motivations that attract users to VoD platforms. Thus, considering the nature of VoD, in this study, we assume that the platform is a

hedonic IS, and because most people use the VoD platforms for the fun that comes from the experience of watching the content (i.e. entertainment purposes), the focus will be on the intrinsic motivators. We thus aim to measure the influence of enjoyment on the continuance intention of the VoD users.

3. Research model and hypotheses

Various studies show how the motivators (intrinsic and extrinsic) influence the information system-usage behaviour (Lowry et al., 2013; Heijden, 2004; Wu and Lu, 2013; Zhihuan and Scheepers, 2012). This study's fundamental contention is that from a motivational perspective, users of VoD services will continue to use the services because they are internally motivated by the platform capabilities to deliver the content, and that internal motivations are expressed in enjoyment that directly impacts the intention to continue to use. To validate these statements, we created and tested several research hypotheses. The research model is depicted in Figure 1.

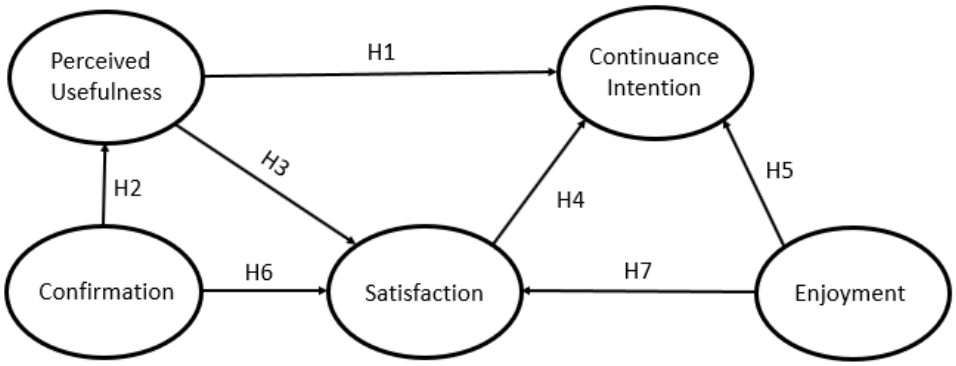


***Figure 1**- Research Model*

It is important to note that this study is focused on current active users (or users who have already adopted the technology). Contextualising within the ECM, the initial expectations and the first interaction were already accessed during the adoption stage. Bhattacherjee (2001) proposed some changes of the original model to accommodate the initial experience. The initial expectations of the performance are captured by the confirmation construct and the post-expectations are measured by perceived usefulness. Therefore, the model can accommodate the changes of the expectations that occur over time with the gain of experience (Hong et al., 2006).

TAM studies demonstrate that perceived usefulness is one of the main drivers of the usage intention (Bhattacherjee and Lin, 2014; Davis et al., 1989;1992). This attitudinal belief, perceived usefulness, measures the instrumentality of the IS use and impacts attitude/intentions substantively and consistently over time. Indeed, TAM studies demonstrate that perceived usefulness is the strongest determinant of intention because with time and experience, the effect of perceived ease of use tends to diminish (Heijden, 2004; Brown, Venkatesh, and Goyal, 2012; Bhattacherjee and Lin, 2014;). According to Nascimento, Oliveira, and

Tam (2018) and Lin, Featherman, and Sarker (2017), perceived usefulness has a positive impact on the continuance intention. Based on that the user may have continuance intention if he/she perceives usefulness in the VoD services. Therefore, we posit:

H1: The user perceived usefulness about the VoD services positively influences the usage continuance intention.

Perceived usefulness in Bhattacherjee's (2001) work captures future expectations. Also, It is the baseline of reference against which the confirmation of the expectations is measured (Hong et al., 2006; Bhattacherjee, 2001). Hence, the level of confirmation will influence how the user perceives the VoD platform. If the initial expectations about the VoD platform are positively met or exceeded by the performance of the platform, the level of confirmation will be positive (Brown et al., 2012), and this condition shapes the user's future expectations. The higher and more realistic are the expectations, the greater the satisfaction will be (Hong et al., 2006; Venkatesh and Goyal, 2010)**.** If the expectations about the usefulness of the platform are very low, this means that users do not have a meaningful reason to continue to use the VoD services, which in turn will result in disappointment (Brown et al., 2012). Thus, we posit:

H2: The user level of confirmation with VoD services positively influences perceived usefulness.

H3: The user perceived usefulness about the VoD services positively influences satisfaction.

Several studies validate how satisfaction is related with the user's continuance intention. Bhattacherjee (2001, 2014) shows that satisfaction is the strongest predictor of user's continuance intentions. In fact, in the literature, the consumer's level of satisfaction is the main driver of the repurchase decision – as it is with the usage continuance (Hong et al., 2006; Sharma & Sharma, 2019). "Per ECT, users' IS continuance intention is determined primarily by their satisfaction with prior IS use" (Bhattacherjee, 2001, p.355). For VoD usage continuance intention, it is important that the user feels satisfied with the service, which will at least guarantee the continuance intention. As such, we formulate that:

H4: The user satisfaction with VoD services positively influences usage continuance intention.

The effect of PE on usage intention was first validated in the TAM model (Davis et al., 1992). Heijden (2004) and Wu and Lu (2013) show how different variables play different roles when they accept a utilitarian or hedonic IS. For this study, hedonic IS, intrinsic motivators (like enjoyment), play a strong role to determine the usage intention. Also, Wu and Lu (2013) show a strong correlation between PE and behavioural intention. Therefore, we posit that:

H5: The user's enjoyment while using the VoD platform positively influences usage continuance intention.

Moreover, the level of satisfaction is predicted by the level of confirmation/disconfirmation (Venkatesh and Goyal, 2010; Bhattacherjee, 2001; Bhattacherjee and Lin, 2014). The level of confirmation is measured by the difference between expectations and the real performance of the IS. In other words, the expectations formed

after the first usage can be positive, negative or indifferent (Bhattacherjee and Lin, 2014; Oliver, 1980). In another study related with mobile apps, the variable confirmation was a stronger predictor of the users' satisfaction (Tam et al. 2018), which is also consistent with Bhattacherjee (2001). Based on that, if the expectation is closer to the user's actual experience of VoD service, it is expected that the user will have more satisfaction. Therefore, we posit the following:

H6: The user level of confirmation with VoD services positively influences satisfaction.

The work of Lowry et al. (2013) and Wu and Lu (2013) underscore the idea that intrinsic motivation is the most consistent human predictive behaviour. That kind of behaviour is performed for its own sake out of pleasure and inherent satisfaction (Agarwal and Karahanna, 2000). In fact, according to Wu and Lu (2013), the expression of intrinsic motivation is usually manifested with positive emotions that are derived from engaging in the same or similar activities. Moreover, Lu et al. (2017) show that enjoyment has a strong impact on satisfaction. In addition, Davis et al. (1992) and Hong et al. (2006) show that perceived usefulness is not the major determinant in the user's satisfaction with computers in the workplace and on mobile internet, respectively. Therefore, we state that the higher is the level of enjoyment, the greater will be the satisfaction, and we posit:

H7: The user's enjoyment while using the VoD platform positively influences satisfaction.

4. Methods

4.1 Measurement Instruments

All measurement items (Table 1) were adapted from Bhattacherjee (2001), Lee (2010), Vila and Kuster (2011) and Lowry et al. (2013) with some modifications. From the literature, perceived usefulness (PU) came from Bhattacherjee (2001); IS continuance intention (CONT) and confirmation (CONF) came from Bhattacherjee (2001) and Lee (2010); satisfaction (SAT) from Vila and Kuster (2011) and enjoyment (JOY) from Lowry et al. (2013). The data were collected using an online survey conducted through a survey website. All items were measured by a seven-point Likert scale, anchored from totally disagree (1) to totally agree (7).

Table 1- Questionnaire

Constructs	Items	Adapted from
Continuance intention	CONT1. I intend to continue using VoD services rather than discontinue its use. CONT2. My intentions are to continue using VoD services rather than to use any alternative means (Traditional TV). CONT3. I will use the VoD services on a regular basis in the future. CONT4. I will frequently use the VoD services in the future.	(Bhattacherjee, 2001; Lee, 2010)
Satisfaction	SAT1. I think I made the correct decision in using the VoD services. SAT2. My experience with VoD platform has been satisfactory.	(Vila & Kuster, 2011)

	SAT3. I am satisfied with the VoD services.	
	SAT4. I am satisfied with the service provided by VoD providers.	
Confirmation	CONF1. My experience with using VoD services was better than what I expected.	
	CONF2. The service level provided by the VoD providers was better than what I expected.	(Bhattacherjee, 2001)
	CONF3. Overall, most of my expectations from using VoD services were confirmed.	
	CONF4. The VoD services can meet demands in excess of what I required for the service.	
Joy	JOY1. I found using the VoD services to be enjoyable.	
	JOY2. I had fun using the VoD services.	
	JOY3. Using the VoD services was boring.	(Lowry et al., 2013)
	JOY4. The VoD services really annoyed me.	
	JOY5. The VoD experience was pleasurable.	
	JOY6. The VoD services left me unsatisfied.	
Perceived	PU1. The VoD services decreased my stress.	
Usefulness	PU2. The VoD services helped me better pass time.	
	PU3. The VoD services provided a useful escape.	(Bhattacherjee, 2001)
	PU4. The VoD services helped me think more clearly.	
	PU5. The VoD services helped me feel rejuvenated.	

4.2 Data Collection

The online context was chosen because of the nature of the technology under study. VoD services are provided through the internet and most users share content related information on social media platforms. For the survey, we emailed the link of the survey to university students and employees of two English companies. This decision is related with the wide nature of the VoD platforms, which is used across age, gender and profession.

The survey was initially developed in English, based on the literature, and the final version was translated into Portuguese by a professional translator and then back into English to ensure translation consistency (Brislin, 1970). The data were collected using an online survey conducted between February 2018 and June 2018. To test the instrument and refine the questions, a pilot survey was conducted gathering 27 valid surveys, which were not included in the main survey. The most significant changes were in the items of enjoyment (Joy), which led us to add three more questions from Lowry et al. (2013).

Of the 248 responses, 205 were valid (82.66 percent); 43 were removed (17.34 percent), of which 32 did not use VoD platforms. As shown in Table 2 of the 205 valid responses, 55.1% are women, more than half of the respondents are between 18 and 35 years old (61.5%), and with a higher level of education (75.6%) (bachelor's and master's degrees). The sample comprises students (26.8%), managers (26.3%) and professionals (24.9%). To test for non-response bias, as suggested by Armstrong & Overton (1977), we looked for significant differences by comparing early and late respondents for each of the constructs. Table 3 shows the distribution of the early and late respondent groups using the Kolmogorov-Smirnov (K-S) test (Ryans, 1974) . The sample distributions of the two groups do not differ significantly, which indicate an absence of non-response bias (Ryans, 1974).

Table 2 - Demographic data of responses (n=205)			
Age		**Gender**	
18-25	33.2% (68)	Female	55.1% (113)
26-35	28.3% (58)	Male	44.9% (92)
36-45	16.6% (34)		
46-55	16.6% (34)	**Profession**	
56-65	5.4% (11)	Clerical support workers	4.9% (10)
		Managers	26.3% (54)
Education		Professional	24.9% (51)
Secondary/Vocational Educat.	20.5% (42)	Student	26.8% (55)
Bachelor	37.6% (77)	Technicians/assoc. professionals	12.7% (26)
Master	38.0% (78)	Unemployed	4.4% (9)
PhD	3.9% (8)		

Table 3 – Testing possible Biases: Early respondents vs. late respondents

	Full sample (n = 205)		**Early respondents (n = 162)**		**Late respondents (n = 43)**		**Kolmogorov-Smirnov test**
	Mean	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**	**p-value**
Confirmation (CONF)	4.677	1.156	4.713	1.153	4.540	1.172	0.768
Perceived Usefulness (PU)	3.839	1.409	3.812	1.420	3.940	1.379	0.785
Satisfaction (SAT)	5.626	1.003	5.626	1.021	5.625	0.941	0.999
Enjoyment (JOY)	5.164	1.073	5.181	1.067	5.101	1.109	0.414
Continuance Intention (CONT)	5.966	1.191	5.963	1.244	5.977	0.975	0.525

5. Results

We used the partial least squares (PLS) method based on the variance, opting for the PLS method because some items in the data are not distributed normally ($p < 0.01$ using the Kolmogorov-Smirnov test) (Chin, 1998a; Gefen, 2005). To analyse the relationships proposed in the theoretical model, we used Smart PLS v. 2.0 software.

5.1 Measurement model

To test the construct reliability, we use the composite reliability coefficient. As demonstrated in Table 2, the Cronbach's alpha values of all constructs are above 0.7, which assures that the constructs are reliable (Straub, 1989). Cronbach's alpha reliability coefficient varies between 0 and 1, with lower values indicating lower levels of reliability and considering 0.60-0.70 as the minimum acceptable values for an exploratory research.

Table 4- Means, standard deviations, correlations, reliability and validity measures (CR, CA and AVE) of latent variables

Constructs	Mean	SD	CR	CA	CONF	PU	SAT	JOY	CONT
CONF	4.677	1.156	0.893	0.839	**0.822**				
PU	3.839	1.409	0.916	0.887	0.511	**0.827**			

SAT	5.626	1.003	0.926	0.893	0.643	0.337	**0.872**		
JOY	5.164	1.073	0.931	0.912	0.677	0.476	0.691	**0.833**	
CONT	5.966	1.191	0.936	0.897	0.456	0.298	0.689	0.468	**0.910**

*The square roots of AVE values are shown on the diagonal and printed in bold.

For the indicators, we follow the indicator reliability criteria, which postulates that the loading of each indicator should be above 0.7 and if below 0.4 should be excluded (Henseler et al. 2016). As shown in Table 4, the loadings (in bold) are greater than 0.7, showing a good indicator reliability. To test convergent validity, we followed the Fornell (1981) and Henseler et al. (2016) criterion. The average variance extracted (AVE) of each construct should be higher than 0.5, such that the latent variable explains more than 50% of the variance observed in its indicators. We can see in Table 4 that all constructs have an AVE higher than 0.5, meeting this criterion.

For the discriminant validity of the constructs, we used Fornell-Larcker criteria and cross-loadings. The first criterion hypothesises that the square root of AVE for each construct should be greater than the correlations between constructs (Fornell, 1981). The second criterion is that the loading of each indicator should be greater than all cross-loadings (Chin, 1998; Tenenhaus et al., 2005). As seen in Table 4, the square roots of AVEs (diagonal elements) are higher than the correlation between each pair of constructs (off-diagonal elements). Because of a low loading, we had to exclude CONT2. After eliminating item CONT2, Table 5 shows that all construct indicators have a loading greater than cross-loading. Hence, both criteria are met.

In this respect, after assessment of the construct reliability, indicator reliability, convergent validity, and discriminant validity, the results show that the constructs can be used to test the conceptual model.

Table 5 - PLS loadings and cross-loadings

Constructs		CONF	PU	SAT	JOY	CONT
Confirmation	CONF1	**0.821**	0.517	0.463	0.508	0.371
	CONF2	**0.870**	0.463	0.452	0.492	0.274
	CONF3	**0.801**	0.312	0.665	0.625	0.512
	CONF4	**0.794**	0.392	0.520	0.592	0.327
Perceived Usefulness	PU1	0.416	**0.824**	0.337	0.441	0.269
	PU2	0.461	**0.815**	0.320	0.390	0.309
	PU3	0.443	**0.858**	0.337	0.451	0.333
	PU4	0.410	**0.837**	0.167	0.336	0.135
	PU5	0.356	**0.802**	0.157	0.303	0.099
Satisfaction	SAT1	0.479	0.342	**0.772**	0.493	0.777
	SAT2	0.532	0.301	**0.922**	0.635	0.608
	SAT3	0.602	0.229	**0.920**	0.641	0.506
	SAT4	0.627	0.293	**0.864**	0.637	0.488
Enjoyment	JOY1	0.658	0.392	0.674	**0.858**	0.514
	JOY2	0.551	0.420	0.564	**0.871**	0.367
	JOY3	0.411	0.424	0.475	**0.795**	0.337
	JOY4	0.405	0.524	0.355	**0.703**	0.262

	JOY5	0.604	0.352	0.612	**0.879**	0.356
	JOY6	0.666	0.350	0.673	**0.876**	0.437
Continuance Intention	CONT1	0.452	0.257	0.671	0.464	**0.899**
	CONT3	0.339	0.229	0.564	0.336	**0.912**
	CONT4	0.444	0.323	0.637	0.465	**0.920**

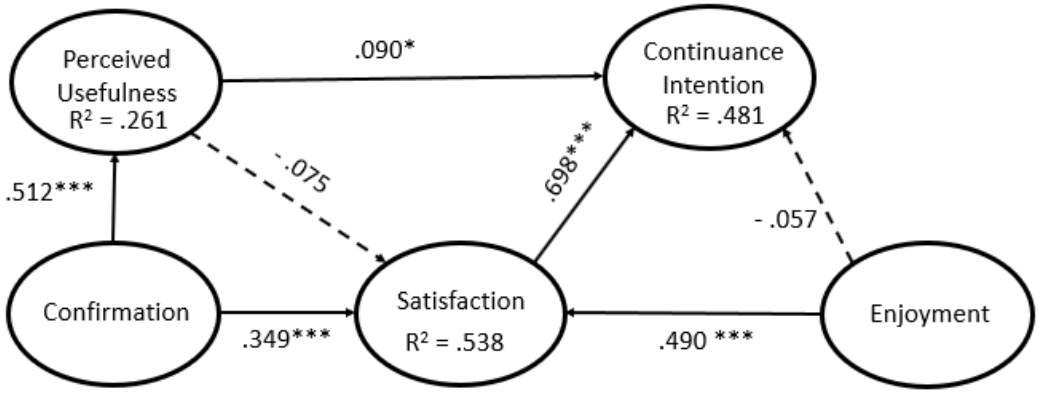
5.2 Structural model

To estimate the structural model, we examined the explained variance (R^2) and the level of significance of the path coefficients. Figure 2 shows the model path coefficients and path significances. The R^2 of dependent variables are 0.261, 0.538 and 0.481 for perceived usefulness, satisfaction and usage continuance intention, respectively. To assess the significance of the path coefficients, we used a bootstrapping procedure (Henseler et al., 2016) with 5000 iterations of resampling (Chin, 1998; Tenenhaus et al., 2005). Figure 2 also shows the path coefficient results.

Perceived usefulness is explained through confirmation ($\hat{\beta}$= .512; p < .01), which is statistically significant and explains 26.1% of the variation in perceived usefulness. Therefore, hypothesis H2 is supported.

The model explains 53.8% of the variation in satisfaction, and the variables confirmation ($\hat{\beta}$= .349 and p < .01) and enjoyment ($\hat{\beta}$= .490 and p < .01) are statistically significant in explaining the satisfaction, thus supporting H6 and H7. The perceived usefulness is not statistically significant, and consequently H3 is not supported.

Finally, the model explains 48.1% of the variation in usage continuance intention. The satisfaction ($\hat{\beta}$= .698 and p < .01) and perceived usefulness ($\hat{\beta}$= .090 and p < .10) are statistically significant in explaining the usage continuance intention, thus supporting H1 and H4. The enjoyment is not statistically significant, and consequently, H5 is not supported.



Note: *p<0.10; ***p<0.01;

***Figure 2**- Model with Results*

6. Discussion

6.1 Theoretical Implications

To the best of our knowledge, this is the first empirical research that investigates the impact of enjoyment in continuance intention usage by the integration of the ECM and hedonic system adoption models in the VoD context. Of the seven hypotheses tested in our study, five were statistically supported and only two were not. This leads to several findings that are of potential interest for future research on VoD usage continuance intention. The findings regarding the seven hypotheses are summarised in Table 6. The results show that theoretically, perceived usefulness and satisfaction increase the predictive power of the ECM model in explaining the usage continuance intention.

In the original model of Bhattacherjee (2001), perceived usefulness and satisfaction explain 41% of the usage continuance intention variance, which is below our 48.1% of variance explained but consistent with the theory. The results also show that when considering their intention to continue the use, VoD users find satisfaction to be more important than perceived usefulness.

Our results are in line with those of other studies (Bhattacherjee, 2001; Bhattacherjee and Lin, 2014; Hong et al., 2006; Lin et al., 2012), all of which show that confirmation is a good predictor of perceived usefulness and satisfaction. In line with the findings of Hong et al., (2006), perceived usefulness is not statistically significant in explaining satisfaction. Therefore, for VoD users having their initial expectations met, significantly affects their future expectations and massively influences their satisfaction. On the other hand, the future expectations do not contribute to their satisfaction. This is a valuable insight for VoD providers – that focusing on delivering a service that fills users' first expectations greatly impacts their satisfaction.

Likewise, the statistical significance of enjoyment to predict usage continuance was not proved in our model, in contrast with other studies (Barnes, 2011; Heijden, 2004; Lowry et al., 2013; Zhihuan & Scheepers, 2012). This might be due to the characteristics of the IS under study. Although the VoD platform can be classified as hedonic, the interaction itself with the platform is not rich. The users use the platform mainly to log in/out and to search/navigate through the content. Although those interactions are important to find the right content, it is the content itself that the user is more focused on. An additional explanation for the different results might be related with the nature of the IS under study. Although video/online games focus more on enjoyment, the current study focuses on the functionality aspect of using the VoD platform, which indicates that users' perceive VoD platforms as less enjoyable than other entertainment technologies.

Nevertheless, our results show that the variable enjoyment increases the predictive power of satisfaction by 20.8 percentage points on variation when compared with the Heijden (2004) model, thereby providing better explanatory power. This is consistent with the work of Davis et al. (1992). Also, captured in the definitions of PE given by Lowry et al. (2013, p.620) and Bhattacherjee (2001, p.354), respectively: "*Joy, or perceived*

enjoyment (PE), is the extent to which using a system is perceived to bring pleasure and fulfilment for their own sake…"; "*…satisfaction is an evaluation of that emotion (i.e., whether a consumption experience was as pleasurable as expected)".* Usually intrinsic motivation is expressed in the form of positive emotions arising from the engagement of the individual in the same or similar activities (Wu and Lu, 2013).

The effect that intrinsic motivators, such as enjoyment, have on satisfaction shows the importance of the theory that is often disregarded in the context of IS continuance. The fact that PE is statistically significant to explain satisfaction indicates that the enjoyment users feel when using VoD platforms does not directly influence their continuance intention to use but impacts their satisfaction, which is the main driver of continuance intention behaviour.

Although some studies examine the role of intrinsic motivators, like enjoyment, to predict behavioural intention (Agarwal and Karahanna, 2000; Lin and Lu, 2011; Lowry et al., 2013; Zhihuan and Scheepers, 2012) none of them explore the impact in a VoD technology context.

Nevertheless, intrinsic motivation is more than the variable enjoyment, as Lowry et al. (2013), Agarwal and Karahanna (2000), Jennett et al. (2008), Ryan and Deci (2000) and Lu et al. (2018) show. There are other intrinsic motivators that can affect usage continuance intention and that together create motivation.

The addition of the variable enjoyment to the ECM model is very significant in the context of the VoD technology, but it is also an extension from general IS use to the VoD technology. The fact that we could not demonstrate the direct impact of enjoyment to explain the continuance intention to use means that the interaction with the platform is less enjoyable when compared with other technologies. Still, its strong impact on satisfaction and consequently on continuance intention makes the addition of variable enjoyment valuable in the VoD context. To the best of our knowledge, no other study specifically investigates VoD as a hedonic system in a continuance usage intention framework.

Table 6 - Results of hypothesis testing

Hypothesis		β	t-value	Result
H1	PU -> CONT	0.090	1.703*	Supported
H2	CONF -> PU	0.512	9.172***	Supported
H3	PU -> SAT	-0.075	1.208 NS	Not supported
H4	SAT -> CONT	0.698	8.938***	Supported
H5	JOY -> CONT	-0.057	0.609NS	Not supported
H6	CONF -> SAT	0.349	5.047***	Supported
H7	JOY -> SAT	0.490	8.074***	Supported

Note: NS = statistically not significant; *p<0.10 and ***p<0.01.

6.2 Managerial Implications

This study's findings have implications for practitioners. This research reveals that satisfaction is important to determine usage continuance intention, but also that enjoyment has a great impact on satisfaction, indirectly impacting usage continuance intention. Therefore, to retain VoD users, providers need to focus on satisfaction (Bhattacherjee, 2001) and keep them motivated (Heijden, 2004; Lowry et al., 2013). As we have seen, the effort should be on perceived usefulness and satisfaction to determine usage continuance intention and enjoyment to increase satisfaction. A VoD platform that delivers on its promise increases the level of confirmation, and therefore, the level of satisfaction (Chuah et al., 2016; Sharma & Sharma, 2019). Moreover, the confirmation of the expectations will also affect how the users perceive and use the platform. It will shape their future expectations about the technology.

In summary, VoD providers should focus on improving functionalities related with the user interaction in a way that improves users' enjoyability and consequently their satisfaction. To engage users on the platform, VoD providers ought to invest in innovation, making delivering a good service and a compulsory requirement.

Although we did not consider the variable perceived ease of use in our study, we cannot discard it completely. As reported by several studies (Bhattacherjee, 2001; Bhattacherjee and Lin, 2014; Brown, Venkatesh, and Goyal, 2012; Heijden, 2004), while the ease of use might lose its effect in post-adoption stages, it may still play a role in the continuance intention.

The platform should have a consistent functionality and it should meet user expectations, thereby increasing the user's intention to continue to use the VoD service. Also, the platform should allow the user to enjoy the content without spending too much effort on the interaction, which will positively impact the level of satisfaction (Ericsson, 2017). This leads to the innovation factor and its importance on retaining users. For example, the Smart Downloads on Netflix are a feature that automatically deletes downloaded episodes after being watched and automatically downloads the new available episodes when the device is connected to the internet (Wolfe, 2018). Another example is the Netflix update, which gives users the possibility to customise their profile with famous show icons (Wittmer, 2018).

VoD companies should focus to develop a service that fits users' needs with the specific characteristics and functions. Moreover, the platform should be designed in a way that users can easily interact with it and gain experience effortlessly; for example, Amazon's Fire TV streaming device, which allows users to watch the content even when they have no cable or satellite TV connection (Smith, 2018). Users can watch content anywhere without the need to subscribe to an additional service. Furthermore, this device can be connected with Alexa, which means that the user can interact with the platform through voice commands. But for VoD, it is important to have a clear marketing strategy that concerns the consistency of the service. Creating unreal expectations or drastically changing the functionality of the platform can have a strong negative impact on user retention (Sharma & Sharma, 2019).

Lastly, another important element is the content, which needs to suit users' profiles such that they can be engaged and enjoy the experience. This means having content shaped to the different market segments and even different countries. Providing a good and consistent service relies on creating reachable expectations, assuming that users' needs are met. The new Netflix arrangement with Bollywood aims to create original content on each continent shaped for specific audiences (Reuters, 2018). It is a good example of a service that fits the target users.

6.3 Limitations and future research

This study suffers from several limitations. First, because people are not used to think about VoD as a technology different from normal TV, their responses might not reflect the opinion toward VoD, but rather toward normal TV. The reverse problem, assuming that VoD is a completely different technology, may have deterred users from responding to the survey.

Second, because the respondents were current users of the VoD platforms, the impression they have of the service providers also impacts the experience and the perception about the technology. If they have had a bad experience or an unresolved problem, it will negatively impact their expectations and the enjoyment of the experience, thus resulting in a more negative response to the survey.

Third, the use of enjoyment as an intrinsic motivator is very narrow. There are other motivators that can influence motivation, such as immersion (Jennett et al., 2008), control and curiosity (Lowry et al., 2013). Therefore, using only one variable to measure such a complex effect might have influenced the results. Perhaps the introduction of other intrinsic variables would have resulted in a richer theoretical framework. In future research, other intrinsic variables should be considered to study VoD users' intrinsic drivers of the continued technology usage.

Fourth, the decision not to consider the variable perceived ease of use might have affected the results, but the literature indicates that perceived usefulness is a better predictor of continuance intention than perceived ease of use. We also showed that there are some limitations when it comes to understand the changes in expectations through the repurchase process, as this is also reflected in the experience.

Fifth, because this is a cross sectional study, it might not accommodate all of the intended behaviour of the VoD services, particularly any changes that might occur in satisfaction or enjoyment. Therefore, future research should consider a longitudinal study to measure and compare changes in the usage continuance intention over time.

Sixth, we conducted this research in a single country. It would also be of interest to compare the VoD usage continuance intention in countries and further analyse other factors such as social, economic and political.

7. Conclusions

IT continuance is a topic that has been gaining more attention recently, particularly because of the great impact it has on IS user retention. To the best of our knowledge, the topic of VoD services has not been previously studied in an IS continuance usage context and has never been studied under the hedonic IS category. This study addresses the gap that contributes with a model that combines ECM with the hedonic system adoption model. It sheds light on what are the main drivers regarding users continuing to use the VoD system, and what are the strategies that companies might adopt to retain their existing customers.

Satisfaction and perceived usefulness were found to have a great impact on usage continuance intention, while enjoyment had a strong impact on satisfaction, which confirms the ECM theory and the hedonic system adoption model. By combining these two models, we increased the predictive power of the ECM. Our findings are important in helping service providers to design strategies and to continually innovate their services to meet the users' expectations. Regarding the enjoyment of using the VoD service that helps to increase the level of user satisfaction, it is important that service providers be aware of this component as an important link between usage continuance and satisfaction.

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Authors' statement:

Rita Pereira: Conceptualization, Investigation, Writing - Original Draft and Visualization

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